REPORT OF THE COMMITTEE TO REVIEW INVESTMENT GUIDELINES FOR NATIONAL PENSION SYSTEM (NPS) SCHEMES IN PRIVATE SECTOR

PENSION FUND REGULATORY AND DEVELOPMENT AUTHORITY
VASANT KUNJ
NEW DELHI
2015

PREFACE

I on behalf of my colleagues in the Committee, take great pleasure in presenting the Report of this Committee. The Committee was constituted by the Pension Regulatory & Development Authority (PFRDA) on September 10, 2014 to review Investment Guidelines for National Pension System (NPS) Schemes in Private Sector. The Committee was expected to examine the current investment guidelines with reference to global best practices. The Committee was also expected to examine and recommend measures for risk management, asset liability management, benchmarks for evaluation of schemes and principles for valuing portfolio etc.

The Government of India in the Union Budget for 15-16 has looked at crafting self-propelled economic security system, in particular to take care when the hats are on the table. The Government is also working overtime to step up the pace of economic growth with focus on infrastructure building. Hence, the time is opportune to revisit current investment guidelines of the pension sector to serve the twin purposes: (a) economically secured retired life and (b) strengthening the channel of financial flows into economic development.

It is our belief that the analysis of the committee and recommendations listed in the report will help PFRDA to initiate steps to address some of the mission-critical issues, transform pension schemes from 'Push to Pull' products and significantly improve the economic efficiency of the savings pooled for economic growth in India.

I take the opportunity to thank the Sh. Hemant Contractor, Chairman PFRDA and in particular, Mr. R .V. Verma, Member (Finance), PFRDA for reposing faith in the Committee. I seize this opportunity to thank cross section of the individuals and organisations whom the committee met to marshal their views and suggestions in its task of proffering sagacious recommendations. I thank PFRDA administration for making excellent logistic arrangements. I would like to thank all the members of the committee who toiled to bring about valuable and cogent thinking on the issues referred to the committee. My special thanks to Ms. Sumeet Kaur Kapoor, General

Manager, PFRDA for providing excellent help in researching and assimilating the material and to consolidate opinions of the committee in the form of the report. I would also like to thank Ms. Connie Franco, Executive Assistant of Intuit Consulting for providing valuable assistance and support.

Contents

CIRCULAR ON COMMITTEE

PFRDA/2014/5/PFM/3

Dated: 10.09.2014

SUBJECT: CONSTITUTION OF EXPERT COMMITTEE TO REVIEW INVESTMENT GUIDELINES FOR NPS SCHEMES IN PRIVATE SECTOR

1. With the approval of the competent authority, an Expert Committee of the following members is constituted for review of investment guidelines for NPS schemes in private sector:

I. Mr. G N Bajpai, former Chairman LIC and SEBI- Chairman
II. Mr. Deepak M. Satwalekar, former CEO and MD at HDFC Standard Life Insurance Company Limited.
III. Mr. S B Mathur, former Chairman LIC, former Administrator of SUUTI, former Secretary General of Life Insurance Council
IV. Mr. C R Murlidharan, former CGM (RBI) and former Member (IRDA)
V. Ms. Madhavi Das, ED, PFRDA
VI. Ms. Sumeet Kaur Kapoor, GM, PFRDA

2. The Terms of Reference of the expert committee are as follows:

I. To review current investment guidelines for NPS schemes for private sector and recommend changes/new schemes.
II. To consider and analyse different types of instruments/assets under Scheme 'E', 'C', 'G' based on domestic and international study/ experience.
III. Based on the analysis, to recommend instruments under each asset class with suitable exposure limits as appropriate.
IV. Reviewing the default scheme viz Life Cycle Fund.
V. Recommend suitable measures for Risk management.
VI. Recommend measures for Asset liability Management.
VII. Moving to dynamic market based allocation of funds/ choice of fund managers.
VIII. Recommend suitable benchmarks for schemes for enabling meaningful evaluation of scheme performance managed by Pension Funds vis a vis the benchmarks and accordingly deciding on a default PF.
IX. To make specific recommendations on the nature and details of the Minimum Assured Scheme as per the PFRDA Act 2013.
X. To recommend the valuation principle for valuing investment portfolio.
XI. Monitoring and supervision mechanism over PFM investment portfolio.
XII. To examine and recommend measures for bringing other pension/ superannuation funds under the regulatory purview of PFRDA in accordance with Sec 12 (1) (b) of PFRDA Act.

XIII. Make recommendations on any other related issue which has a bearing on the investment pattern of New Pension System and will affect interest of subscribers to the NPS such as active and passive management.

3. The travel and accommodation expenses and sitting fees for meetings of the Expert Group will be met by PFRDA.

4. The Expert Group would be advised to submit their recommendations within six weeks.

(Sumeet Kaur Kapoor)
General Manager

HANDING OVER THE REPORT

Date:- 07th APRIL' 2015

The Chairman,
Pension Fund Regulatory and Development Authority
1st Floor, ICADR Building
Vasant Kunj Institutional Area II,
New Delhi

Dear Sir,

We submit herewith the Report of the Committee to Review the Investment Pattern Guidelines for NPS Schemes in the Private sector.

Yours sincerely,

.....

Shri G. N. Bajpai
Former Chairman, SEBI
(Chairman)

.....

Mr. Deepak M. Satwalekar
Former CEO and MD at HDFC Standard Life Insurance Company Limited

.....

Mr. S B Mathur,
Former Chairman LIC, former Administrator of SUUTI, former Secretary General of Life Insurance Council

.....

Mr. C R Murlidharan
Former CGM (RBI) and former Member (IRDA)

.....

Ms. Madhavi Das
Executive Director, PFRDA

.....

Ms. Sumeet Kaur Kapoor
GM, PFRDA

LIST OF ABBREVIATIONS

ALM	**Asset-Liability Management**
AMFI	**Association of Mutual Funds of India**
AUM	**Assets Under Management**
BSE	**Bombay Stock Exchange**
CBLO	**Collateralised Borrowing and Lending Obligation**
CDS	**Credit Default Swap**
CG	**Central Government**
CGF	**Capital Guarantee Fund**
CP	**Commercial Paper**
CPF	**Capital Protection Fund**
CRIISP	**Committee to Review Implementation of Informal Sector Pension**
DB	**Defined Benefit**
DC	**Defined Contribution**
EEE	**Exempt-Exempt-Exempt Tax Status**
EPF	**Employee Provident Fund**
EPFO	**Employee Provident Fund Organisation**
ERISA	**Employee Retirement Income Security Act**
ETF	**Exchange Traded Fund**
FASB	**Financial Accounting Standards Board**
FIMMDA	**Fixed Income Money Markets and Derivatives Association**
FMC	**Forward Markets Commission**
FPO	**Follow on Public Offer**
GDP	**Gross Domestic Product**
GOI	**Government of India**
G-SEC	**Government Security**
HTM	**Held to Maturity**
IDR	**Indian Depository Receipt**
IFRS	**International Financial Reporting Standards**
IPO	**Initial Public Offer**
IR	**Information Ratio**
IRDAI	**Insurance Regulatory and Development Authority of India**
LC	**Letter of Credit**
LIC	**Life Insurance Corporation of India Ltd**
MF	**Mutual Fund**
MSME	**Micro, Small and Medium Enterprises**
MTM	**Mark To Market**
NAV	**Net Asset Value**
NPA	**Non-performing asset**
NPS	**National Pension System**
NSE	**National Stock Exchange**
OECD	**Organisation for Economic Cooperation & Development**
PFM	**Pension Fund Manager**

PFRDA	**Pension Funds Regulatory and Development Authority**
PIR	**Prudent Investor Regime**
PoP	**Points of Presence**
PSU	**Public Sector Undertaking**
RBI	**Reserve Bank of India**
REIT	**Real Estate Investment Trust**
SAFEX	**South African Futures Exchange**
SBI	**State Bank of India**
SDL	**State Development loan**
SEBI	**Securities and Exchange Board of India**
SG	**State Government**
TOR	**Terms of Reference**
UK	**United Kingdom**
UTI	**Unit Trust of India**
US	**United states of America**
VF	**Venture Fund**
YTM	**Yield To Maturity**

Chapter I

EXECUTIVE SUMMARY OF THE RECOMMENDATIONS

I. The current global demographic shift to ageing population, largely reflecting rising life expectancy and declining fertility, has led many countries across the world to revisit their pension systems. The UNFPA report has pointed to the increasingly greying population in India. Current demographics trends also indicate increasing longevity with a more active lifestyle post retirement owing to improving medical facilities. With the swift shift to nuclear families, intergenerational support cannot be the sole source of old age security. Statistics indicate that only about 12% of the total population is covered that too inadequately in most cases by organized old age social security schemes in India and workforce in the unorganized sector has limited access to formal channels of old age economic support. Hence, creation of a viable old age security system has become an imperative

II. The onus of funding entire any old age security system cannot squarely lie with the government, which is already reeling under the pressure of ever expanding Fiscal deficit. This entails a switch, wholly or partially, from unfunded systems, e.g. pay-as-you-go (PAYG) or defined benefit system to self-propelled funded systems like defined contribution system. It is this switch which can help build a sustainable social security nest for individuals and eventually channelize large sums for economic reconstruction of India. Neverthless , the role of the Government in providing for appropriate pension below Poverty line segment outside the contributory pension framework may continue.

III. In case of India, the switch from Defined benefit to Defined contribution system for Government employees is a relatively recent phenomenon. National Pension System (NPS), a highly innovative and sophisticated financial product, based on the world's best practices in the Pension sector was launched with effect from 1st of January, 2004 for Government employees and from 1st May 2009 for all citizens of India on voluntary basis under the regulatory jurisdiction of the interim Pension Fund Regulatory and Development Authority. The Scheme was operationalised in 2008.

IV. The NPS has made noticeable progress from the time of its inception, on boarding about 87 lakh subscribers with a total AUM of Rs 80,000 crores on 31.03.2015. These include about 15 lakh subscribers from Central Govt, 26 lakh subscribers from State Govt, 41 lakh subscribers under NPS-Lite and about 4.5 lakh subscribers from the unorganized sector. With only 12% of the workforce covered by any kind of old age security in India, there is thus a huge untapped potential for NPS to expand. However, this would require multipronged approach with co-operation of multiple stakeholders including Central Government, State Governments, Autonomous bodies, trade bodies, Regulators and many more.

V. The passage of the PFRDA Act in September 2013 followed by notification of the Act on 1st February 2014 marks an important milestone in the history of the Pension Sector reforms as the Act provides an overarching mandate to the PFRDA for promotion and development of old age security in India. In light of

the paradigm shift in the pension landscape in the country, it is imperative to review the progress of NPS so far and realign the existing policy framework for Pension Funds within the mandate of the Act.

Besides the expansion in coverage, the provision of old age income security also entails working towards adequacy of income post working life, which can be done by optimizing returns through appropriate investment guidelines. While devising the investment guidelines, the interest of the subscriber is to be kept paramount, balancing the security aspect with adequacy of returns. Movement from Defined Benefit scheme to Defined Contribution scheme implies shifting of the investment risk to the subscriber from the employer. While returns on investment under DC scheme cannot be guaranteed, it is important to frame guidelines, which enable the pension funds to deliver good real rate of returns to the subscriber for meaningful old age income security, which cannot be done with overload of fixed income securities. Hence, an enabling environment is required to be created for the Subscriber to maximize his/her returns depending upon his/her risk appetite. A larger number of older and retired people, in the absence of a dependable pension system, will put enormous strain on the government of the day to re-route expenditure earmarked for public goods and services towards providing for health and pension spending.

VI. It is therefore imperative that the pension programmes be strengthened. The challenge lies in making the pension sector attractive enough to draw in the large percentage of the working force that is currently outside its pale. Therefore it is necessary to ensure that pension sector helps to provide returns that are stable and competitive through judicious investing .

It is in this background, the Committee deliberated on the way forward to create an enabling framework for a self sustainable pension system with the twin objective of ensuring security and adequacy of pension wealth .In this context, the Terms of the Reference provided the paradigm for examing wide ranging issues and challenges pertaining to the National Pension System including the Investment guidelines, the Risk management framework, the Asset liability management, Performance and benchmarking of PFs. While the detailed perspective on the issues is documented in the forthcoming chapters, the executive summary of the findings is listed out below:-

I. There are two main alternative approaches to Investment of pension assets in vogue-

a. a) "quantitative portfolio regulations", which limit holdings of certain types of asset that are perceived to be risky on account of their safety, price volatility / illiquidity within the portfolio and thereby leading to directed investments regime as by the Regulator

b. "prudent investor rule" on the other hand leaves the choice of investment of their pension assets to the subscriber. Based on his/ her perception of risk and financial situation in life, the Subscriber is expected to exercise the choice, as a prudent investor would.

While the first philosophy is primarily premised on maintaining the safety of the pension corpus, the second one aims at maximising the pension wealth within the Risk return paradigms, which subscriber chooses for herself / himself.**(Ref: TOR I, II, III)**

II. As is the presently the case with the entire Insurance and pension sector in the industry in India, NPS currently follows the philosophy of " Directed investment". The movement from Defined benefit to defined contribution propelled policy makers to have the over-riding concerns towards shielding the savings of beneficiaries from volatility and risk, and protecting it from capital erosion. These anxieties were justified and essential for the development of NPS in its nascent stages. The Directed Investment regime was introduced, also keeping in view the low financial literacy levels in the country and underdeveloped financial and regulatory environment in the pension sector. Consequently investment guidelines for NPS prescribe a) the asset classes in which investments can be made *viz* Equity, Corporate bonds and Government securities (E, C, G) b) Ceilings on each of the asset classes . The ceilings prescribed on the asset classes are different for Private sector investor on one hand and Government sector employees and NPS lite subscriber on the other hand. **(Ref: TOR I, II, III)**

III. However, as economies, markets and systems evolve, so must laws, policies and regulations. The design of the mandated investment norms in vogue today with predominance of low risk fixed income securities, that too mainly Government securities, has lower tolerance for risk, but a high tolerance level for lower returns especially in case of the Government Sector employees. This is, in

the opinion of this Committee, unfair for the investors who may need a combination of low risk with moderate returns or even higher returns with higher risks. This is especially true for those in the early stages of their saving curve. There can be no denying that in the pursuit of risk-free investment, investors are getting the short shrift and are therefore revealing a preference for physical assets. **(Ref: TOR I, II, III)**

IV. Therefore, the Committee is of the view that the investment philosophy pertaining to the entire pension sector has, therefore, to evolve from Directed investment regime to the prudent investor regime., The Committee suggests gradual easing of investment exposure patterns with the aim of eventual alignment of Fund Management of entire Pension Sector The current boundaries of directed investment should be shrunk and more play allowed to individual fund managers. Accordingly, the movement to Prudential investor regime should be based on following principles:

a) Harmonisation of the Investment Guidelines for Private and Govt Sector
b) Review of ceiling for each asset class
c) Expanding the universe of instruments under each Asset Class
d) Adding new Asset Classes
e) Allowing the entire corpus of NPS to be managed by both private and public sector funds

It is proposed that in six years, the Pension sector to move to Prudent Investor regime completely. Six years is a sufficiently long time period for market forces to play out [1] and short enough for reforms to hold steam till the end. **(Ref: TOR I, II, III)**

V. Multiplicity of investment mandates across various Regulatory Regimes within the domain of pension sector creates an uneven playing field and therefore there is an urgent need to harmonise the same. The existing investment norms across all regulatory regimes be harmonised, at least till such time as the move to a prudent investor regime is complete. This creation of a harmonised regime will usher in transparency and allow investors to compare their returns across product platforms. A beginning can be made by harmonizing the investment guidelines within NPS across Government and Private Sector i.e. loosening the guidelines for Govt sector to allow more play to the Pension Fund managers in asset classes like equity, which are historically known to beat inflation across various countries in the long run. **(Ref: TOR I, II, III)**

VI. The restriction of allowing Pension funds only from the public sector to manage the funds of Government employee subscribers may be done away with. This will also be in keeping with the mandate under the PFRDA Act to provide choice to the subscriber. On the other hand, the enhanced competition and the appurtenant economies of scale shall go a long way in building a healthy pension corpus for the subscriber. **(Ref: TOR I, II, III)**

[1] **According to the NBER, there have been 11 business cycles from 1945 to 2009, with the average length of a cycle lasting about 69 months, or a little less than six years**

The movement from the Directed investment regime to the Prudent investor regime shall entail not only easing of the ceilings for each asset class, but also allowing wider choice of instruments under each Asset Class across the board. This could mean expanding the universe of instruments under equity from merely mirroring any index to investing in securities with derivatives on the stock exchange and expanding into other capital market instruments (primary and secondary) even further as the market matures, with suitable caveats and ceilings . In case of other asset classes ,it could mean introducing instruments like Covered notes , CPs/ CDs , SBLMs, Repo, Reverse Repo, CBLO, derivatives for the purpose of hedging etc again with suitable caveats and ceilings . It must be kept in mind that only such financial products be allowed which are exchange-traded, so that counter-party risk is eliminated, liquidity is enhanced and exchange-level regulation keeps a check on excess volatility. Progress can be reviewed after three years. This should be the phase when financial markets get ready to offer full basket of products for PFM to choose from. **(Ref: TOR I, II, III)**

VII. Gradually, the regulator must allow for the introduction of some new ideas and new asset classes also called as alternate assets *viz* Real Estate, Commodity, and Infrastructure through new instruments like Investment Trusts, Infrastructure Investment Trusts - units, etc as a measure of diversification of assets and enhancing yields followed in the various developed countries. **(Ref: TOR I, II, III)**

VIII. On the road to Prudent investor regime, the Regulator may, in the interim allow introduction of a few new schemes to test the risk appetite of the subscribers and build their confidence in asset classes perceived to be riskier viz Equity through the life Cycle fund approach. While the existing life cycle Fund shall continue to be the one with maximum investment in equity pegged at 50% (option LC50), more life cycle funds (at least two more to begin with) may be introduced keeping the core principle of "decreasing risk appetite with increasing age" intact with lower and higher ceilings in Equity to cater to both conservative subscriber and subscriber with a higher risk appetite. **(Ref: TOR IV)**

IX. The Broad road map for moving to Prudential investor regime , based on principles defined above would be as follows: **(Ref: TOR I, II, III)**

Phase I:

a) Allowing private sector PFs to manage the funds of the Government sector employees
b) Harmonization of the investment guidelines of the government and private sector.
c) Shift away from the fixed income fixated investment pattern and allowing more play to pension fund managers in equity through following measures;-
   - Allowing investment in equity to the extent of 50% by Government sector employees/ NPS lite subscribers.
   - Allowing floating of life cycle funds with equity cap at 75%
   - Moving away from passive investment to active investment in equity.
   - Allowing investments in shares, which have derivatives in any stock exchange.
   - Expanding the universe of investment of equity to NSE 100.

d) Allowing investments in equity both through primary and secondayr market. Allowing investment in Mortgage backed securities , Covered notes, CPs, CDs
e) Allowing investments in Infrastructure Trust Funds.
f) Removal of limits on SDLs under "G"
g) Introduction of new asset classes within overall cap of 5% of the portfolio.
   - Real estate through REITS
   - Alternative Investment Funds (AIF) registered with SEBI

Phase II

a) Raising the ceiling on equity to 75%
b) Further loosening ceilings on AIFs, REITS,INFRA-REITS
c) Introduction of IDRs
d) Allow CBLO in both Corporate bonds and Government bond
e) Allow Repo and Reverse Repo.
f) Introduce commodity trading viz bullion through Gold ETFS with ceilings of 1%

Phase III

a) No ceilings on asset classes
b) Only a negative list of assets and instruments based on the experience of last 5 years
c) Some prudential ceilings viz concentration ceilings etc or risky and volatile asset classes/ instruments.

X. However, the move to a prudent investor regime be preceded by upgrading and re-tooling the extant systems The following pre-conditions have to be met before moving on to the prudent investment regime:-

A. To allow for capacity building within the related institutional architecture, primarily to smoothen the journey to prudent investor regime. This will include putting in place :
   i. Policy framework
   ii. Appropriate Regulatory oversight mechanisms and people capabilities with Regulators.
   iii. Corporate governance structures and processes
   iv. Risk management systems and processes
   v. Building up a pool of Trustees and Investment Managers

B. Development of the Capital market and deepening of the corporate debt market characterised by :
   i. Regulated Market: (a) Empowered, capable and motivated regulator and (b) Robust Regulation
   ii. Developed Market: (a) Range of Products, (b) Depth, Liquidity, Costs, Safety, Efficiency, and (c) Transparency, Research, Databases.
   iii. Protected Market: (a) Market Stability, (b) Market Surveillance, (c) Investor Protection (d) Governance of Investee and (e) Bankruptcy Laws.

C. Widespread Financial literacy to make informed choices pursuant to creating awareness about the schemes and appertunant risks-

rewards, parameters for selection of schemes / investment options , consequences of not excercising options etc

(Ref: TOR I, II, III)

XI. The PFRDA Act mandates that the subscriber shall have an option of investing up to hundred per cent of his/her funds in Government Securities. The NPS already has this option in place by virtue of Scheme "G". However the bulk of subscribers from the Govt and NPS lite are devoid of this choice. Besides, providing this choice to all the subscribers, the regulator shall create awareness about the "G" scheme including *interalia* issues realting to adequacy of returns for fulfilling this mandate. **(Ref: TOR I, II, III)**

XII. PFRDA Act mandates that "Subscribers seeking minimum assured returns, shall have an option to invest funds in such schemes providing minimum assured returns as may be notified by the Authority" .The provision essentially seeks to assuage the uncertainties in respect of the quantum of terminal pension wealth of the subscriber in the backdrop of market linked Defined Contribution pension scheme like NPS. While several such products can be offered by the pension funds Viz Capital protection, product with minimum assurance of returns etc , it is essential to have suitable caveats upfront made known to the subscriber opting for such a product, including higher and market determined cost for the product, cost of possible sub optimal returns on account of an investment strategy adopted to service the liability under the assurance rather than optimising the returns, low probability of the guarantee being actually invoked , lower replacement incomes under the guaranteed products than non-guaranteed products. The offering of the minimum assured returns products by Pension funds would also entail strengthening the risk management systems of the PFs including increase in the regulatory capital, stipulating solvency ratios, stringent ALM parameters, periodic Actuarial evaluations, building capital protection fund if required , devising separate investment guidelines for the products. While the minimum assured return products may increase the outreach, the regulator may need to balance the aspect of adequacy of replacement income under such products. The Committee however noted that past experiences in India and abroad have not always been successful.**(Ref: TOR IX)**

XIII. The role of PFs in marketing NPS has been deliberated in detail in the CRIISP report wherein it was agreed that in order to increase the uptake of NPS, it was important to allow a wide spectrum of entities to distribute NPS including Pension Funds. However, the hazard of mis-selling had weighed on the mind of the committee, wherein it had stated that "*the hazard of mis-selling is very real and cannot be wished away. However, on balance any possible misdoing would be substantially mitigated by a combination of strict regulations that ensures full transparency and disclosure*". Therefore, the committee had at that time opted to walk the middle path. It had recommended that PFMs should be allowed to sell NPS but not directly but through their own PoPs/ subsidiaries. However, with the notification of the PFRDA Act, consequent empowerment of PFRDA through various provisions on investigations, enquiry, penalty and other enforcement actions besides other customer protection measures envisaged in the various

Regulations under the Act, the Regulator now has the means to deal with the same. Hence, in the opinion of the committee, the time is ripe to allow PFs to market the NPS product themselves, as they are the only entities in the entire NPS system that have direct stake in the expansion of NPS and are also the only entities that are entirely regulated by PFRDA and hence best suited to expand coverage under NPS. To remain within the precincts of the Act, the PFs may canvass the product while the actual on-boarding may be done through the PoPs. Also,there was a felt need to develop a cadre of independent financial advisors who could offer this product as a part of this financial planning.**(Ref: TOR XIII)**

XIV. If PFs are to act as an alternative channel for garnering new investments, the current fee structure (at 0.01% of the average monthly assets under management) seems way too low for them to even meet their costs, let alone provide them additional incentive to actively start championing NPS. Therefore, there is substantial scope for revision in the selection process adopted for PFs . The existing system of bidding is borrowed from the EPFO system but does not seems to have given optimum results it was expected to yield. The reasons are not far to seek. The EPFO funds are a captive market of the funds collected under EPFO Act and are generally invested into G-Sec Bonds, requiring little fund management skills with the comfort of fall back on the sovereign fiscal for funding the shortfall in returns. On the other hand, NPS requires marketing efforts (by subsidiary or otherwise), efficient fund management and generation of optimum returns to stay in business. The present bidding system has only created “a race to the bottom” leading to uneconomical bids being forced on all the Pension funds. Thus, there is a need to review the system of selection of Pension Funds having a bearing on the determination on the Pension Fund Management fee. The regulator, may perhaps, introduce a fixed and variable component in the fee, with pension funds being incentivized to quote lowest fixed fee in the bid. However, the variable fee shall depend upon other performance indicators *viz* relative Returns generated etc. This model is being followed in one of the European countries where the maximum rate of variable fee is 0.06% of assets annually (for the best performing pension fund) the minimum is 0% (for the worst one) with average of 0.03%. Another variable factor could be distribution fee, which could be paid on the contributions of the fresh subscribers garnered during the year by the PFs, instead of loading the entire fee with marketing fee. Similar methods of charging fee may also be examined by the PFRDA for arriving at an economically viable incentive structure, without compromising on the cost.

(Ref: TOR XIII)

XV. Presently, the NPS is predominantly in the accumulation phase. However, about 2.25 lakh subscribers are expected to exit the NPS system in the next five years calling for an efficient Asset Liability Management to meet the payouts at least cost to the system on account of duress sales of securities etc. The NPS Portfolio today predominantly consists of fixed income securities. The regulator can therefore prescribe a dynamic and comprehensive asset-liability management module, which could include, among others, prudential duration gap limits, prudential limits for interest rate sensitivity and a structural liquidity framework. A format on the lines of a Debenture Redemption Reserve could be

considered over a three year period to redemption so that there is no worry of sales of investments under duress, which can hurt those staying behind more than those getting paid out. The first step in this direction would of course be periodic sharing of relevant data by CRM relating to exits with the PFMs. Based on the prudential guidelines stipulated by the Regulator and available data, the PFMs to formulate their individual ALM polices (within the framework of DRR stipulated by PFRDA) and file the same with the regulator. **(Ref : TOR VI)**

XVI. In order to give meaningful choice to the subscriber, subscribers should have adequate, reliable information available in the public domain, which they can then use to compare and take an educated decision before choosing any pension scheme or pension fund. Therefore, a framework for disclosures about the performance of pension funds is necessary for generating healthy competition and for meeting the standards of transparency. Given the nature of Pension Product, viz. NPS, which is long term in nature (20 to 40 years) and which should be a major component of old age security, the Performance Evaluation criteria should not be centred too much on returns generated but should also factor in risk management parameters, which includes a judicious mix of returns generated *viz* Risk adjusted returns, Yield to Maturity (YTM), and Tracking Error besides risk parameters, impact on safety of funds *viz* Concentration (Issuer & Industry), Liquidity, Credit Quality, and Maturity profile with appropriate weights assigned to them. Suitable weights may be attributed to each of these parameters to arrive at a composite score for comparison. While this may definitely be an exercise for the benefit of the monitoring and supervisory wing of PFRDA, this would also enable the Pension funds to tailor their performance in accordance with the laid down objectives and focus areas of PFRDA. **(Ref: TOR VIII)**

XVII. With the growth of the NPS AUM, the benchmarks specific to the NPS schemes have to be drawn up for the purpose of evaluation of the performance of the Pension funds. Further, the benchmarks will have to be dynamically evolving as the movement to "Prudent Investor regime" progresses. Further, the comparison with benchmarks has to be undertaken by independent analysts. PFRDA should institutionalise professional organizations of analysts, retirement advisors or consumer protection forums aimed at analyzing the data, comparisons, and evaluation of the Pension funds' performance for the benefit of subscribers and also for evolving benchmarks. **(Ref: TOR VIII)**

XVIII. The PFRDA Act mandates provision of subscriber choice. However, the provision of the choice assumes certain awareness levels and capability of the subscriber to make such choices. In the absence of widespread literacy, one cannot wish away the ground reality that majority of the subscribers are either incapable or unwilling to make a choice of PFs or asset allocation. In such a scenario, the funds are being directed to default PF .. **(Ref : TOR VIII)**

XIX. While the life cycle fund is unambiguously the default option as far as asset allocation is concerned, the choice of default PFM needs to be considered carefully. Internationally there are various parameters used for selecting the default PFs, including directing the new subscribers into least cost PFs for first 12 / 24 months with switch over fees, or based on returns etc. A holostic view

needs to be taken. However, the concept of selection of default PF by the Regulator is not without its pitfalls. Hence, all efforts should be made to make the subscriber exercise his choice of the PF consciously instead of a default PF. **(Ref: TOR XIII)**

XX. Pension funds are following the "fair market" value principle to value their assets and declare NAV on every business day. However, Pension funds have very small liquidity needs in relation to their total assets under management. This means that they do not need to sell assets at current prices to meet benefit payments and other expenditures as they can rely on the regular flow of contributions and investment income for the same. The valuation of the portfolio at mark to market, when predominant part of the portfolio consists of Fixed Income securities raises questions about the "fairness of the Valuations". The present fair value system also induces market linked volatility in the declared NAV, based on short term fluctuations, while the long term valuations are in intact. This perceived volatility runs the risk of inducing pro- cyclical behaviour in the pension funds which are under pressure of showing short term returns. Hence there is a need to introduce a system of valuations that is in sync with the tone and tenor of the pension funds rather than mutual funds or other short term funds. A point in case is the recently revised principle IFRS 9 wherein partial fair value model has been introduced[2] . Thus Debt securities need to be segregated into HTM and MTM categories. Any security not traded for 90 days and intended to be held till maturity may be moved to HTM category and valued as such as per RBI guidelines. Rest of the securities may be valued at MTM. However movement between the categories to be authorized by the Pension Fund Boards. Prudential guidelines may be set by the regulator for holding securities in each category. NAV based on these valuations may be declared by the pension fund as hitherto. **(Ref : TOR X)**

XXI. For valuation of the securities on MTM basis, the fair valuation principle is being followed at the portfolio basis as prescribed by SEBI. However, while the fair value principle is easily applied in case of traded securities, in cases of thinly traded securities and illiquid securities, it become difficult to apply the principle in absence of recent trading data. In such cases it may be useful to apply security level valuation principle .This principle is still in the evaluation stage and may be applied as and when adopted by SEBI. The other method is to apply the mark up or mark down method to the valuation arrived at by the agencies like FIMMDA, ICRA or CRISIL. **(Ref : TOR X)**

XXII. The Pension supervisory authorities in various countries have been moving towards a risk-based supervision (RBS) approach, in line with the Banking and insurance sector regulators. RBS can be recognized as a structured process

[2]The IASB initially planned to require complete fair valuation of all financial assets and liabilities. However, at the end of 2008, critics loudly blamed fair value accounting for accelerating the financial crisis as banks, and to some extent insurance companies and pension funds, were forced to sell market-valued assets at depressed prices, further depressing the markets. Ultimately, the IASB adopted a partial fair value accounting standard called IFRS 9, which requires entities to measure financial assets basically held for the purpose of collecting interest and principal cash flows on an amortised cost basis. The partial fair value model has met with broader acceptance than the requirement for full fair valuation,

aimed at identifying the most critical risks that face each pension fund and, through a focused review by the supervisor, assessing the pension fund's management of those risks and the pension fund's financial vulnerability to potential adverse experience. A key part of a risk-based approach to pension supervision involves the supervisory authority transitioning from checking detailed compliance requirements for the operation of pension funds to reviewing the internal decision-making processes and competencies of bodies of these funds. This assumes a high degree of competence at the Regulator to conduct risk based assessment. One of the main objectives of risk-based supervision is to ensure sound risk management at the institutional level taking into account both the quality of risk management and the accuracy of the risk assessment.

The Three pillars of the Risk Based supervision essentially are:

(i) Capital Adequacy to mitigate Credit Risk, market risk and operational risk.
(ii) Market Discipline including disclosures
(iii) Supervisory review

a. Capital Adequacy: It may be desirable to increase the stake of the Pension funds in the system as the AUMs grow. Even if the PFs do not have to bear credit risk and market risk, provision needs to be made for operational risk. Besides, with the opening of the Govt sector to the private PFs, they are also expected to get a bigger share of the NPS AUM Pie. Hence, Minimum tangible net worth may be increased to Rs 100.00 crore in a phased manner linked to the overall size of NPS AUM. Till the AUM size of Rs 10,000 crore, the regulatory Capital may remain at Rs 25 crore, pursuant to which the regulatory capital may be increased in a phase wise manner. Similarly, a solvency ratio of 100% at all times may be stipulated for minimum assured returns scheme.

b. GOI / PFRDA has put in place systems and processes for supervisory review through the PFRDA Act, Policies, Guidelines, and regulations. The PFs are also subjected to a system of disclosures and review by external agencies *viz* Auditors, External review by CRISIL etc.

c. However, currently the Risk management system is essentially rule based with all PFs given the same attention by the Regulator, for the simple reason of small number of players in the market. However, as the system matures and there are more number of players under NPS and other pension schemes regulated by PFRDA, the regulator may have to move to Risk Based Supervision. The RBS is already being followed in other financial sectors in India.

This would entail introduction of

i. Risk based Scoring model .
ii. Stress Testing for all the PFs with Traffic light approach.
iii. Putting in place a Prompt Corrective action (PCA) mechanism

iv. Regulatory intervention framework to determine the action required- enhanced oversight, mandate improvement or Enforcement action. **(Ref : TOR V)**

XXIII. While a host of suggestions have been made to strengthen the regulatory functions of PFRDA in respect of Pension Funds, it is important to review the paradigms in which these Pension funds shall function including a clearly carved out regulatory regime. The financial sector landscape is essentially dotted with four regulators *viz* RBI, SEBI, IRDA and PFRDA. While the domain of each regulator is carved out in their backing statutes, some overlapping has been witnessed in their jurisdictions leading to apprehensions of either over-regulations on one hand and regulatory arbitrage on the other- either of these scenarios do not bode-well for the development of the financial sector and consumers. In the past, pension products have been registered with SEBI and IRDA. However, SEBI and IRDA continue to grant approval to pension products. Further, there are superannuation funds that have been granted exemption by EPFO and hence are currently unregulated. With the notification of the PFRDA Act 2013, a new dispensation has been put in place by the Parliament to regulate the pension products. In keeping with the Parliaments mandate of regulatory carve out for pension products, it would be in order to develop a contiguous pension system involving collection, investment, fund management, record keeping and pay outs for orderly growth of the pension sector under the single regulatory umbrella of PFRDA. **(Ref tor: XIII)**

XXIV. While reviewing the external environment for the pension Funds, one cannot but help notice the uneven playing field for the NPS. The PFRDA will have to play an active advocacy role in getting a level playing field for the subscribers. The principal of EET has been applied to NPS.The tax treatment to NPS compares unfavorably with the other long term saving instruments in the market and this has been perhaps one of the reasons for its slow off-take in the Private sector. The tax treatment also creates an invidious distinction between pre-2004 and post 2004 Government employees. a) Level playing field- EET TAX REGIME: NPS is subject to tax at the hands of the assesse under sub-section (3) of Section 80CCD of the Income Tax Act. . . This also compares unfavourably with Govt employees joining prior to 1.04.2004 - wherein commutation of pension is allowed exemption from taxation as per section 10 (10A) of the Income Tax Act at the time of retirement. Further, all the other long term saving instruments such as mutual funds, LIC, PPF, GPF etc are enjoying Tax benefits at the time of withdrawal. In order to ensure development of the pension sector in general and NPS in particular, it is essential that distortions across financial instruments and group of assesses are resolved and appropriate fiscal incentives are provided. Iniquitous tax treatment not only disadvantages one financial product against the other, it also creates avenues for tax arbitrage. **(Ref TOR: XIII)**

Chapter II
INDIAN PENSION SCENARIO

WORLD BANK MULTIPILLAR MODEL

The three main players – individual, society and government have distinct but complementary objectives to accomplice through a pension system. Individual seeks - smooth consumption over lifetime and insurance against inflation and longevity risk. Societal concerns are income redistribution and poverty alleviation. The governmental concern is widest possible coverage (preferably universal), which is robust and fiscally sustainable. The first building block in a pension system is the zero pillar i.e. a basic social pension financed from the general budgetary revenues with no contributions from beneficiaries. There is emerging consensus that all countries need to have social pensions which cater to people with low life time incomes, e.g. disabled, poor. Besides, in countries where defined contribution systems don't exist or have poor coverage (e.g. India), social pensions will also need to cover current and future retirees In such schemes the form, levels of benefits and eligibility conditions depend on factors like size of other vulnerable groups e.g. children, availability of budgetary resources and design of complementary systems.

However, single pillar pension systems (dependent only on tax financed pensions) are unable to address variety of risks associated with population ageing. A system design based on multiple pillars which take into account the initial conditions and specific context of the country is better suited to providing protection to the elderly. The World Bank's multi pillar model has been adopted as a basic template by most countries in recent times for designing pension systems.

- Zero Pillar – Non- contributory social pension for poverty alleviation and providing minimum level of protection
- First Pillar – Mandatory, defined benefit, pay as you go, publically managed (normally)
- Second Pillar – Mandatory, defined contribution, privately managed
- Third Pillar – Voluntary, flexible (could be DC or DB) and discretionary
- Fourth Pillar – Informal/Formal social programmes that support the elderly (health care, housing etc)

The zero, third and fourth pillars are generic and can be employed for both organized and unorganized sector while the first and second pillars cater mainly to the organized sector.

PENSION SYSTEM IN INDIA

As per the Population Census 2011, the elderly population accounted for around 8.6 per cent of total population in 2011. With increase in per capita income, better quality of life and better medical services, life expectancy is gradually increasing and consequently both the share and size of elderly population is increasing over time. In fact the rate of increase of elderly population (60+ years of age is higher than the general rate of growth in population. The elderly population (60+ years of age) increased at the rate of 35.10% between 1991 and 2001 and at the rate of 35.51% between 2001 and 2011 against the increase of total population @ f 21.53% between 1991 and 2001 and 17.64% between 2001 and 2011. Consequently, the share of elderly population in total population has increased from 6.8% in 1991 to 7.4% in 2001 and subsequently to 8.6% in 2011.

As per the report on Ageing in 21st Century jointly brought out by United Nations Population Fund (UNFPA) and Help Age International in 2012, the number of elders, who have attained 60 years of age, will shoot up by 360 per cent between 2000 and 2050. India had around 100 million elderly population upto 2012, which is expected to grow to 323 million, constituting 20% of the total population, by 2050.

Pension Policy in India has traditionally been based on the employment contracts/ service conditions and financed through employer and employee participation. As a result, the coverage has been restricted to the organized sector and a vast majority of the workforce in the unorganized sector has remained outside the formal channels of old age financial support. Around 2.96 crore people are employed in organized sectors, which is around 8 per cent of the main workforce of the country. The remaining working population is engaged in the unorganised sector and majority have no access to any formal system of old age economic security.
A report published by the City of London Corporation (*Insurance Companies & Pension Funds as Institutional Investors: Global Investment Patterns*) has broadly classified Indian pension system into four segments:

- **The National Social Assistance Programme (NSAP):** A limited —first pillar, the central government has launched poverty alleviation programmes aimed at the aged under this umbrella scheme. It‘s a pay-as-you-go plan (an unfunded scheme, with current revenue receipts used for paying out retirement benefits). Under the scheme, the government pays out Rs. 200-1,000 every month to 15.7 million poor citizens aged 65 and above. Some state governments make a matching contribution. Obviously, this falls short of the optimal universal, old-age, income security plan.

- **The Employees' Provident Fund Organisation (EPFO):** The Employees Provident Fund, India's largest defined contribution and publicly managed plan, is an example of the typical Pillar–II arrangement. Employees in the organised sector are required to participate in provident funds and pension plans administered by EPFO. According to the City report: —These include a defined-contribution provident fund and a defined-benefit pension plan that

cover only 14% of the workforce. Included in this ambit are about 2,750 private trusts approved by the EPFO that offer similar programmes in private companies with 4.9 million members and assets of Rs. 100,500 crore ($20.4 billion).

- **Private pensions and annuities**: Regulated by the insurance regulator (IRDA), these are various schemes administered by life insurance companies. In 2010, IRDA directed all insurance companies, which had launched unit-linked pension plans, to provide a guaranteed return indexed to interest rates. The order was reversed in 2011 but sales in this segment have remained sluggish.

The National Pension System (NPS) launched by GOI and supervised by the Pension Fund Regulatory & Development Authority (PFRDA) has evolved out of this very need to provide old age security to the vast multitude of Indian population, without unduly straining the fiscal fabric of the Govt and simultaneously enabling long term investment funds for the development of economy.

The NPS is a highly innovative and sophisticated product and is based on the world's best practices in the pension sector involving disciplined saving, vigilant investment and its judicious draw down on retirement. It was initially launched for government and semi-government employees on 01.01.2004 to ring fence on the Govt's liability of Civil Servants (Defined Benefit) pension, which would have become unaffordable under the pay as you go system, marking a paradigm shift of transition to defined-contribution pension system.

All employees of the Central Government and of Central Government autonomous bodies, with the exception of the armed forces, are now covered by the NPS. Besides, 29 State Governments have also joined NPS in respect of their employees. As of 31.03.2015, over 4.1 million Government employees, from Central and State Governments, have already joined the NPS and the corpus (of their contributions & returns) has crossed Rs 73,000crore.

Subsequently NPS was extended to all citizens of India on voluntary basis w.e.f. 1st May, 2009. Any citizen of India between 18-60 years of age fulfilling minimum eligibility criteria can join the NPS. Subscribers are eligible for tax benefit.

The NPS is a well regulated and transparent scheme. It is portable across PFM, geographies and employments. It is technology driven. Subscribers can view their accounts online. It has laid down prudent investment norms for the fund managers, and their performance and portfolios are regularly monitored by the NPS Trust under the overall supervision of the PFRDA. The scheme offers complete flexibility in terms of choice of investment mix in respect of the percentage of the corpus that goes into equities, corporate bonds and government securities, with just a 50% cap on the exposure to equities in case of private sector.

Thus, Indian pensions market is nascent. At one end of the spectrum are Defined Benefit (DB) pension schemes of which the two main schemes are the pre-reform civil services pension scheme of the Centre/states (since replaced by the DC scheme under National Pension System for the new recruits) and the 'organised sector' social security scheme operationalised by the Employees' Provident Fund Organisation (EPFO). At the other end of the spectrum are the Defined Contribution (DC) Schemes, most important being National Pension System (NPS) introduced from January 2004.

In terms of assets under management, EPFO funds hold two-thirds of the share and private pensions and annuities one-third. Although NPS is still very small, it is gathering acceptance due to higher returns under the NPS schemes compared to all other options, The recent budget announcements relating to provision of choice to employees between PF and NPS , , singular I.T rebate up to Rs. 50,000 to NPS in addition to rebate available to other investments and general awareness will hopefully swing the preference to NPS schemes.

Chapter -III
BRIEF BACKGROUND ON NPS SCHEMES: A SHORT REVIEW

Pension Funds

"Pension Fund" means an intermediary which has been granted a Certificate of Registration by the Authority as a Pension Fund for receiving contributions, accumulating them and making payments to the subscriber in the manner as may be specified by the Authority.

(A) Government Sector: For managing the contributions of Government employees three (3) Pension Funds (PFs) were appointed by PFRDA in April 2012, which are as under:

(i) LIC Pension Fund Ltd
(ii) SBI Pension Funds Private Ltd.
(iii) UTI Retirement Solutions Ltd.

The investment management fee charged by PFs is 0.0102 per cent per annum.

(B) Private Sector: For managing the contributions of non-government employees eight (8) Pension Funds (PFs) were appointed by PFRDA w.e.f 01.08.2014

(i) SBI Pension Funds Pvt. Ltd.
(ii) UTI Retirement Solutions Ltd.
(iii) LIC Pension Fund Ltd.
(iv) Kotak Mahindra Pension Fund Ltd.
(v) Reliance Capital Pension Fund Ltd.
(vi) ICICI Prudential Pension Funds Management Co. Ltd.
(vii) HDFC Pension Management Co. Ltd.
(viii) Pension Fund to be incorporated by Birla Sun life Insurance Co

The investment management fee charged by PFs is 0.01 per cent per annum

Schemes of NPS

"Scheme(s)" means any scheme under National Pension System or a scheme of Pension Fund, which is regulated by Authority.

(i) Government schemes i)CG Scheme (ii)SG Scheme

(A) Private sector schemes:
(i) Scheme E (Tier I & Tier II)
(ii) Scheme C (Tier I & Tier II)
(iii) Scheme G (Tier I & Tier II)
(iv) NPS Lite*[3]
(v) Corporate-CG Scheme*

[3] * * Follow investment pattern applicable to schemes for Government employees.
*Corporate CG Scheme has been discontinued for new enrolment w.e.f. 12th February 2013.

YEAR ON YEAR GROWTH OF NPS IN LAST TWO YEARS

	Year 2012-13	Year 2013-14	Sep-14	Growth In March 2014 (%)
Total CG	17,313.71	24,172.08	29,905.34	**39.61**
Total SG	10,822.73	20,198.05	27,632.29	**86.63**
Total NPS Lite	596.67	843.33	1,230.90	**41.34**
Total Corporate CG	693.77	1,809.32	2,698.72	**160.80**
Total Tier I - E	167.95	355.56	512.09	**111.70**
Total Tier I - C	128.93	246.46	343.87	**91.16**
Total Tier I - G	244.81	408.97	575.27	**67.06**
Total Tier II - E	13.17	26.10	35.76	**98.16**
Total Tier II- C	15.23	24.27	29.76	**59.34**
Total Tier II - G	12.28	20.44	26.56	**66.43**
Total Fund Value	**30,009.24**	**48,104.57**	**62,990.57**	**60.30**

Scheme wise AUM of the Pension Funds as on March 31, 2014 (Rs in crore)

Pension Fund	NPS Schemes										
	Central Govt (CG)	State Govt (SG)	Corp CG	NPS Lite	E-I	C-I	G-I	E-II	C-II	G-II	TOTAL
SBI PF	9025	6892	1664	335	221	154	306	12	11	10	18629
UTI RSL	8082	6659	0	242	21	14	20	3	2	2	15045
LIC PF	7081	6661	146	252	20	12	8	0	0	0	14180
ICICI PF					64	45	47	7	9	6	177
Kotak PF				15	14	10	13	1	1	1	55
Reliance PF					15	10	13	2	1	2	44
HDFC PF					2	2	2	0	0	0	6
DSP PF					0	0	0	0	0	0	1
TOTAL	**24188**	**20211**	**1810**	**844**	**356**	**247**	**409**	**26**	**24**	**20**	**48136**

*The Corporate CG Scheme has been discontinued w.e.f. February 12, 2013

Returns

For the FY- 2013-14, the weighted average returns (since inception) for the NPS Schemes are given below:

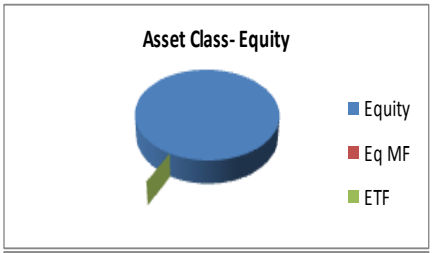
Name of Scheme	Compound Annual Growth Rate (since inception) in %
Central Government (CG) (w.e.f. April 01, 2008)	9.10
State Government (SG) (w.e.f June 25, 2009)	8.59
E (w.e.f. May 1, 2009)	9.20
C (w.e.f. May 1, 2009)	10.53
G (w.e.f. May 1, 2009)	7.93

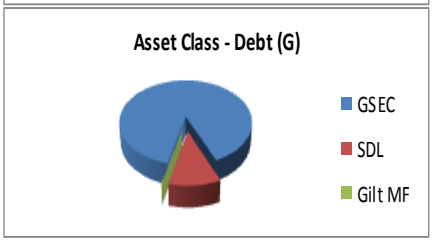
Note: The above returns are calculated based on scheme NAVs and the securities held under the schemes portfolio are valued on Mark-to-Market (MTM) basis.

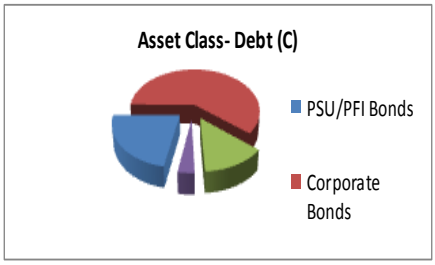
Figures in Crores

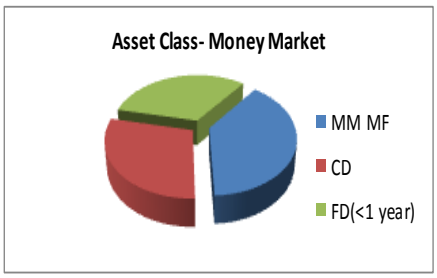
Asset Class wise classification of total AUM under all NPS Schemes

Asset Class	Product	Amount	Percentage
EQUITY	Equity	4,159.74	8.64%
	Eq MF	0.00	0.00%
	ETF	0.00	0.00%
	TOTAL	**4,159.74**	**8.64%**
Government Securities	GSEC	22,135.81	45.99%
	SDL	2,575.41	5.35%
	Gilt MF	8.94	0.02%
	TOTAL	**24,720.17**	**51.36%**
Corporate Debts	PSU/PFI Bonds	3,790.65	7.87%
	Corporate Bonds	10,301.74	21.40%
	Infra Bonds	2,252.44	4.68%
	FD(>1)	586.14	1.22%
	TOTAL	**16,930.97**	**35.17%**
Money Market	MM MF	343.01	0.71%
	CD	255.32	0.53%
	FD(<1 year)	283.74	0.59%
	TOTAL	**882.08**	**1.83%**
Non Current Assets	Cash & NCA	1,442.77	3.00%
Grand Total	G TOTAL	48,135.72	100.00%



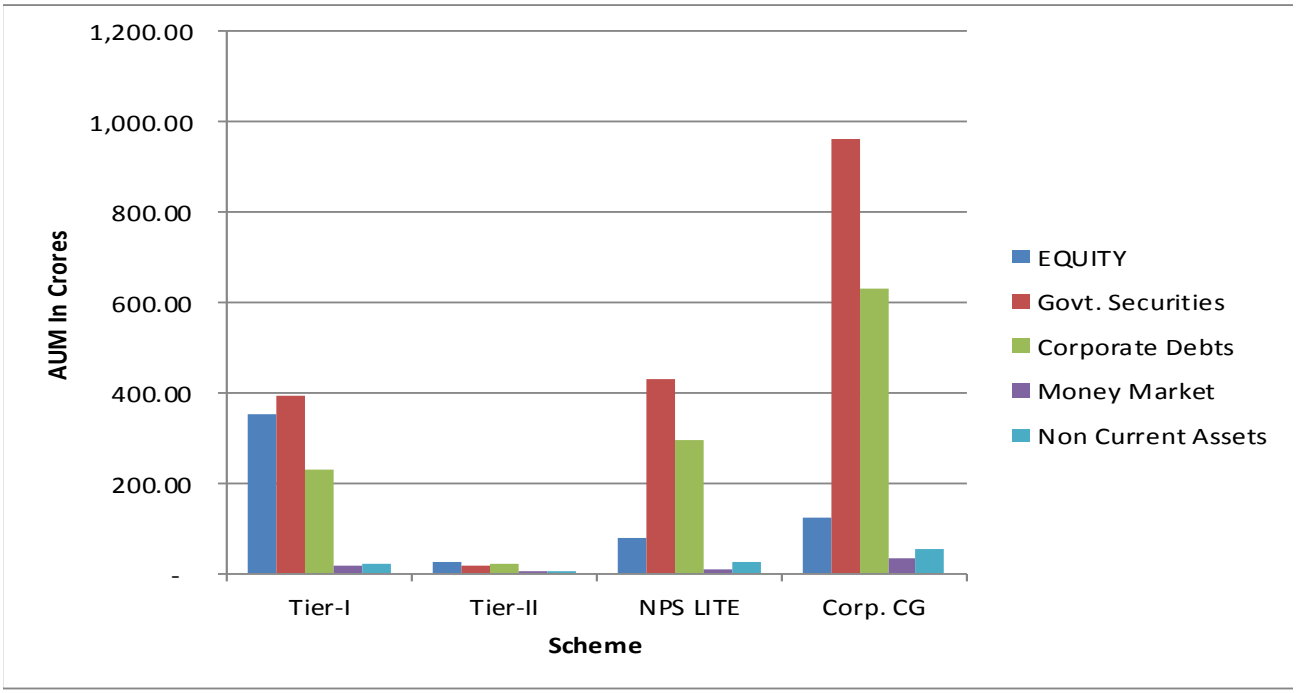






Asset Class wise classification of Scheme for Non-government Employees/unorganised sector/all citizen under NPS

		Consolidate (All Private				
	Tier-I	Tier-II	NPS LITE	Corp. CG	Total	%-age
EQUITY	350.97	25.70	77.96	124.88	579.51	15.51%
Govt. Securities	392.80	19.11	432.49	963.68	1,808.09	48.39%
Corporate Debts	231.46	22.62	296.67	632.47	1,183.21	31.67%
Money Market	16.10	1.82	9.45	34.13	61.50	1.65%
Non Current Assets	20.34	1.57	27.21	54.70	103.82	2.78%
Grand Total	1,011.67	70.82	843.78	1,809.86	3,736.13	100.00%



Chapter- IV
PENSION SECTOR: GLOBAL PERSPECTIVES

Private pension systems across geographies are facing serious challenges. The economic crisis constricted government's ability to finance pay-as-you-go public pensions, heightening role for private pensions in ensuring economic security for old-age.

Population ageing is leading not only to an increase in the number of people in retirement relative to the size of the working-age population, but also most importantly adding years that people spend in retirement; .. This may adversely impact the solvency of defined benefit (DB) pension plans and the adequacy of income flowing from defined contribution (DC) pension plans. DB pension funds are exposed to the longevity risk owing to future improvements in morbidity and life expectancy. If pension promises are calculated based on expected life expectancy the future liabilities will outgrow future assets. For DC pension funds, higher life expectancy unless retirement age is periodically adjusted would pronounce the, inadequacy of income to maintain the desired standard of living in retirement.

Additionally, low economic growth may constipate the overall resources (employer and employee contributions) available to finance retirement.

HIGHLIGHTS OF PENSION SYSTEMS AROUND THE WORLD
Source- OECD/ IOPS

- Assets accumulated by the main institutional investors in the OECD grew in 2013. Institutional investors, assets totalled to USD 92.6 trillion in 2013, with USD 34.9 trillion coming from investment funds, USD 26.1 trillion from insurance companies, USD 24.7 trillion from pension funds, USD 5.1 trillion from public pension reserve funds and USD 1.8 trillion from other investors. In 2013, pension funds confirmed their growing prominence among institutional investors, with a share of 26.7% of the total assets held by institutional investors.

- Asset-to-GDP ratio increased

The OECD weighted average asset-to-GDP ratio for pension funds increased from 77.1% of GDP in 2012 to 84.2% of GDP in 2013. The Netherlands reached the highest ratio at 166.3%.

- Pension funds achieved positive returns in 2013 in almost all countries reviewed notwithstanding uncertainties in the world economy and volatility in financial markets

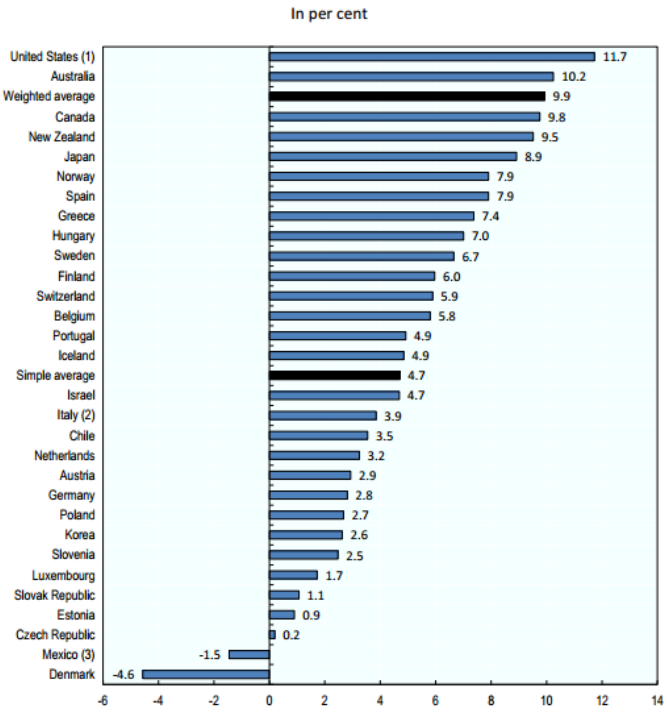
Pension funds in the OECD countries experienced on average annual real investment return rate of 4.7%, ranging from 11.7% for the highest performer (United States) to -4.6% for the lowest performer (Denmark). The strong performance across most equity markets in 2013 bolstered up the average investment returns in most countries. Most pension funds outside the OECD countries also earned positive returns in 2013, with an average annual real investment returns rate slightly above the OECD average (5.6%).

- Bonds and equities remain dominant asset classes

In most of the OECD and non-OECD countries for which IOPSreceived data, bonds remained by far the dominant asset class, accounting for around 52% of total assets on average, indicating an overall conservative stance. Countries like the United States, Australia, Chile and Poland showed significant portfolio allocations to equities, in the range of 40% to 50%. Pension funds tended to reduce the share allocated to equities compared to their pre-crisis level and reallocate part of this share to bills and bonds in a majority of OECD countries. Between 2007 and 2013, twenty-one OECD countries decreased the share invested equities, possibly an account of perceived lower returns during those years.

KEY ASPECTS

Figure 8. Pension funds' real net investment rate of return in selected OECD countries, Dec 2012 - Dec 2013



Note: For methodological notes see page 32 onwards.

Source: OECD Global Pension Statistics.

1. Despite uncertainties in the world economy and volatility in financial markets, pension funds achieved positive returns in 2013 in almost all OECD countries, with a real return greater than 4.5% in 16 OECD countries.

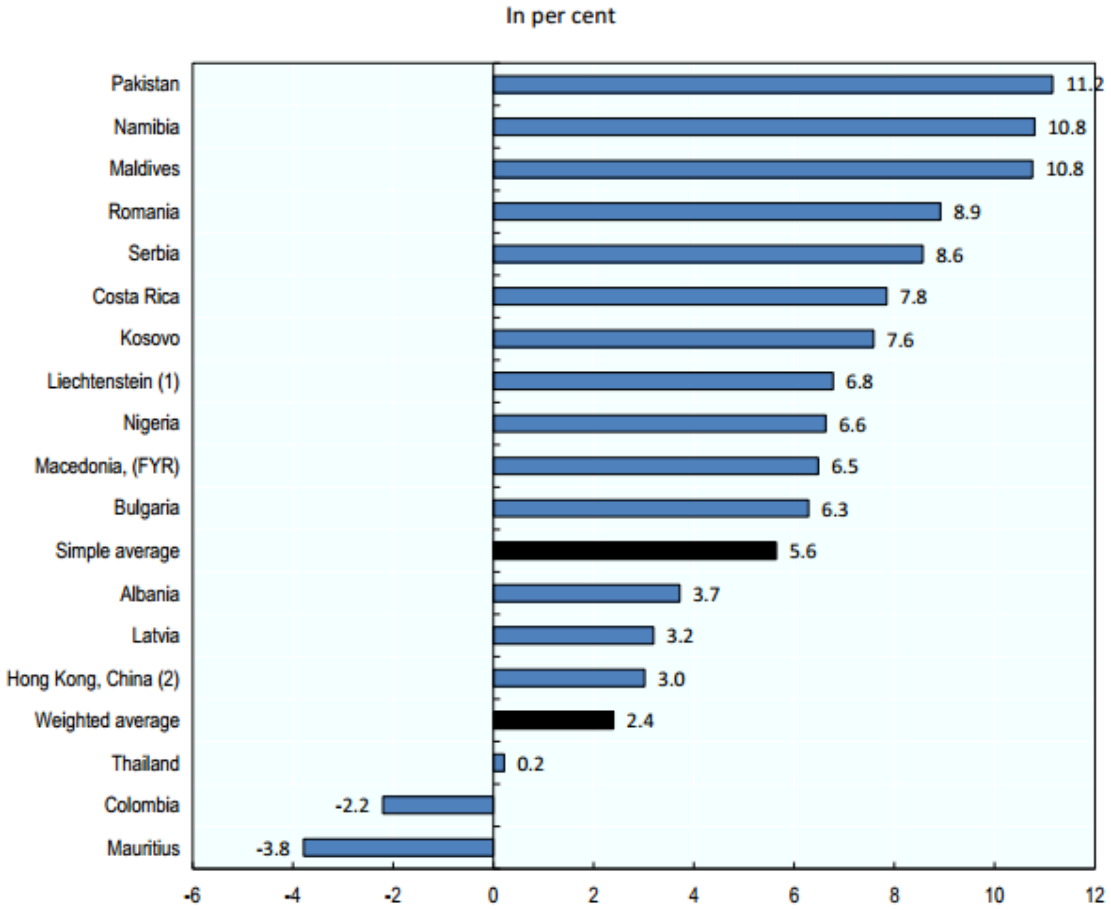
Table 1. Pension fund nominal and real 5-year geometric average annual returns in selected OECD countries

In per cent

Country	5-year average annual return	
	Nominal	Real
Netherlands	9.6	7.4
Canada	9.1	7.4
Mexico (1)	8.7	4.6
Chile	8.4	6.5
Israel	8.2	5.6
Iceland	8.1	3.3
United States	7.9	5.7
Norway	7.5	5.8
Belgium	7.6	5.5
Denmark	6.1	4.1
Estonia	5.3	2.8
New Zealand (2)	5.2	2.8
Switzerland	5.2	5.3
Poland	5.0	2.1
Luxembourg	4.9	2.5
Austria	4.9	2.6
Spain	4.6	2.7
Australia (3)	4.4	2.1
Germany	4.4	2.9
Italy	4.2	2.3
Slovenia	4.1	2.2
Portugal	3.9	2.2
Korea	3.7	1.1
Japan	3.6	3.8
Czech Republic	2.1	0.2
Slovak Republic	1.7	-0.3
Greece	1.5	-0.3

2. Pension funds in selected non-OECD countries experienced on average an annual, real rate of investment returns of 5.6%, slightly above the OECD average (4.7%). It ranges from 11.2% for Pakistan to -3.8% for Mauritius.

Figure 9. Pension funds' real net investment rate of return in selected non-OECD countries, Dec 2012 - Dec 2013



3. Over the last five years, all non-OECD countries with available information had a positive nominal average investment rate of return, with Pakistan experiencing the higher performance at 14.0%. In real terms, only Nigeria experienced negative average returns (-3.5%).

Table 2. Pension fund nominal and real 5-year geometric average annual returns in selected non-OECD countries

In per cent

Country	5-year average	
	Nominal	Real
Pakistan	14.0	3.2
Colombia	13.3	10.4
Romania	11.0	6.2
Serbia	9.9	2.1
Costa Rica	9.5	4.7
Hong Kong, China (1)	7.9	4.1
Former Yugoslav Republic of Macedonia	7.7	5.5
Nigeria	7.1	-3.5
Albania	6.7	4.0
Bulgaria	5.0	2.8
Thailand	4.2	1.1
Liechtenstein	3.1	..

4. <u>Pension Fund Investments</u>

- Twenty-one OECD countries invested more than 70% of their portfolio into these two asset classes viz shares and bill bonds at the end of 2013. The United States was the country where pension funds allocated the biggest share of their portfolios in shares in 2013, followed by Australia, Chile and Poland. In these four countries, pension funds' equity allocations were above the OECD weighted average of 40.3% of total investments.

- In half of the OECD countries, pension funds invested more than 50% of their assets in bills and bonds in 2013. The proportion of bills and bonds in pension fund portfolios was over 80% in two countries, namely the Czech Republic (86.5%) and Hungary (83.1%). Bills and bonds were more than 50% of the portfolio in 2013 in a further fifteen OECD countries: Chile, Denmark, Germany, Greece, Iceland, Israel, Luxembourg, Mexico, Norway, Poland, Slovak Republic, Slovenia, Spain, Sweden and Turkey
- As in OECD countries, bills, bonds and equities were also the main asset classes in which pension funds in non-OECD economies invested. Bills and bonds represented more than 50% of the asset allocation of pension funds in 2013 in fourteen non-OECD countries. Pension funds in Costa Rica invested all their assets in bills and bonds, due to a broad range of products and good yields. Equities were predominant in pension funds' portfolios in three countries, accounting for more than 50% of total investments: Namibia, Kosovo and Hong Kong (China).
- Pension funds tended to reduce the share allocated to equities compared to their pre-crisis level and reallocate part of this share to bills and bonds in a majority of OECD countries. Between 2007 and 2013, twenty-two OECD countries decreased the share invested equities. Among them, eighteen reallocated part of the related amounts to bills and bonds.
- In some OECD countries, the inverse trend was observed between 2007 and 2013. Pension funds in Luxembourg, Mexico, Poland and Switzerland reduced their allocations to bills and bonds and reallocated part of it to equities, the biggest reallocation to equities being observed in Luxembourg.
- In the OECD, foreign investment in entities located abroad (including investment in local currencies) tends to be greater in countries that belong to the Euro area
- In a large number of OECD countries, pension funds were not constrained in their allocation in shares, bills and bonds. In 2013, restrictions in the allocation to shares can be found in fourteen OECD countries, while four OECD countries have restrictions in investments in bills and bonds

<u>Global Pension Assets Study 2014 BY TOWER WATSON</u>

1) At the end of 2013 pension assets for the 13 markets in the study were estimated at USD 31,980 bn, representing a 9.5% rise compared to the 2012 year-end value.
2) Pension assets relative to GDP reached 83.4% in 2013, which represents a 7.8% increase from 2012 ratio of 75.6%.
3) The largest pension markets are the US, UK and Japan with 59.0%, 10.2% and 10.1% of total pension assets in the study, respectively.
4) In USD terms, the pension assets growth rate of these three largest markets in 2013 was 12.0%, 13.3% and 2.2% respectively.
5) It is important to caveat the impact of the currency exchange rates when measuring the growth of pension assets in USD, as in many cases the results vary significantly with those in local currency terms.

DB/ DC ALLOCATION

1) During the last 10 years DC assets have grown at a rate of 8.8% pa while DB assets have grown at a slower pace of 5.0% pa.
2) Currently DC assets represent 47% of total pension assets, in line with the established trend towards the growing dominance of DC pensions.
3) DC is dominant in Australia and Netherland, Japan and Canada, both historically only DB countries, are now showing signs of a shift to DC.

ASSET ALLOCATION AT THE END OF 2013

1) At the end of 2013 the average global asset allocation of the seven largest markets was 52% equities, 28% bonds, 1% cash and 18% other assets (including property and other alternatives).

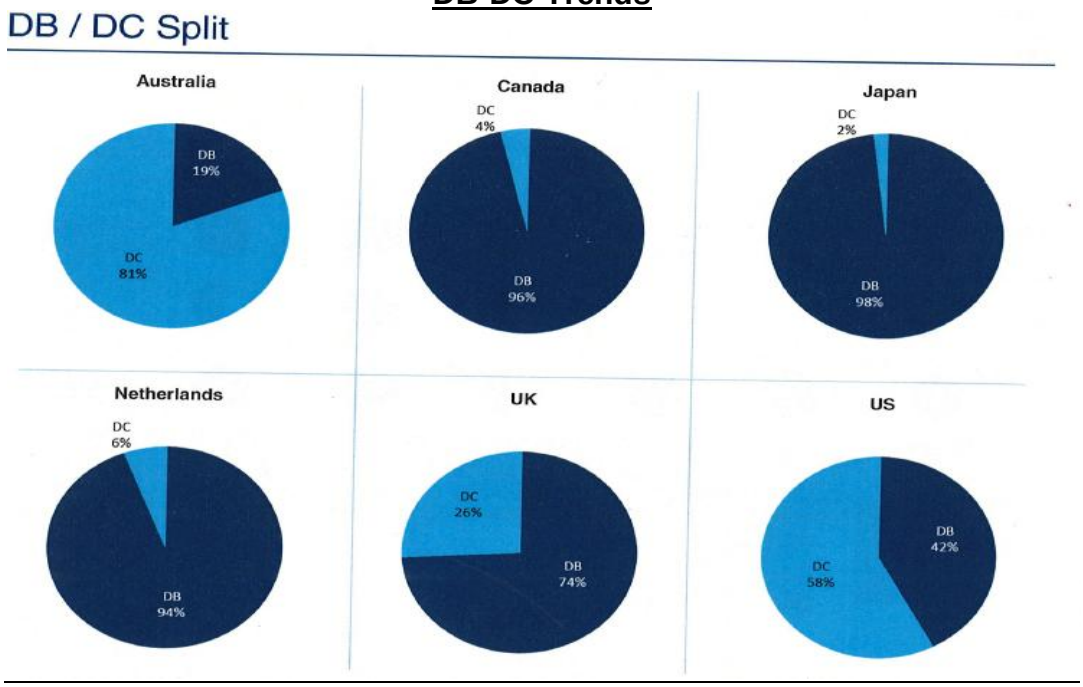
2) The asset allocation pattern has changed somewhat compared to the end of 2012. Allocations to equities increased while allocations to bonds and other investments fell. Allocations to cash remained somewhat the same.

3) The US, Australia and the UK have higher locations to equities than the rest of the P7 markets. More conservative investment strategies – more bonds and less equities –occur in the Netherlands, Japan and Switzerland.

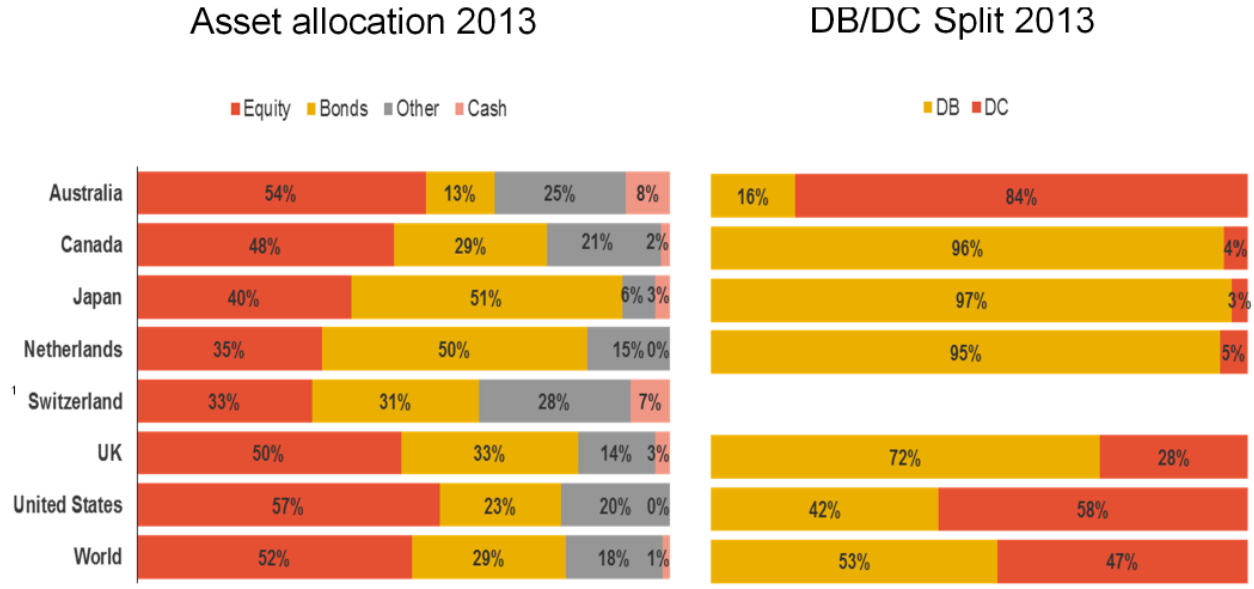
Key findings – figures

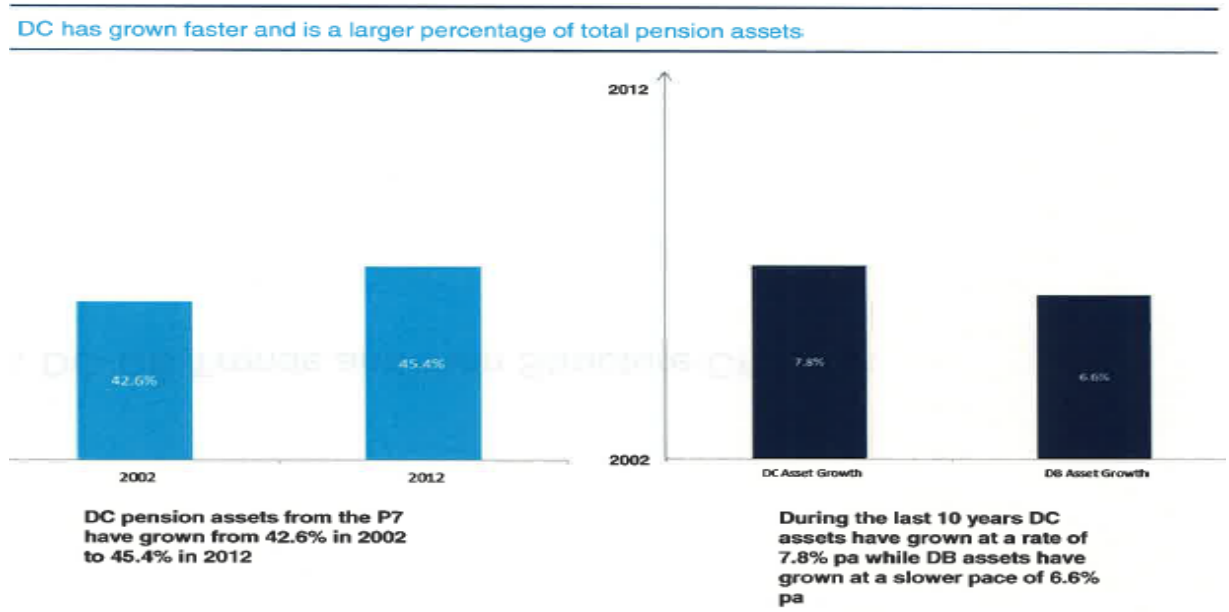
	Total Assets 2013 (USD billion)	% GDP in bn USD*
Australia	1,565	105%
Brazil[1]	284	13%
Canada	1,451	80%
France	169	6%
Germany[2]	509	14%
Hong Kong	114	41%
Ireland	130	59%
Japan[3]	3,236	65%
Netherlands	1,359	170%
South Africa	236	67%
Switzerland[4]	786	122%
UK	3,263	131%
US[5]	18,878	113%
Total	31,980	83%

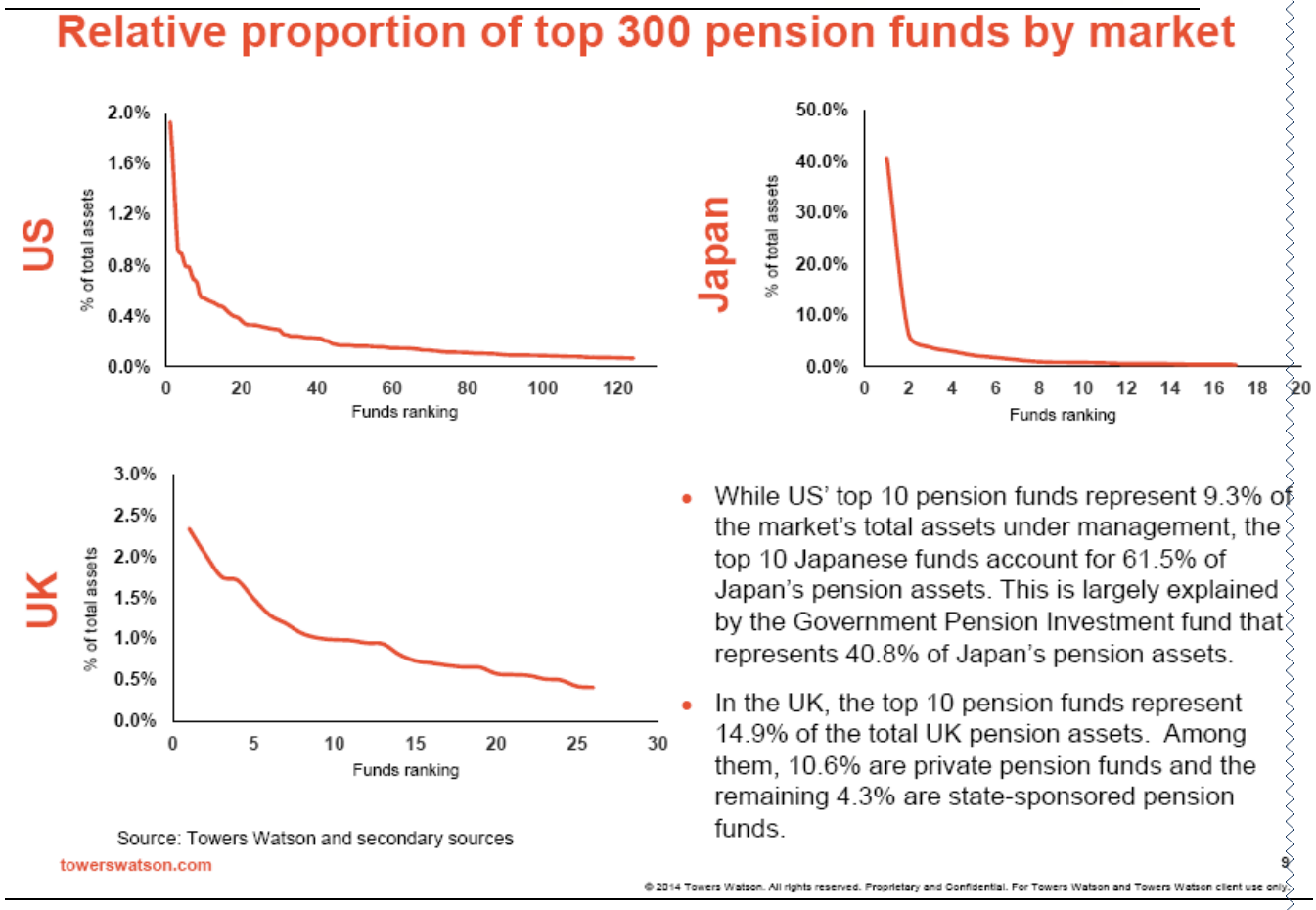
DB-DC Trends



Asset Allocation





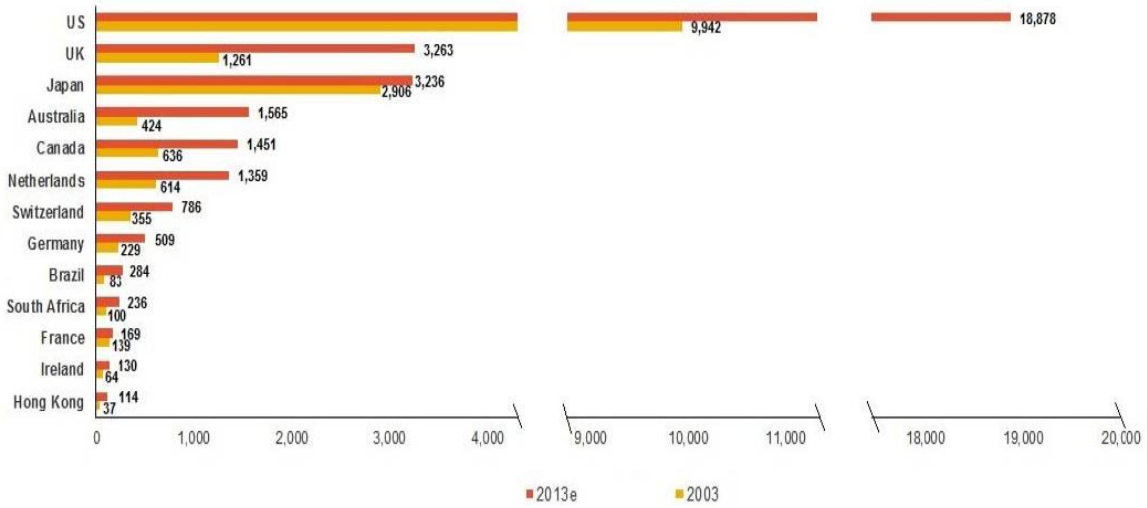


Global Pension Assets

- Global pension assets in 2013 are estimated to have reached USD 31,980 bn, an increase of 9.5% since the end of 2012.
- The US continues to be the largest market in terms of pension assets, then followed, at significant distance, by UK and Japan. Together they account for over 79.4% of total assets.
- The smallest markets are, in descending order, France, Ireland and Hong Kong.

Market	Total Assets (USD billion) Year end 2003	Total Assets (USD billion) Year end 2013e	Growth rate (USD) 10-year CAGR
Australia	424	1,565	14.0%
Brazil	83	284	13.1%
Canada	636	1,451	8.6%
France	139	169	2.0%
Germany	229	509	8.3%
Hong Kong	37	114	12.1%
Ireland	64	130	7.4%
Japan	2,906	3,236	1.1%
Netherlands	614	1,359	8.3%
South Africa	100	236	9.0%
Switzerland	355	786	8.3%
UK	1,261	3,263	10.0%
US	9,942	18,878	6.6%
Total (USD)	16,787	31,980	6.7%

Evolution 2003-2013 – USD billion



Global pension assets growth rates

Compound annual growth rates – *USD*

- In 2013 global pension assets are estimated to have increased by 9.5%, compared to a 6.9% increase seen in 2012, measured in US dollar terms.
- During the last 10 years, the most rapidly growing pension markets have been Australia[3] (14.0%), Brazil (13.1%) and Hong Kong (12.1%) when measured in US dollar terms.
- On the other hand, Japan and France showed the slowest rates of growth in US dollar terms since 2003 (1.1% and 2.0% respectively).

[1] For France and Canada, change in methodology in 2008/2009. For UK it was in 2012.
[2] 1-year growth does not capture net contributions in markets
[3] In the case of Australia, the existing contribution rates as well as the fact that retirees can cash in all their benefits (i.e. no compulsion to lock in or annuities), can have a significant impact on expected asset growth.

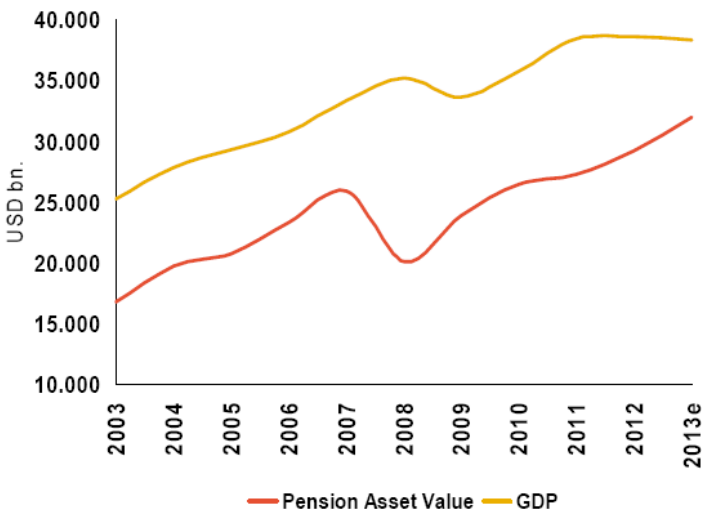
Market	1-year (31/12/11-31/12/12) Actual	Growth rates to 2013e (USD)		
		1-year (31/12/12-31/12/13) CAGR[2]	5-year (31/12/08-31/12/13) CAGR	10-year (31/12/03-31/12/13) CAGR
Australia	4.4%	6.0%	17.1%	14.0%
Brazil	2.6%	-14.4%	8.6%	13.1%
Canada[1]	5.7%	2.1%	11.4%	8.6%
France[1]	9.3%	10.3%	2.0%	2.0%
Germany	4.7%	8.7%	6.1%	8.3%
Hong Kong	12.7%	12.1%	10.6%	12.1%
Ireland	13.6%	22.1%	7.7%	7.4%
Japan	-14.5%	2.2%	1.3%	1.1%
Netherlands	16.3%	8.5%	9.8%	8.3%
South Africa	15.1%	-6.5%	10.9%	9.0%
Switzerland	10.5%	6.8%	9.1%	8.3%
UK[1]	15.7%	13.3%	17.9%	10.0%
US	10.0%	12.0%	9.9%	6.6%
World	6.9%	9.5%	9.7%	6.7%

Source: Towers Watson and secondary sources

Global pension assets vs. GDP

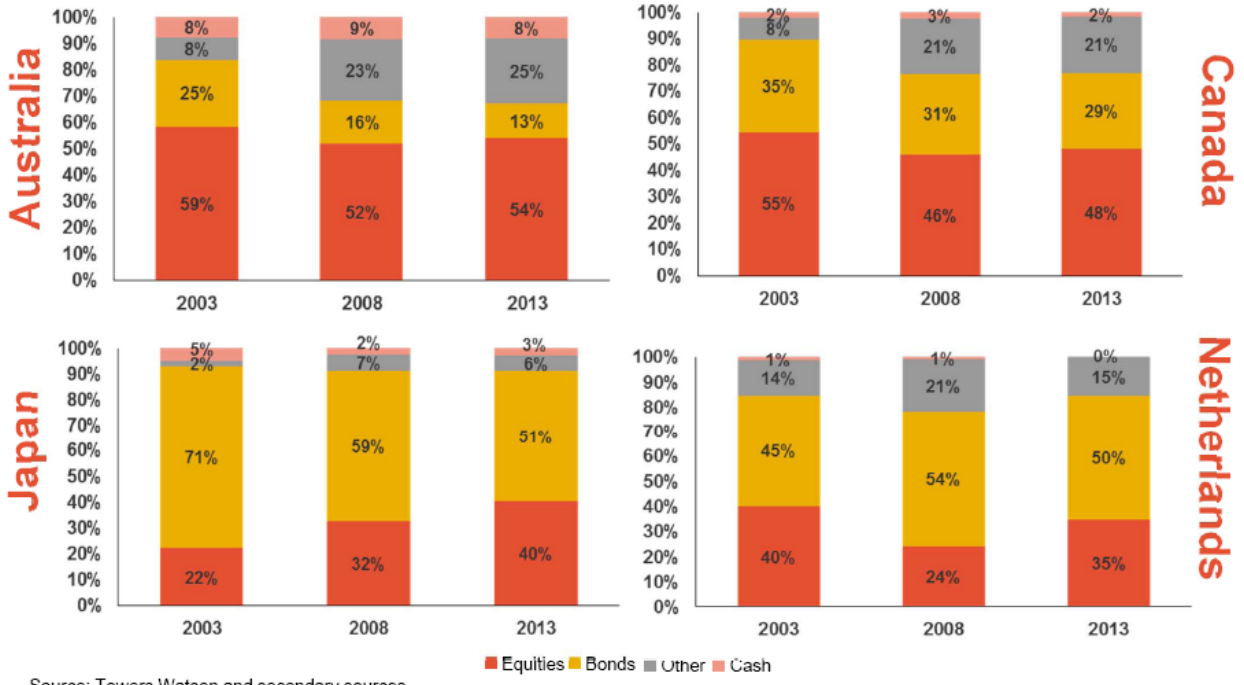
In USD

- Global pension assets to GDP ratio (P13) increased from 75.6% at the end of 2012 to 83.4% at the end of 2013.
- The Netherlands has the highest ratio of pension assets to GDP (170%) followed by the UK (131%), Switzerland (122%) and the US (113%) .
- During the last 10 years, the pension assets to GDP ratio grew the most in the UK and the Netherlands (64 and 56 percentage points respectively). It declined in France, Brazil and Japan during the same period.



Pension asset allocation

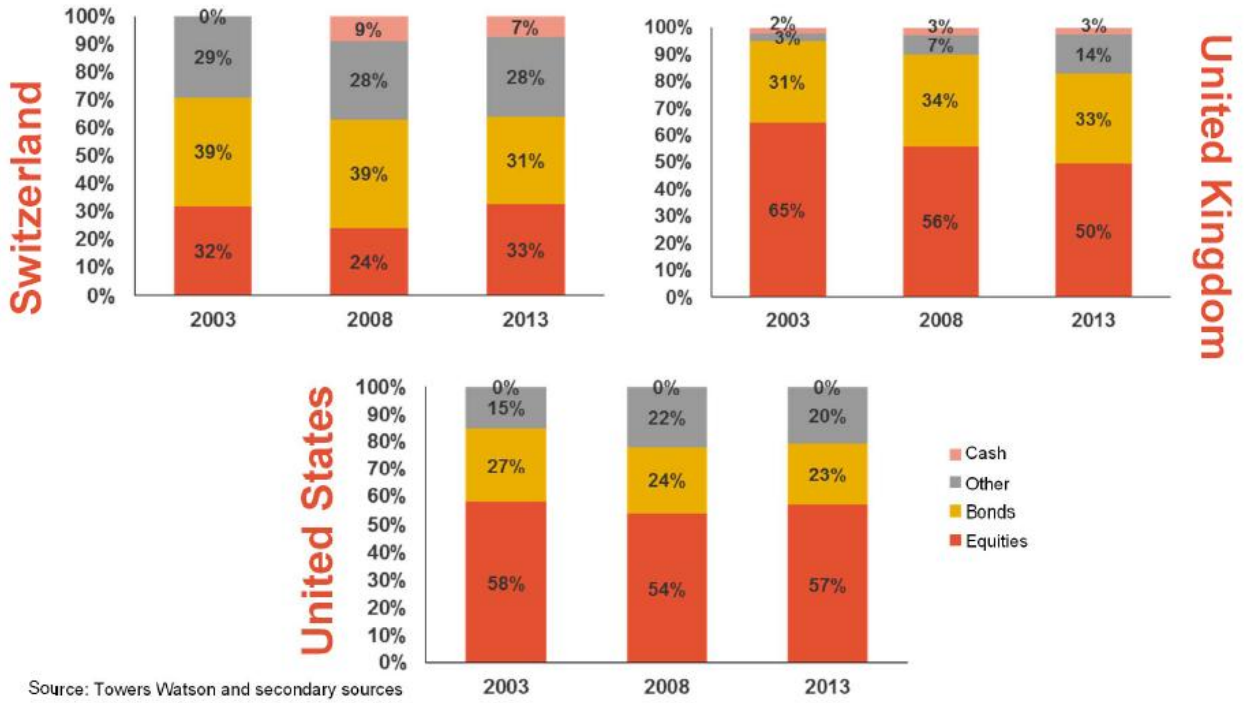
Aggregate – end 2003 versus end 2008 versus end 2013



Source: Towers Watson and secondary sources

Pension asset allocation

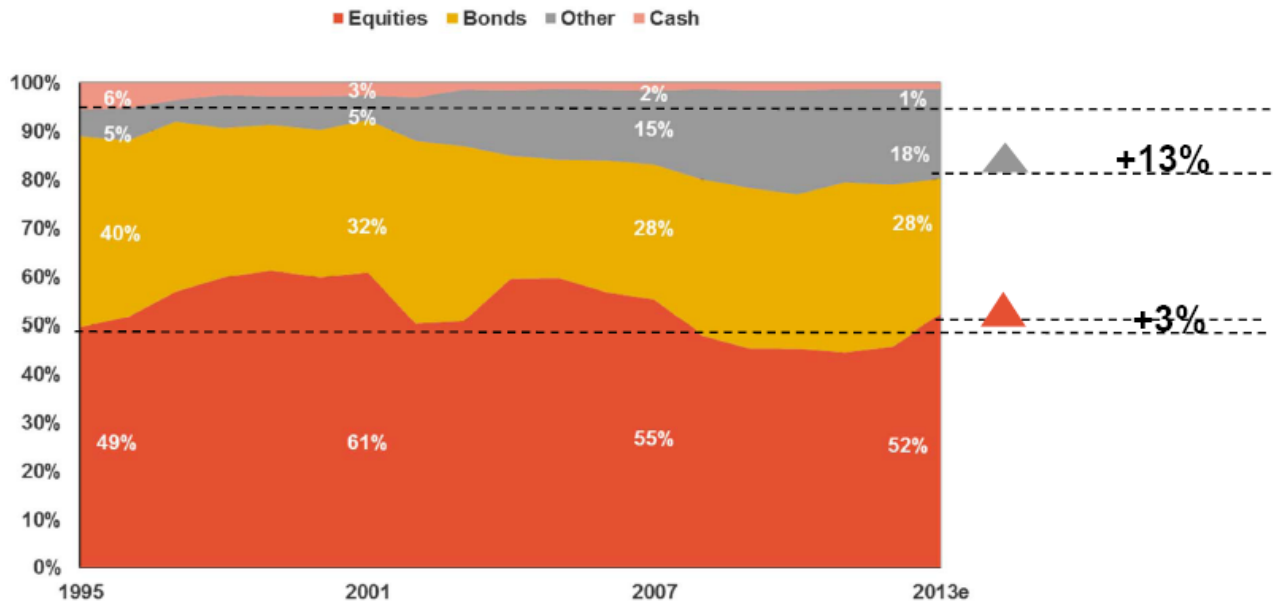
Aggregate – end 2003 versus end 2008 versus end 2013



Source: Towers Watson and secondary sources

Pension asset allocation

Aggregate P7 asset allocation from 1995 to 2013

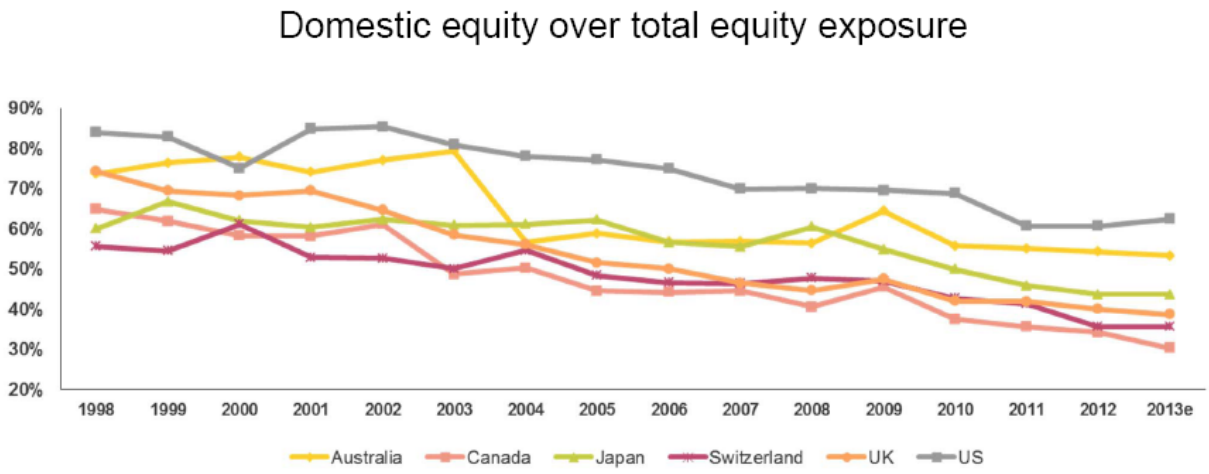


- Since 1995 bonds and cash allocations have been reduced to a varying degree while equity allocation and assets in alternative areas have increased from 49% to 52% and from 5% to 18% respectively.

Source: Towers Watson and secondary sources

Pension asset allocation

Domestic equity exposure

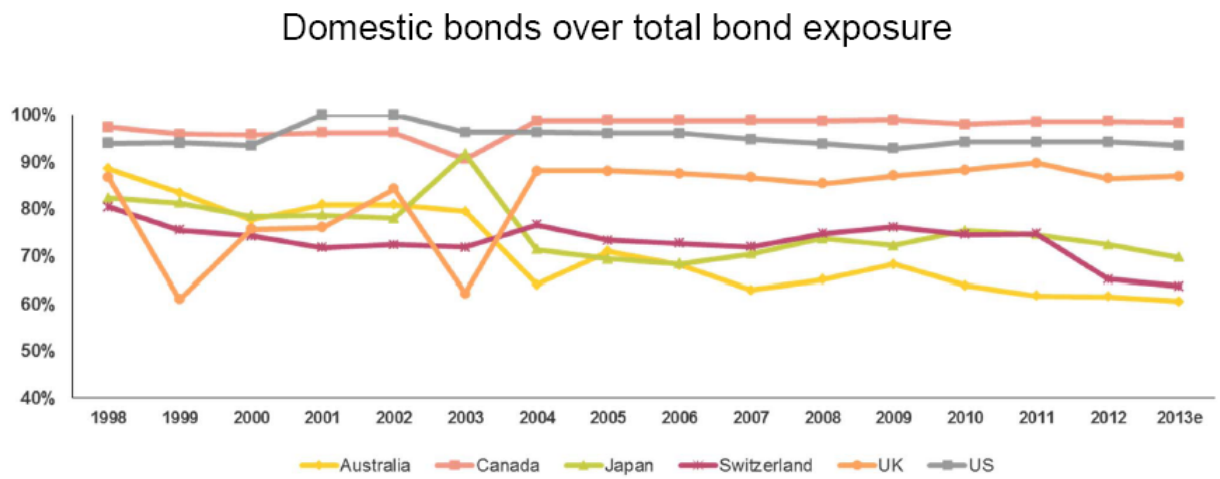


- There is a clear sign of reduced home bias in equities, as the weight of domestic equities in pension assets portfolios has fell, on average, from 64.7% in 1998 to 44.1% in 2013.
- The US pension market remains the most dependent market on domestic equities while Canada has been the least dependent market on domestic equities over the last 10 years.

Source: Towers Watson and secondary sources

Pension asset allocation

Domestic bonds exposure



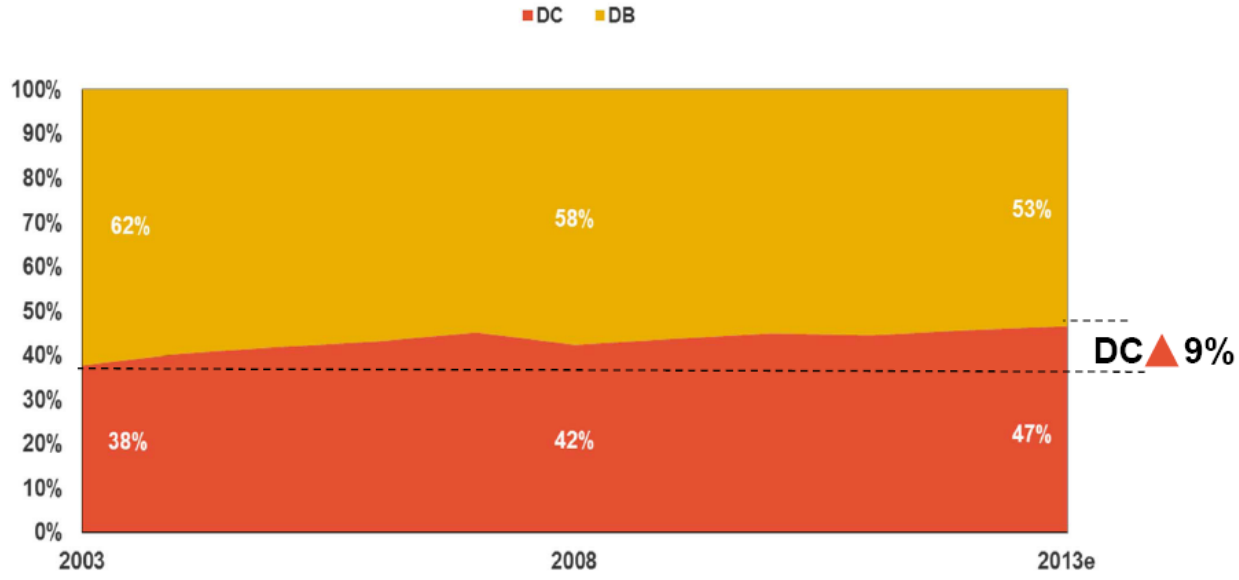
- Regarding fixed income investment, the relationship between domestic and foreign bonds has remained high. On average, the allocation to domestic bonds as a percentage of total bonds was 88.2% in 1998 and 79.8% in 2013.
- Canada and the US have most of their fixed income investments in domestic bonds, while Australia is the market with more foreign fixed income exposure than the rest of the markets in the P7.

Source: Towers Watson and secondary sources

Note: The Netherlands is not considered

DB/DC asset split

Change over the last 10 years



Source: Towers Watson and secondary sources

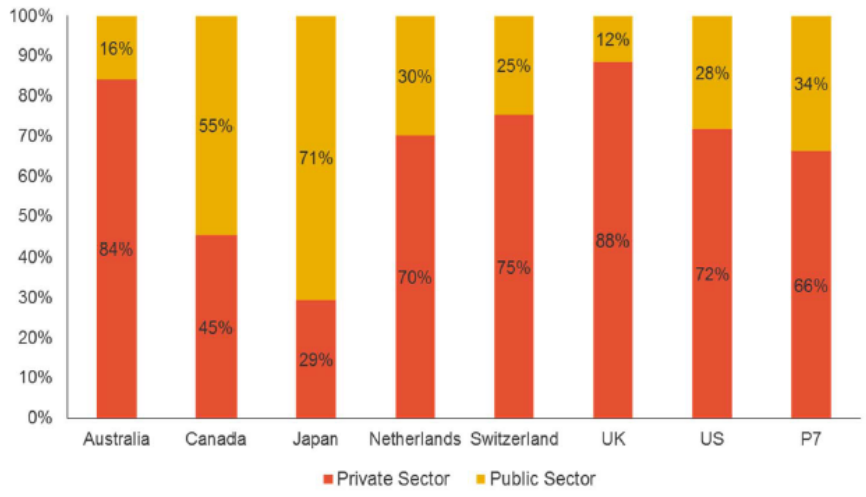
DB/DC asset split

Change over the past years

- The markets with a bigger proportion of DC assets relative to DB in 2013 are Australia with 84% and the US with 58%.
- Japan, Canada and the Netherlands have only 2.7%, 4.3% and 5.1% respectively of DC assets in 2013.
- DC pension assets from the P7 have grown from 37.7% in 2003 to 46.6% in 2013.
- During the last 10 years DC assets have grown at a rate of 8.8% pa while DB assets have grown at a slower pace of 5.0% pa.

Public vs. private sector

By markets – estimate values at 2012



- Considering the pension assets of the P7 group, 66% of them are held by the private sector and 34% by the public sector.
- In the UK and Australia the private sector holds the biggest portion of pension assets, accounting for 89% and 84% respectively of total assets in 2012.
- Canada and Japan are the only two markets where the public sector holds more pension assets than the private sector, holding 55% and 71% of total assets respectively.

Source: Towers Watson and secondary sources

Methodology does not provide an estimate for 2013

Chapter-V
INVESTOR REGIMES: CHANGING ORDER

The regulation and supervision of pension assets has twin objectives: first, to ensure safety and security of the assets under management and second, to create an environment of delivering optimal returns at an acceptable level of risk. Hence, the management and supervision and regulation becomes crucial, in particular for DC schemes, where the entire risk rests with the subscriber. There is widespread consensus among most economists that it is the asset class allocation decision, rather than specific stock selection, which defines long-run investment performance.

There are two main alternative approaches to asset allocaton, viz (a) "prudent investor regime," which enjoin portfolio diversification and broad asset-liability matching, and (b) "quantitative portfolio regime", which limit holdings of certain types of asset within the portfolio. Both seek to ensure adequate diversification and liquidity of the asset portfolio, but in radically different ways. The underlying chosen regime determines who, the regulator or the pension fund's governing body, will be responsible for establishing the asset allocation parameters for pension investment management . Thought these may be, polar opposites but there are certain gradations between the two, as is revealed by the experience of a range of OECD countries.

A quantitative portfolio regime specifies quantitative limit on holdings of a given asset class. Typically, those instruments whose holding is limited are those, which are perceived to be carrying higher risk say of credit risk, price volatility and/or low liquidity etc.

A prudent investor rule stipulates that investments should be made in such a way that they are considered to be handled "prudently" (as someone would do in the conduct of his/her or her own affairs). The aim is to ensure adequate diversification, thus protecting the beneficiaries against insolvency of the sponsor (in case of insurance or DB schemes) and investment risks.

The logic of the quantitative restriction is that prudence is equal to safety ONLY, where security of assets is measured instrument-by-instrument according to a fixed standard. The focus is placed on the investment itself. The overall risk of a life insurance or pension portfolio must not go beyond a certain level, while allowing for the desire of life companies or pension fund sponsors to be as competitive or low-cost as possible. This leads to a quantitative view of prudence which is focused on the idea that the investment itself can be tested as to whether or not the decision was prudent at the time. The model effectively tests the investment category, the asset class and the outcome of the investment. Such quantitative regulation of portfolio distributions entail limits on holdings of assets with relatively volatile nominal returns, low liquidity or high credit risk, such as equities, venture capital/unquoted shares and real estate, as well as foreign assets, even if their mean return is relatively high. The aim is to protect beneficiaries against insolvency of operators and investment risks. On the other hand, explicit allowance is by definition not made for potentially offsetting correlations between types of financial instrument. It thereby overrides the free choice of investments. It may be added that there is a strong link to the civil law tradition typical of Continental Europe, where rules are codified, rather than in the common law tradition of the Anglo Saxon countries.

The prudent investor rule is focused on the behaviour of the person concerned. The process of making the investment is the key test of prudence. More specifically, the test in this case is of the behaviour of the individual investor (holder of pension account), the pension fund manager, and the process of decision making.

In reality, the polar extremes are rarely adopted. Notably, prudent investor rules are typically accompanied by a quantitative restriction on self-investment, while some countries with asset restrictions also introduce concepts of maximising safety and profitability to their investment laws. Furthermore, there are commonly restrictions on the proportion of the assets of an investor that may be exposed to a single borrower or piece of real estate. On the other hand, quantitative restrictions are rarely extended to require specific methods and targets for maturity matching.

The general rationale against quantitative portfolio regulations is put succinctly by European Commission (1999), namely that they are "in the way of optimisation of the asset allocation and security selection process, and therefore may have led to sub-optimal return and risk taking". The following are some of the documented arguments which propel movement towards "Prudent Investor regime":-

- In terms of risk and return optimisation, they are likely to enforce holdings of a portfolio below the efficient frontier, because they typically insist on high proportions of bonds and domestic assets

- they focus unduly on the risk and liquidity of individual assets and fail to take into account the fact that at the level of the portfolio, the default risk and price volatility can be reduced by diversification, while liquidity risk depends on the overall liquidity position of the investor and not the individual instruments;

- Does not take into account the differences in duration of the liabilities (which may differ sharply between companies and between funds, as well as over time), and related changes in risk aversion;

- renders difficult or impossible the application of appropriate asset-liability management techniques for maturity matching, because such techniques may require sharp variations in the portfolio between equities to bonds, and use of derivatives;

- The stipulated operative limits will force the institution either to hold low-yielding assets or expose itself to unnecessary risks;

- they are inflexible and cannot be changed rapidly in response to changing conjectural economic circumstances and movements in securities, currency and real estate markets (The threat to some insurance companies from the fall in inflation, which has driven bond yields below policy guarantees made in an era of high inflation, are a case in point. Arguably, a more diversified portfolio with more "real assets" and hedging could have offered better protection)

- they also may find it difficult to adapt to structural changes in financial asset markets such as the reduction in government bonds outstanding in the UK and US and the development of corporate bond markets in the euro area;

- if enforced strictly, they may give incentives to asset managers to hold proportions of risky assets which fall well short of the limits, to avoid breaching them when markets perform well and prices rise;

- they encourage strategies to be conducted so as to conform with legal restrictions rather than attaining good returns, reducing risk and other desirable objectives. Notably they may limit tactical asset allocation;

- they encourage national governments to treat institutions as means to finance budgetary requirements, in a way that could not occur under a prudent investor rule;

- they reduce the extent to which the diversification benefits of international investment may be attained, and can even be said to expose subscribers to currency risk, given that they will want to spend some of their income on foreign goods and services, and the domestic currency may depreciate;

- conversely, whereas regulations on domestic assets may seem appropriate in a small domestic market where there is high volatility and undiversifiable risk in equities, so as to ensure adequate diversification and portfolio liquidity, the widening and deepening of capital markets may make the regulations less necessary;

- portfolio regulations are not needed to bolster solvency in the case of policies which pass risk to the consumer, such as unit linked life policies and defined contribution pension funds. Prudent diversification is still warranted, but could be mandated by prudent investor rules;

- limits on exposures to single borrowers are unnecessary for the most part, since diversification mandated by prudence would require small stakes in any case.
- There may also be deleterious effects of portfolio regulations on the asset management industry and the economy as a whole:

- there is no incentive for the institutional investor to nominate investment managers with skills to achieve higher return and lower risk, by equity and international investment;

- competition among asset managers is discouraged if their main function is to meet quantitative asset restrictions;

- the development of the industry per se is likely to be set back, especially if entry by foreign managers is restricted

- quantitative restrictions may lead to inefficient allocation of capital and hence hold back economic growth and employment;

- in particular, limits on unquoted shares and venture capital (including limits on the proportion of a firm's equity that can be held) can hinder the dynamic small firm sector, which generate the bulk of new employment;

- they increase costs for employers providing pensions or life insurance, hindering job creation.

Some possible exceptions may be made to this argument, which may apply notably in emerging market economies:

- there could be a rationale for portfolio regulations (albeit not minima) if fund managers as well as regulators are highly inexperienced and the markets volatile and open to manipulation by insiders. They, in a sense , ensure portfolio diversification in a rough and ready way, and avoid risk becoming excessive in such cases. A corollary is that restrictions may justifiably be eased as expertise develops;

- this point applies more generally where regulators have initial doubts about internal controls in institutions, as well as about the industry's capacity for self-regulation and related governance structures;

- compliance with portfolio limits is more readily verified and monitored by supervisors than for prudent investor rules. The latter requires a high degree of transparency of institutions, and strict supervisory controls on investor malpractice (such as occurred in the Maxwell case) as well as on self-regulatory bodies. There may also be legal difficulties with enforcing prudent investor regulations, e.g. in civil law countries;

- the regulations may be used as a safeguard against imprudent companies, and as a signal to the market and consumers;

- following the general case above, regulation should become more liberal as financial markets become more sophisticated and mature, and should be reviewed frequently;

- governments may, by use of asset restrictions, seek to avoid bearing the burden of bailing out individuals from losses following imprudent investments in products such as personal pensions, where the individual bears the risk;

- further issues arise in the context of capital outflow controls in developing countries. As noted by Fontaine (1997), exchange controls have in the past been - justifiably - imposed during foreign exchange crises to deal with capital flight, to avoid a sharp and costly overshooting of the currency, but often kept in looser form once normal conditions were re-established;

- foreign investment may be seen as risky in the absence of appropriate derivatives markets for risk control;

- some countries also argue that restrictions are needed to boost development of domestic capital markets;

- even in OECD countries, limits on self investment are considered appropriate to prevent concentration of risk;

- meanwhile a difficulty with prudent investor rules lies in the fact that court judgements (or desire to avoid litigation) may lead to narrow interpretations of risk and safety. Avoidance of individually high-risk assets that could improve the overall risk and return profile of the portfolio may actually be contrary to beneficiary protection.

- Such interpretations may also encourage a focus on portfolio indexation. Indexing to narrow core market indices artificially drives up the value of the firms that are included and may increase the volatility of the investors' assets.

THE PRUDENT INVESTOR RULE IN PRACTICE

In this section we provide some detail about the UK and US

UK APPLICATION OF THE PRUDENT INVESTOR RULE.

In the United Kingdom, the duties and powers of pension trustees derive from three sources: 1) the trust document and rules of the pension scheme; 2) the general law applicable to trustees, which is a mixture of legislation – such as the Trustees Act of 1925 – and case law; and 3) the law specific to trustees of occupational pension schemes, found largely in the Pensions Security Act 1993 and rules as applied to pensions.

Pensions Act 1995.

Generally, in carrying out their powers and obligations, pension trustees in the United Kingdom are bound to exercise reasonable care and to show the prudence and diligence that an ordinary man of business would in the exercise of his/her own affairs. In the words of a 19th century court, the duty is to "take such care as an ordinary prudent man would take if he were minded to make an investment for the benefit of other people for whom he felt morally bound".[20] In accordance with common law principles, pension trustees also have a general duty to invest the pension scheme's assets and not allow them to sit idle, unless immediately required for the payment of benefits or other purposes.

In addition to these common law obligations, the powers and duties of pension trustees with respect to asset management are further codified at Sections 33-36 of the Pensions Act 1995, as follows:

1. Trustees and any person to whom the function has been delegated, have a duty of care to exercise skill in the performance of the investment function, exercising any special skills they may possess.

2. When choosing investments, the trustees must have regard for a) the need to diversify investments in so far as appropriate for the pension scheme; b)the suitability of the type of investment for the pension scheme and c)the suitability of the particular investment; the trustees also must obtain proper advice on their investments, and d) act in accordance with their statement of investment principles.

3. Trustees must prepare and maintain a written statement of investment principles that a) identify the kinds of investments to be held; b) identify the balance between different kinds of investment; c) address the nature and extent of risk anticipated in the investment portfolio; d) identify the expected return on investments; and

4. Subject to these rules, the trustees' powers to invest are broad, and include the power "to make an investment of any kind as if they were absolutely entitled to

the assets of the scheme".

5. Trustees may delegate investment functions to a fund manager legally authorised to undertake investment business in UK; the trustees, however, must assure the fund manager has appropriate knowledge and experience, and monitor the fund manager's performance.

The UK law also restricts employer-related investments ("self-investment") – using an explicit, quantitative limit to do so. Specifically, these investments are restricted to 5% of the pension scheme's assets. Loans to the employer are totally prohibited.

The UK law generally takes a "whole portfolio approach". Specifically, trustees and their investment managers are judged by the standards of portfolio management theory current at the relevant time, and the level of risk in the portfolio as a whole will be looked at, rather than on a per investment basis.

US APPLICATION OF THE PRUDENT INVESTOR RULE.

As previously noted, the US rule is set forth in the Employee Retirement Income Security Act of 1974 (ERISA). ERISA Section 404 sets forth the general standards of fiduciary conduct, requiring that plan trustees and other fiduciaries to the pension plan discharge their duties in the following manner:

1. "Solely in the interest of plan participants and beneficiaries."

2. "For the exclusive purpose of providing benefits" and "defraying reason-able expenses of administering the plan".

3. "With the care, skill, prudence and diligence under the circumstances then prevailing that a prudent man acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character with like aims."

4. "By diversifying investments… so as to minimize the risk of large losses, unless under the circumstances it is clearly prudent not to do so."

5. In accordance with plan documents.

Unlike UK law, the US pension statute does not expressly require pension plan fiduciaries to establish an "investment policy". The US Department of Labor, however, has strongly encouraged their preparation and use.

To the extent a plan fiduciary delegates investment responsibility to an investment manager, that manager is subject to the prudent investor rule

Although the ERISA prudent investor rule essentially codifies the common law, US courts have in fact interpreted this codification of the law to be a more exacting standard. One often-quoted judicial opinion stated that the duties of an ERISA trustee are "the highest known to the law".

Similar to the UK law, the US law also supplements the general standard by

explicitly addressing the issue of self-investment. It places significant quantitative limits (generally 10% of plan assets) on a pension plan's acquisition and holding of employer securities and real property. It also expressly prohibits numerous specified transactions between a plan, plan fiduciaries and affiliated "parties in interest".

ERISA takes a "whole portfolio approach" to plan asset management. The US Department of Labor specifically clarified that the statutory standard should be interpreted to mean that the "prudence of a particular investment decision should not be judged without regard to the role that the proposed investment or investment course of action plays within the overall portfolio".

In interpreting the statute, both the US Department of Labor and the courts have stressed the importance of "process". The Department's regulatory pronouncements indicate that fiduciaries should give "appropriate consideration" to all relevant factors in assessing an investment; employ proper methods to investigate, evaluate, and structure investments; act in a manner in accordance with others who have a capacity and familiarity with such matters; and exercise independent judgement when making investment decisions. The regulator has steadfastly refused to develop any list of investments or investment techniques that might be considered *per se* permissible or impermissible.

ADDITIONAL COUNTRIES THAT EMPLOY THE PRUDENT INVESTOR RULE.

Most countries employing a version of the prudent investor rule similar to that used in the United Kingdom and the United States have an Anglo-Saxon common law legal tradition. These would include among others Australia, Canada, and Ireland. Certain non-Anglo-Saxon countries also use a prudent investor approach, including principles such as diversification and dispersion in their regulatory framework. These would include, for example, Italy, Japan and the Netherlands, among others. In some cases, the prudent investor rule is accompanied by certain quantitative restrictions. However, some of those restrictions – such as those that require diversification or limit self-investment – are, in effect, an articulation of aspects of the prudent investor rule.

As already noted, both the United Kingdom and the United States require that pension assets be invested on a diversified basis. In each case, however, this diversification requirement is stated as a general principle, rather than in terms of specific quantitative rules. Similarly, the Netherlands also includes a general diversification requirement in its laws. By contrast, Canada imposes certain quantitative limitations related to diversification, for example, by limiting real estate investment to 5% of a pension fund's portfolio and limiting fund investment in foreign assets to 30%. Italy permits only up to 15% of a pension fund to be invested in one investment.

Countries that employ a prudent investor rule also frequently employ explicit quantitative restrictions on self-investment. Examples include Australia (5%), Canada (10%), Netherlands (generally 5%) and, as already noted, the United Kingdom (5%); and the United States (generally 10%). Ireland requires disclosure when the 5% threshold is crossed. The EU Directive applies a 5% limit to investment in the "sponsoring undertaking" and a 10% limit to investment in entities within the "same group" as the sponsoring undertaking. Non-Anglo-Saxon countries with a prudent investor approach also sometimes include similar

explicitly quantitative restrictions on self-investment.

Of course, the more explicit and numerous the restrictions placed upon the composition of a pension fund's portfolio, the less distinguishable the prudent investor rule becomes from the quantitative limitation approach employed by many other countries. Indeed, countries employing a combination of the two approaches present a significant challenge in comparing investment outcomes under the two methods of investment regulation.

An international study of investment limits imposed in various countries is attached at Annexure 1

PRUDENT INVESTOR RULE CAN VARY IN APPLICATION.

It is important to observe, based on the discussion above, that in practice the prudent investor rule is interpreted, calibrated and applied in a variety of ways. This can be demonstrated first by comparing the rule as historically applied to its contemporary form; second, by comparing the details of the contemporary rule in the United Kingdom with those in the United States; and third, by comparing the rule as applied to pensions with the rule as applied in non-pension trust contexts.

Historically, as identified above, the prudent investor rule focused on the preservation of capital and an extreme aversion to risk-taking; the rule included per se prohibitions on investing in a number of asset categories; and courts applying the rule reviewed investment decisions on an investment-by-investment basis. By contrast, contemporary interpretations of the rule strike a wholly different balance between capital preservation and risk-taking, and emphasise the investment management process over the actual investments made. Today's courts, reviewing the prudence of any particular investment, do so in the context of a fiduciary's management of the entire trust portfolio.

Similarly, the details of the rule vary from jurisdiction to jurisdiction. For instance, the United States incorporates a "prudent expert" standard in its pension laws, whereas the United Kingdom uses an "ordinary man of business" standard. Likewise, some countries will more explicitly state various aspects of the rule than others will. For example, the United Kingdom explicitly requires fiduciaries to develop a statement of investment policy to guide investment decision making. In the United States, however, there is no explicit rule on this point.

Even within a country, the precise parameters of the rule may vary with the context. As noted above, this is true of the nature of fiduciary obligations gene-ally. For example, the fiduciary obligations of a corporate director to a corporation and its shareholders are different from the fiduciary obligations of a trustee to a trust and its beneficiaries. This is also true within the trust context itself. The precise rules applied to pension trusts – in both the United Kingdom and the United States – differ from those applied to non-pension trusts. Both the United Kingdom and the United States have developed prudent investor rules specific to pensions or added rules that complement the basic rule. Within the United States, the common law rule as applied to bank trusts and other institutions has not developed in lock step with the pension rule.

More generally, in designing a prudent investor rule applicable to pension asset management, some jurisdictions rely more on a "purer" form of the rule, albeit

often supplemented with rules providing additional specificity to the general standard *(e.g.,* the United Kingdom, the United States); other jurisdictions appear to use a combined approach that also relies, in part, on quantitative restrictions *(e.g.,* Canada, certain US public (state and local government) plans, EU directive.)

ADAPTABILITY OF THE PRUDENT INVESTOR RULE.

Notwithstanding the differences, in its con-temporary application in the United Kingdom and the United States, the prudent per-son rule has shown itself to be broadly applicable, flexible and resilient. This may be because the contemporary prudent investor rule is set out as a set of principles intended to lead to prudential decision-making, rather than to dictate outcome. The adaptable nature of the rule in application is both its principal strength and weakness.

Adaptability is needed to accommodate the wide variety of objectives and circumstances that trustees and other fiduciaries may face. It is also important in light of the rapid pace of change in today's financial marketplace. For example, our concept of risk and risk management techniques have changed dramatically over time and will continue to do so. Today's trustees and fiduciaries must assess a constant stream of new developments in the financial markets, new investment products and advances in practice and theory employed by asset managers. The prudent investor rule has provided fiduciaries the flexibility they need to make investment management decisions in this ever-changing environment.

APPLICABILITY TO MEMBER-DIRECTED PENSION PLANS.

The discussion thus far has focused on the application of the prudent investor rule to the investment management of pension fund assets. The rule applies, however, much more broadly. For example, the rule continues to have a significant role to play in the management of defined contribution vehicles with member-directed accounts. Thus, under the rule in the United States, plan or fund trustees are required to select and review investment options available to plan members. In carrying out such responsibilities, trustees are expected to assure the availability of an appropriate array of investment choices for members, considering the composition of the membership and their needs, the costs associated with each available investment and whether or not the investment is being adequately managed. In doing so, trustees to whom the prudent investor rule applies may establish an investment policy and bench-marks by which to measure and monitor the performance of each investment option, replacing them when appropriate.

To Conclude, as the markets and economies mature, there is a perceptible shift towards " Prudent Investor regime " from quantitative restrictions, directed to yield optimum returns to subscriber instead of overtly stressing on perseverance of capital. A prudent investor approach is a standard that measures a course of conduct and not an investment outcome. Nevertheless, such approach is often accompanied by an implicit or explicit presumption that diversification of investments is a key indicator of prudence. The prudent investor rule, in effect, allows the free market to operate throughout the investment process while ensuring, along with solvency regulations and appropriate decisions regarding contributions in the light of market conditions, that there is both adequacy of assets and appropriate levels of risk. Rather than the focus being on the external rules, the onus is on internal controls and governance structures in which the authorities may have confidence. The authorities correspondingly require information on these aspects rather than purely focusing on the composition of the asset portfolio, as is feasible with quantitative restrictions. The beauty of the approach lies in its flexibility, with which it is being implemented in various countries. Reference in this regard is made to Annexure I

CHAPTER VI
NPS INVESTMENT GUIDELINES : A REVIEW

As economies, markets and systems evolve, so must regulation. What worked in the previous decade may not necessarily be relevant for the current environment. For example, the regulatory structure has to take into account the changing nature of risk, especially risk that emanate elsewhere and sweep across porous global financial boundaries. Comprehensive work has been done in risk-predictive and risk-mitigation models. Regulation has to so evolve that it takes into account extensive changes being fashioned in corporate governance theory and practice and other related areas. Dynamic markets, like moving targets, cannot be regulated through static policies. Regulations have to evolve concurrently and keep pace with the development of markets.

It is also time that regulators moved away from micro-management of companies/funds and their business practices and focus more on big picture issues. In fact, the regulators should leave micro-management of investment to the investment committees of individual companies/funds.

A defined contribution (DC) scheme, such as the NPS, which maintains individual retirement accounts where pensioners bear the investment risk, must not only maximise pension wealth, but also ensure that the return of pensioners reported, as net asset value of units, are relatively smoothened. This means special care should be taken to ensure that the volatility of returns, which is also an important parameter, is monitored regularly.

INVESTMENT NORM FOR NPS FOR GOVT SECTOR- CG-SG/ NPS LITE

The investment norm prescribed by DEA for Non-Govt provident funds etc, which was last modified by DEA in August 2008 and was made effective from April 1, 2009 is being used for the Central government and State government employees covered under the National Pension System (NPS). The same is currently under revision by DFS. The revised investment norms to be implemented w.e.f 01.04.2015.

For managing the contributions of government employees, PFRDA appointed three pension fund managers (PFMs) in April 2012 – namely, LIC Pension Fund Ltd, SBI Pension Funds Private Ltd, and, UTI Retirement Solutions Ltd. The applicable annual investment management fee is only 0.0102% p.a.

INVESTMENT NORM FOR NPS FOR PVT SECTOR

The non-government private sector subscribers have the option of three schemes -- “E” or equity market instruments, “C” or credit risk bearing fixed income instruments and “G” or government securities. Subscribers are free to switch across schemes as well as PFMs once in a year free of charges, if they so desire.

Broadly, the instruments approved for investments by PFMs are as under:

i. Central Government Bonds and State Government Bonds

ii. Equity shares listed on BSE or NSE on which derivatives are

available or are part of BSE Sensex or Nifty Fifty Index

iii. Fixed Deposits of scheduled commercial banks

iv. Debt securities issued by Bodies Corporate including scheduled commercial banks and public financial institutions

v. Credit Rated Public Financial Institutions/PSU Bonds

vi. Credit Rated Municipal Bonds/Infrastructure Bonds / Infrastructure Debt Funds

vii. Money Market instruments including liquid schemes of mutual funds.

.The above schemes have enabled indirect participation of subscribers in the financial markets, who would have otherwise remained bereft of its benefits. Incentives in the form of tax breaks are given to subscribers. The exit is allowed from the age of 60 years and has been kept flexible keeping the interests of the subscribers in mind, albeit with 40% compulsory annuitisation of the accumulated corpus.

PFMs are active participants in the markets as they have to constantly monitor and conserve the scheme portfolio. PFMs have to be proactive as the scheme portfolio is marked to market and subscribers are allotted units based on the NAV of the portfolio. Generation of reasonable returns by PFMs on the scheme portfolio is a reflection of the market's potential and has a direct bearing on subscriber motivation.

As contributions to NPS are considered long term investments, the selection of instruments in each scheme is based on the PFM's risk-return perception, subject to the objectives of the scheme. While building the scheme portfolio, PFMs are broadly guided by credit quality of investments, tenor/ maturity of instruments, and returns. Risks related to investments are mitigated through stringent internal procedures and controls by PFMs and through regular monitoring by PFRDA/NPS Trust.

INVESTMENT PATTERN UNDER NPS FOR PRIVATE CITIZENS

The investment guidelines for NPS for private citizens allow investment in government securities (asset class G), corporate bonds (asset class C) and equities (asset class E) in various proportions (subject to condition that investment in equity cannot exceed 50% of the investible funds). For subscribers not exercising any choice, their funds are invested under the —auto choice, which is based on life-cycle investment choice.

Allocation of funds across asset class for "Auto choice"

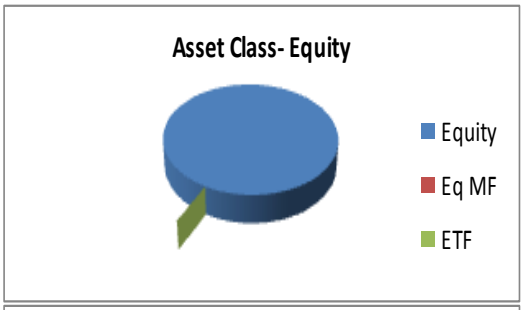
Age (In Years)	Asset Class E (%)	Asset Class C (%)	Asset Class G (%)
Up to 35	50	30	20
36	48	29	23
37	46	28	26
38	44	27	29
39	42	26	32
40	40	25	35
41	38	24	38
42	36	23	41
43	34	22	44
44	32	21	47
45	30	20	50
46	28	19	53
47	26	18	56
48	24	17	59
49	22	16	62
50	20	15	65
51	18	14	68
52	16	13	71
53	14	12	74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

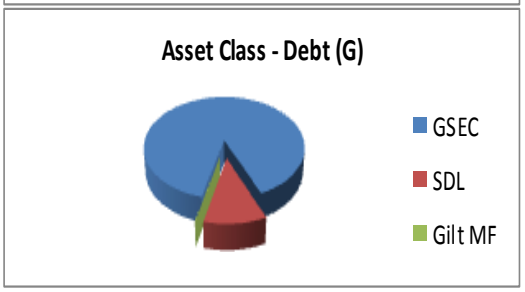
The following table shows the existing exposure of government securities under NPS.

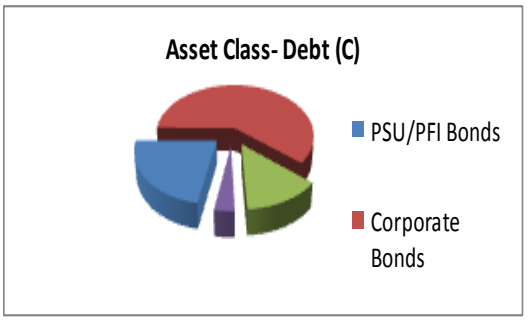
Figures in Crores

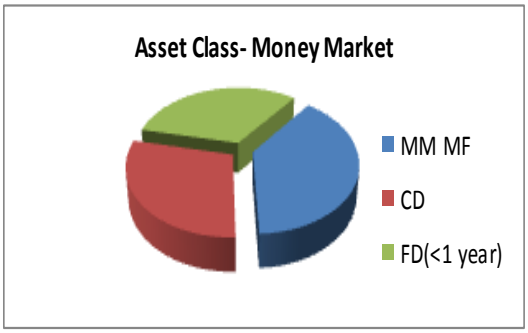
Asset Class wise classification of total AUM under all NPS Schemes

Asset Class	Product	Amount	Percentage
EQUITY	Equity	4,159.74	8.64%
	Eq MF	0.00	0.00%
	ETF	0.00	0.00%
	TOTAL	**4,159.74**	**8.64%**
Government Securities	GSEC	22,135.81	45.99%
	SDL	2,575.41	5.35%
	Gilt MF	8.94	0.02%
	TOTAL	**24,720.17**	**51.36%**
Corporate Debts	PSU/PFI Bonds	3,790.65	7.87%
	Corporate Bonds	10,301.74	21.40%
	Infra Bonds	2,252.44	4.68%
	FD(>1)	586.14	1.22%
	TOTAL	**16,930.97**	**35.17%**
Money Market	MM MF	343.01	0.71%
	CD	255.32	0.53%
	FD(<1 year)	283.74	0.59%
	TOTAL	**882.08**	**1.83%**
Non Current Assets	Cash & NCA	1,442.77	3.00%
Grand Total	G TOTAL	**48,135.72**	**100.00%**









The table throws up two important findings. One, the total exposure to equity is barely 8.64%, with corporate debt close to the upper limit of 37%.Two, Investments in Govt bonds is highest at 51%. It can be inferred from the above that while pension funds seem to have an appetite for fixed income securities yielding higher returns than government bonds, they are yet to fully embrace the equities culture. This becomes all the more evident when we compare the performance of the NPS private sector schemes which, unlike the government schemes, are invested separately in each investment category. The table below shows that Scheme C (fixed income) has consistently outperformed scheme G

(government securities) as shown in data from pension fund managers (PFM).

PENSION FUND MANAGERS' PERFORMANCE FOR SCHEME C AND SCHEME G SINCE INCEPTION (AS ON SEPT 30, 2014)

Compound Annual Growth Rate							
Scheme	**For the period ending 31.03.2009**	**For the period ending 31.03.2010**	**For the period ending 31.03.2011**	**For the period ending 31.03.2012**	**For the period ending 31.03.2013**	**For the period ending 31.03.2014**	**For the period ending 30.09.2014**
CG	**12.02%**	**12.06%**	**10.72%**	**9.41%**	**9.99%**	**9.11%**	**9.73%**
SG		**8.09%**	**9.51%**	**8.43%**	**9.62%**	**8.59%**	**9.41%**
E		**15.71%**	**11.28%**	**4.44%**	**5.20%**	**9.20%**	**12.84%**
C		**9.57%**	**10.76%**	**10.81%**	**11.81%**	**10.53%**	**10.84%**
G		**8.02%**	**10.36%**	**8.69%**	**10.05%**	**7.93%**	**8.79%**
Corp CG							**8.91%**
NPS Lite							**10.76%**
Pvt. Sect overall							**9.15 %**

It is clear that corporate fixed income securities and equities are more attractive investment options when compared with government securities, which yield a very low real rate of return due to high inflation in India. Therefore, given the persistence of inflationary pressures in the economy and the near-negative real yields available on gilts, there is an urgent need to shift asset allocation from government securities to corporate bonds and equities

It may be mentioned that the corporate debt (fixed income) category of investments includes

(i) corporate debt securities of not less than 3 years tenure, (ii) term deposits of not less than 1 year duration, and, (iii) rupee bonds having outstanding maturity of at least 3 years. Corporate debt (category i) requires investments to be made in securities with an investment in at least AA rating . It is to be noted that corporate long-term infrastructure debt would qualify under category (i) due to the 3-year tenure requirement.

Considering that (a) infrastructure represents the most urgent, long-term financing need of the nation, and, (b) pension funds are a source of mobilizing long term , which are typically invested by the fund managers over a longer horizon, there is a duration match between pension funds and infrastructure funding. With appropriate credit enhancement mechanisms for infrastructure debt, a substantial part of the annual flow of pension funds could potentially be invested in infrastructure debt, subject to the normal risk provisions.

The long term nature of pension funds, the robustness of equity markets and the existence of equity risk premium in stock markets over the longer horizon present a strong case for greater investment in equities. Studies have shown that —equity risk premium -- the excess return of stock markets over the risk-free rate -- exists in many developed countries as is evident from historical stock returns data. The —equity risk premium in India from 1981 to 2006 has been estimated on a geometric mean basis at 8.74%. Similar experience of existence of —equity risk

premium has been documented for many OECD countries for which the data of more than 100 years is now available.

EQUITY

India's high-growth, high-inflation environment makes equities more attractive than fixed income securities. The optimal investment strategy would therefore be one more similar to that of the UK – where equity has been favoured by institutional investors because inflation has historically been high – than that of, for example, Germany, where inflation has been low for last five decades. In fact, regulatory intent in the mature economies to liberate insurance and pension fund managers from a directed investment regime has helped them deliver positive real rate returns, something that has eluded Indian investors.

PRESENCE OF EQUITY RISK PREMIUM IN INDIA

In the —equity risk premium study by Varma and Barua[4], the equity risk premium, defined as the excess return of the stock markets over the risk free rate, has been estimated for the Indian capital markets. BSE Sensex was used to derive the stock market index by narrowing the stock universe to highly traded stocks, adjustment for self-selection bias, removal of the outliers, incorporation of dividend and a weighted adjustment for revision of the Sensex in 1996. During the pre-reform period, the risk-free rate was determined based on estimates of financial repression using the call market rate, real interest rates pre and post-deregulation and a comparison of the US and Indian interest rates. From 1995 onwards, the risk-free rate was estimated as the yield on the 1 year T-Bill. Linear interpolation was used to determine the risk free rate from 1992 to 1995.

The risk premium in India from 1981 to 2006 has been estimated on a geometric mean basis at 8.74% (Varma and Barua). The study has found that there has not been a significant difference in the equity risk premium between the pre-reform (8.96% from 1981-1991) and post-reform period (8.58% from 1991-2006). However, the volatility in returns has been found to increase from 20% to 25% between the pre-reform and post-reform periods.

In a different study[5], the equity risk premium has been estimated for various countries for long historical periods. In the US, the risk premium (excess of the real market return over the risk free rate) has been estimated at 7% for the period of 1947 to 2000. Similarly in other countries, the equity risk premium has been estimated using the similar methodology -- stock market return over the risk free rate (treasury bill rate).

Country	Time Period	Equity Risk Premium
United States	(1947-2000)	7.00%

[3] **A First Cut Estimate of the Equity Risk Premium in India: Jayanth R Varma & Samir K Barua; IIM Working Paper Number 2006-06-04, June 2006, http://www.iimahd.ernet.in/~jrvarma/papers/WP2006-06-04.pdf**

[5] **The Equity Premium: A Puzzle; RajnishMehra& Edward C Prescott; http://www.artsci.wustl.edu/~cedec/azariadis/teaching/e589Sp08/papers/MehraPrescott_jme85.pdf**

United Kingdom	(1947-1999)	4.60%
Japan	(1970-1999)	3.30%
Germany	(1978-1997)	6.60%
France	(1973-1998)	6.30%
Sweden	(1919-2003)	5.50%
Australia	(1900-2000)	8.70%

It is noteworthy that taken together, the United States, the United Kingdom, Japan, Germany, and France accounted for more than 85% of capitalised global equity value at the time of the study in 2006. In the same study, the question of why there exists such as a large equity risk premium has been examined. While modern portfolio theory and the standard model for estimating the value of marginal utility to the investor of the excess stock returns during good and bad states of the economy do not seem to fully explain why such a large equity premium it is widely held by most economists that the equity premium that has been discovered in the historical data across countries is statistically significant.

Similarly the following two tables highlight the favourable impact that any reduction in the mandated investment in government securities and the consequent increase in equity/corporate bonds can have on the return from a portfolio of, say, Rs 1000 crore.

Return on Investment of Rs. 1000 crore as per present allocation					
	%age investment	Amount invested in Crores	Return	Corpus after 30 years	Absolute Return in Crores
Government Securities	50	500	0.0879	6261	5761
Debt securities	40	400	0.1084	8769	8369
Equity	10	100	0.1284	3749	3649
Total	**100**	**1000**		**18779**	**17779**

Return on Investment of Rs. 1000 crore as per revised allocation					
	%age investment	Amount invested in Crores	Return	Corpus after 30 years	Absolute Return in Crores
Government	25	250	0.0879	3130	2880

Securities					
Debt securities	25	250	0.1084	5481	5231
Equity	50	500	0.1284	18744	18244
Total	**100**	**1000**		**27355**	**27354**

Thus, rejigging the portfolio resulted in increase in Pension wealth by 46%.

Hence, the era of directed investments is now an antiquity which must be discarded and replaced. However, it is not to suggest that precautions should be thrown to winds, or to completely dispense with regulation, or even slacken the governance norms.

The movement of towards the Prudent Investment Manager Regime (PIMR) has to be carefully calibrated alongside the evolution of the underlying economic and business environment.

The movement towards greater efficiency and sophistication in markets calls for a greater adoption of the modern portfolio theory which is based on the efficient market hypothesis. While some of the assumptions of the efficient market hypothesis -- such as normally distributed asset returns, fixed correlation between assets, rational and risk-averse investors, symmetry of information, lack of transaction costs and taxes -- do not exactly hold true even in sophisticated and well-developed financial markets, the degree to which the modern portfolio theory is applicable is dependent on the degree to which these assumptions can be approximated as true.

As per the European Journal of Economic and Finance, several factors may be contributing to inefficiency in Indian markets (Mishra et al). Inflationary pressures in India are bound to lead to periods of high interest rate regimes. During such periods, while the coupon rates on debt securities – both corporate and government – are expected to be higher, the high inflationary environment would imply a low real rate of return on the debt securities. However, three facts remain that are applicable and should be considered for investment of pension funds:

i. The contributions to the NPS pension funds (except in the case of NPS Tier II) are all long- term.

ii. The equity markets in India are robust and well-developed.

iii. There exists an equity risk premium in the Indian stock markets over the longer horizon.

BASIS AND RATIONALE FOR REGULATION OF PENSION PORTFOLIOS

Financial sector customers in countries which have introduced mandatory, funded, defined contribution based pension systems often had little experience of investing in the financial market. Besides this, financial services industries were rarely well developed. There is an apprehension in the minds of the pension sector regulators and governments that the lack of experience of investment and risk management might lead to poor portfolio choices. The risks of investing in emerging economies

can take many forms -- capital markets can be weak, lacking both liquidity and transparency.

Countries with more developed financial markets, where the population has more investment experience, may require only a light regulatory regime. The preponderance of individual and voluntary retirement savings also put a less onerous responsibility on the government and pension regulators than mandatory pensions, again suggesting less need for strict regulation of pension fund investments.

RELATIONSHIP BETWEEN ASSET ALLOCATION AND PENSION FUND RETURNS

The main concern about allowing portfolios with small equity holdings is that while equity has historically generated a higher rate of return than bonds, these returns are more volatile than bond yields. But pension and insurance funds are long-term investors and there is a possibility that much of volatility is smoothened out over a long investment period. Further, any shortfall in funds' returns is very important for the value of the terminal wealth.

The impact of investment restrictions on returns is that pension funds in countries with relatively liberal investment regimes earn more compared to the countries that restrict asset allocations. Or, in other words, returns in countries where pension funds have sizeable investments in equity have been higher than countries where bonds dominate portfolios. Portfolio limits could, therefore, have a high cost in terms of reduced benefits for subscribers of pension and insurance funds.

One objective of transition towards a funded pension system is to increase an individual's responsibility for his or her own retirement income planning, based on self-effort. The ability to choose a pension fund manager is an important factor for increasing competition between funds in both service and performance. Stipulation of portfolio limits, along with regulation of industry structure and fund returns, significantly reduces individual choice. These rules interacted to produce almost identical pension fund portfolios and performance in Latin America

The risk-return trade off that underlies the entire financial management is at work here as well. For, as we move from predominantly risk-free government securities to risk-prone securities like equity, the return is seen to be increasing but commensurate with the risk. However, shift to prudent investor approach warrants ability of the capital markets to facilitate investing. Let us look at the state of the Indian capital market.

FINANCIAL DEVELOPMENT INDEX 2012

Indicator	Rank/62	Value
Banking financial services		
Deposit money bank assets to GDP	**42**	**61.5**
Central bank assets to GDP	**19**	**3.3**
Financial system deposits to GDP	**34**	**58.9**
M2 to GDP	**27**	**75.2**
Private credit to GDP	**43**	**43.5**
Bank deposits to GDP	**35**	**58.9**

Money market instruments to GDP	**33**	**0.0**
Aggregate profitability indicator	**12**	**5.3**
Bank overhead costs	**32**	**2.0**
Public ownership of banks	**61**	**77.3**
Bank operating costs to assets	**41**	**.2.6**
Non-performing bank loans to total loans	**16**	**.2.3**
Private credit bureau coverage	**44**	**15.1**
Public credit registry coverage	**26**	**0.0**
Non-banking financial services		
IPO market share	**6**	**2.9**
IPO proceeds amount	**11**	**0.4**
Share of world IPOs	**7**	**4.0**
M&A market share	**13**	**1.9**
M&A transaction value to GDP	**26**	**3.1**
Share of total number of M&A deals	**10**	**3.1**
Life insurance penetration	**17**	**3.6**
Non-life insurance penetration	**52.**	**0.7**
Real growth of direct insurance premiums	**50**	**-5.5**
Life insurance density	**1**	**43.5**
Non-life insurance density	**3**	**8.8**
Relative value added of insurance to GDP	**34**	**1.1**
Securitization to GDP	**25**	**0.5**
Share of total number of securitization deals	**3**	**5.6**
Financial markets		
Spot foreign exchange turnover	**14**	**0.7**
Outright forward foreign exchange turnover	**14**	**0.9**
Foreign exchange swap turnover	**25**	**0.3**
Interest rate derivatives turnover: Forward rate agreements	**31**	**0.0**
Interest rate derivatives turnover: Swaps ..	**21**	**0.1**
Interest rate derivatives turnover: Options	**13**	**0.5**
Foreign exchange derivatives turnover: Currency swaps	**33**	**0.1**
Foreign exchange derivatives turnover: Options	**13**	**0.5**
Stock market turnover ratio	**15**	**114.7**
Stock market capitalization to GDP	**18**	**83.1**
Stock market value traded to GDP	**16**	**64.5**
Number of listed companies per 10,000 people	**41**	**0.0**
Private domestic bond market capitalization to GDP	**33**	**5.5**
Public domestic bond market capitalization to GDP	**23**	**33.6**
Private international bonds to GDP	**41**	**3.2**
Public international bonds to GDP	**54**	**0.0**
Local currency corporate bond issuance to GDP	**22**	**0.6**

Thus, although at an overall level the Indian financial markets are robust and

well-developed. The development is non-uniform and skewed across various segments, with a very well developed equity market, a robust G-sec market and an underdeveloped corporate debt market . This skewed development of capital markets, combined with weaknesses in institutional and business environment and low financial access, implies the need for prudent regulation of investment assets under management in general.

Trading Value of Different market segments(Rs in Crores)

Segment/Year	2010-11	2011-12	2012-13	2013-14
Capital Market	35,77,410	28,10,893	27,08,279	28,08,488
Equity Futures & Options	292,48,221	313,49,732	315,33,004	382,11,408
Wholesale Debt Market	5,59,447	6,33,179	7,92,214	8,51,434
Currency F&O *	34,49,788	46,74,990	52,74,465	40,12,513
Interest Rate Futures **	62	3,959	0.22	30,173
Total	**368,34,927**	**394,72,753**	**403,07,962**	**459,14,017**

Source: NSE

Thus a movement towards liberalisation, beneficial from returns point of view, has to be embedded in the overall framework of the prevailing state of economy (for instance the fiscal deficit and its impact on driving out private investment); availability of expertise to effectively manage funds; corporate governance and also things like creativity and innovation of the MSME sector to use funds for generating disproportionate gains for the nation. Thus the word Prudent' has to be the guiding mantra for an investor' in India and such a movement should also be in phases accompanied by capacity building.

The asset constraints do have important effects on the funds' asset allocations and hence on the development of local securities market. A comparison of the mature and emerging markets indicates that because of these asset restrictions the mature markets hold a predominant proportion of pension assets in equities, whereas emerging market pension funds old smaller shares of their portfolio in stocks. In short, emerging markets pension funds have relatively larger holding of domestic bonds and smaller allocation in equities and foreign securities than most mature market pension funds. Thus, an important policy issue is whether the emerging market economy should gradually liberalise some of the investment restrictions and how much weight should be given to the development of local securities market in formulating pension fund regulations.

The portfolio regulations on equity holdings in most countries undertaking pension reforms appear not to be too restrictive and the relatively large portfolio allocation in government bonds could be construed to be a natural outcome of the early stages of such a reform process. However, it creates an undesirable concentration of assets in one category of financial instruments. There is a case for not only increasing investment limits for corporate bonds in the investment guidelines for pension funds, but also relaxing the credit rating eligibility norms for such bonds in the mandated guidelines. However, stringent requirements on minimum acceptable ratings for corporate bonds could also be relaxed gradually and prudently, if only to allow for investment in infrastructure projects. This relaxation

should happen concurrently with the creation of adequate support systems providing credit guarantees and credit enhancement.

Pension fund assets under management (AUM) have been growing at a rapid pace in the mature markets as well as in the emerging markets that have implemented pension reforms. There could be an imbalance between the demand (from pension funds) and supply in the local securities market which may cause significant distortions in asset pricing, concentration of exposures and price bubbles. This calls for constant and coordinated efforts to improve the regulatory frameworks for both pension funds and securities market. Considering the diversification argument, the limits on equity holdings and corporate bonds could be gradually relaxed as the local asset managers become used to risk management techniques. The gradual relaxation of portfolio limits to investment in bonds and shares (both domestic and offshore), perhaps through diversified mutual funds, is likely to improve pension fund diversification opportunities and financial market stability. In case of offshore investments, since it amounts to relaxation of control over capital outflows, the macro-economic consequences of such measures have to be carefully considered. However, for the time being, in view of the prohibition on offshore investments by pension funds in the Pension Fund Regulatory and Development Authority Act 2013, the offshore investments are not being considered.

Finally, it has already been discussed that the skewed development of financial markets in India would put some inherent restrictions for liberalised investment framework. To sum up, the pension funds in India, especially the defined contribution scheme of the NPS, would require prudent investment limits with the intention of maximising shareholder wealth while reducing the volatility of returns for the time being. Also, the presence of individual retirement accounts requires consistency of investment performance without large dispersion between returns of individual pensioners.

The efficient market hypothesis, which states that markets carry information of prices, can be expected to hold to a certain extent in uniform, transparent and well-developed financial markets. In India, however, empirical studies have provided evidence of growing market size and liquidity but also greater volatility and inefficient capital markets. As discussed above, the non-uniform development of capital markets, weaknesses in institutional and business environment and low financial access leaves room for inefficiencies across markets. The disaggregated structure of supervision of financial services and markets also leaves room for regulatory arbitrage.

The combined effect of the above mentioned factors could have two implications – (i) the risk-return trade-off may not always hold true, and (ii) there could be existence of —alpha or excess returns due to mispricing of financial instruments. Stock markets in emerging economies, such as, India are therefore characterised by higher returns coupled with higher volatility, but their Sharpe ratios (excess return over the risk free rate/volatility) need not be higher compared to developed economies.

Correlation between funds tenor/nature of cash flows and existence of investment limits

Pension funds are characterised by longer term funds with more stable and

predictable cash flows. They represent large pools of long-term household savings and therefore require a more predictable rate of return for pension savers. In Indian markets, with risk-return mispricing and existence of —alpha or excess returns, pension funds would require prudent investment limits to ensure there is a predictable rate of return on investments. The exposure limits for long term investors can be tweaked and eventually relaxed as the markets evolve with short term investors acting as drivers of market efficiency. The beneficial impact of declining interest rates – as anticipated in the future -- on fixed income securities is likely to increase the gap in the rate of returns between equity and bonds.

CHICKEN-AND-EGG PROBLEM OF THE CORPORATE DEBT MARKET

The second point above can also be observed by a comparison of the debt funds raised on the primary market and turnover on the secondary market.

Funds raised in the primary bond market during 2012 were split in the ratio of 3:1 for G-Secs and corporate bonds, respectively. The turnover (volume traded) in the secondary market is almost entirely from G-Secs. This implies that there is lack of sufficient depth and liquidity for corporate bonds when compared with G-Secs. Depth in the corporate bond market could be achieved by means of more product innovation and securitisation under an appropriate risk mitigation framework. Liquidity in the corporate debt market can be improved by an increase in trading across the yield curve. However, trading may not pick up under low liquidity conditions leading to a typical chicken-and-egg problem.

EQUITY MARKETS

Emerging economies such as India are characterised by equity markets with high returns and high volatility. Since pension fund managers seek to maximise long-term returns and are less concerned about short-term volatility, the Indian equity markets are good avenues for investment. Having said that, there is a strong case for risk mitigation via equity derivatives even for long term funds to smoothen out returns and avoid excess loss of NAV during economic downturns.

CASE FOR MORE DYNAMIC ASSET ALLOCATION STRATEGIES FOR PENSION FUNDS

Typically, long term investors use fundamental analysis of securities for more tactical and passive asset allocation strategies. This may be expected to work in efficient markets. However, greater inefficiencies imply that long term investors who do not dynamically balance their portfolios may be (i) foregoing opportunities of —alpha and leaving excess returns on the table, or, (ii) booking excess losses due to economic downturns, market sentiments or inefficiencies. Therefore, while broad investment limits are necessary for long term funds, there is no reason why certain investment categories with high volatility, such as equity, should not adopt a more dynamic portfolio allocation strategy by utilising derivatives to hedge risk. More dynamic strategies for interest-rate hedging can be used in the fixed income markets as well. Active hedging combined with tactical asset allocation based on fundamental analysis would allow long-term fund managers to mitigate risk during market downturns and maximise the wealth of pensioners within each investment category while adhering to the overall investment exposure limits.

To summarise, while there is a need to further relax the investment pattern.

However, abrupt abandonment of prescriptive investment pattern may not be desirable. Hence a sequenced approach may be pursued.

ROAD MAP FOR NPS TOWARDS PRUDETIAL INVESTMENT REGIME:

This chapter reviews the ground conditions and the reasons that are forcing the need to think about changing the investment norms now.

The investment norms currently in force seem to have stood the system in good stead. They have, unarguably, managed to meet their primary objective – of shielding long term savings from the menacing shadow of risk, especially in the realm of insurance and pension. So, what has changed that requires us to even contemplate overhauling the extant system?

One of the pressing needs for reviewing the investment norms are the diminishing real returns earned by investors in these sectors. Given the excessive risk protection measures adopted by the sector regulators, the flexibility to diversify investments and earn higher real returns – a fundamental concept enshrined in modern portfolio management theory – seems to have been repeatedly overlooked.

This spells trouble for pension sectors because this might force investors to turn their backs on these savings channels. The trend is already discernable, though it's still in its nascent stages. Both pension and insurance sectors do not seem to be the preferred choices for incremental flows into financial instruments.

The current investment philosophy in the sector presumes that, fundamentally, over the long term investors might be willing to sacrifice higher returns for capital protection. Although this might seem to be intuitively true, there is no academic study to back this hypothesis. Also empirical data seems to be suggesting otherwise with the incremental inflows into both pension narrowing down. This committee would like to reiterate that while it is not in favour of throwing caution to the wind -- nor does it believe in advocating investment norms that are bereft of any safeguards – it nevertheless feels strongly that the investment norms definitely need a launch-pad that will not only allow beneficiaries gain positive real rates of returns but also shelter them from capital erosion. In fact, the reality is extreme – the mandated investment norms do not allow even for a balanced portfolio, one that hedges its risk between equities and bonds and is an outdated concept, which needs a rethink.

While the investment philosophy pertaining to the pension sectors has to evolve into the prudent investor regime, the move to prudent investor regime cannot, and must not, take place abruptly without giving the extant systems an opportunity to upgrade, re-learn and re-tool. Hence, an abrupt abandonment of prescriptive investment pattern may not be desirable. Hence, sequenced approach may have to be pursued.

The Committee suggests the gradual easing of investment exposure patterns with the aim of eventual alignment of Fund management of entire Pension Sector. The current boundaries of directed investment should be shrunk and more play allowed to individual fund managers. Accordingly, the movement to Prudential investor regime based on following principles:

- Harmonisation of the Investment Guidelines for Private and Govt Sector

- Review of ceiling for each asset class
- Expanding the universe of instruments under each Asset Class
- Adding new Asset Classes
- Allowing the entire Corpus of NPS to be managed by both private and public sector funds

In six years, it is proposed that the Pension sector to move to Prudent Investor regime completely. Six years is a sufficiently long time period for market forces to play out [6] and short enough for reforms to hold steam till the end.

A. Harmonisation of the Investment Guidelines for Private and Govt Sector

Multiplicity of investment mandates across various verticals within the domain of pension sector is self-defeating in nature and there is need to harmonise the same. The existing investment norms across all verticals be harmonised, at least till such time as the move to a prudent investor regime is complete. This creation of a uniform regime will usher in transparency and allow investors to compare their returns across product platforms. A beginning can be made by harmonizing the investment guidelines within NPS across Government and Private Sector i.e. loosening the guidelines for Govt sector to allow more play to the Pension Fund managers in asset classes like equity, which are historically known to beat inflation in the long run across various countries.

The restriction of allowing Pension funds only from the public sector to manage the funds of Government subscribers may be done away with. This will also be in keeping with the mandate under the PFRDA Act to provide choice to the subscriber. On the other hand, the enhanced competition and the appurtenant economies of scale shall go a long way in building a healthy pension corpus for the subscriber.

B. Review of ceiling for each asset class

PORTFOLIO LIMITS – ARE THESE IMPORTANT IN INDIA?

A pension scheme may be funded – that is, there exists a savings corpus from which pension is paid. Alternatively, it may be a pay-as-you-go scheme, where taxes of current generation of workers' pay for the pension of current pensioners and there is no stock of savings to invest. The goal of any funded pension scheme should be to maximise return on investment of pension funds under management in order to provide —adequate pension to the pensioners. A 1% increase in annual returns increases the terminal pension wealth for a full 40-year lifetime of contributions by 30%.

For a funded defined benefit (DB) pension scheme, the pension outgo is a defined formula, dependent on factors such as average wage and number of years of service. There does exist a corpus of savings which must be invested with the goal of maximising return. The specific investment objectives would have to be defined based on the existing size of the corpus fund as well as the pension obligations of

[6] **According to the NBER, there have been 11 business cycles from 1945 to 2009, with the average length of a cycle lasting about 69 months, or a little less than six years**

the fund. Reducing the volatility of returns may not be the priority. Also, any shortfall in the returns of the fund would have to be borne by the employer providing the pension benefit.

On the other hand, a defined contribution (DC) scheme (such as, the NPS), which maintains individual retirement accounts of pensioners who bear the investment risk, must not only maximise pension wealth, but also ensure that returns are relatively smoothened, or the volatility of returns is minimised. It is, therefore, not surprising to notice that several countries, developed and emerging, which run both DB and DC schemes as separate pillars of social security, have different investment pattern requirements for their schemes.

The above international experiences indicate the following:

- A defined contribution scheme in which a pensioner bears the investment risk requires more prudent investment regulations as the goal is to maximise pension wealth as well as smoothen returns by reducing volatility to assuage any concerns about the NAV reported.

- A defined contribution scheme would have to provide greater freedom to the pensioner to decide his investment exposure based on risk appetite.

NPS for the private sector, a voluntary scheme, provides flexibility to the investor to decide his investment portfolio based on risk appetite. However, for those employed in the unorganised sector, without sufficient awareness of financial investments, there is a default investment portfolio balancing mechanism which incorporates the goal of maximising terminal pension wealth while mitigating the risk of dispersion in returns.

An important reason for the existence of investment limits for NPS lite pension scheme is the information asymmetry between the various stakeholders—this is most obvious, for example, in the case between fund managers and subscribers to NPS Lite scheme for the unorganised sector. It could also be the case that there exists a knowledge gap between the pension fund managers and the board of trustees of other pension fund schemes. The above are examples of the —principal-agent problem, which serves as a deterrent to applying the —prudent investor rule in the current Indian framework. However, as Regulatory frameworks evolve and there is build-up of capacity and heightened investor awareness and literacy levels, the shift to PIR may take place.

While in many OECD countries pension funds are required to follow the —prudent man rule -- that is, assets should be invested in a manner that would be approved by a prudent investor -- there are some quantitative restrictions based on minimum diversification requirement (in terms of investment instruments), self-investment /conflict of interests, other quantitative rules and ownership concentration limits (which seeks to minimise exposure risk by restricting a fund‘s investment to each company beyond a certain limit). On the other hand, while no emerging market economy follows the —prudent investor rule, but instead follows directed investment approach, some countries do allow a high proportion of their portfolio in stocks.

The asset limits are usually justified from three public policy objectives:

(i) There is an unstated desire to limit the dispersion of outcomes (in terms of terminal pension wealth) for equivalent workers. In some jurisdictions, this is reflected into a policy response of a relative return guarantee;

(ii) There is a desire to limit the downside risk even if it compromises average return;

(iii) There may be a —moral hazard when a minimum pension guarantee exists and the absence of investment limits would encourage an investor to choose a riskier portfolio.

The prudent investor approach does not address these issues and in any case its effective application requires a robust legal system and well-developed institutional capacity at the level of trustees of the pension funds. In most emerging market countries, that seems to be absent. On the other hand, placing limits on the overall risk level of the portfolio would address the three concerns.

G-Secs are stable and low risk but provide a low real rate of return

While Government securities are low risk and safe instruments, there could be a case for lowering the minimum requirement limits of G-Sec investments for the following reasons:

- Persistent inflationary pressures in India translate into a low real rate of return on G-Sec investments.
- High minimum exposure investment limits in G-Secs may be contributing to the chicken-and-egg problem of the underdeveloped domestic debt market.
- Lowering investment limit requirements on G-Secs may also serve as an indication of the government‘s intention to rein in fiscal deficit by reducing borrowing.

Hence, it can be concluded that on the road to prudent investor regime , while it may advisable to ease the prudential ceilings , they may not be done away completely. However, there is a case for lowering the ceilings for Govt especially in Govt sector and allowing more play for Equity and Corporate bonds.

C. EXPANDING THE UNIVERSE OF INSTRUMENTS UNDER EACH ASSET CLASS

The movement from the Directed investment regime to the Prudent investor regime shall entail not only easing of the ceilings for each asset class, but also allowing wider choice of instruments under each Asset Class across the board. This could mean expanding the universe of instruments under equity from merely mirroring any index to investing in securities with derivatives on the stock exchange and expanding even further as the market matures, including allowing investment in primary and secondary capital market with suitable Caveats and ceilings to begin with. In case of other asset classes ,it could mean introducing instruments like Covered notes , CPs/ CDs , SBLMs, Repo, Reverse Repo,

CBLO, derivatives for the purpose of hedging etc again with suitable caveats and ceilings . It must be kept in mind that only such financial products be allowed, which are exchange-traded, so that counter-party risk is eliminated, liquidity is enhanced and exchange-level regulation keeps a check on excess volatility. Progress can be reviewed after three years. This should be the phase when financial markets get ready to offer full basket of products for PFM to choose from.

On the road to Prudent investor regime, the Regulator may, in the interim allow introduction of a few new schemes to test the risk appetite of the subscribers and build their confidence in asset classes perceived to be riskier viz Equity through the life Cycle fund approach. While the default life cycle Fund shall continue to be the one with maximum investment in equity pegged at 50% (option LC50), more life cycle funds (at least two more to begin with) may be introduced keeping the core principle of "decreasing risk appetite with increasing age" intact with Lower and higher ceilings in Equity to cater to both conservative subscriber and subscriber with a higher risk appetite.

The mandate in the Act is to provide the subscriber shall have an option of investing up to hundred per cent of his/her funds in Government Securities. The NPS already has this option in place by virtue of Scheme "G". However the bulk of subscribers from the Govt and NPS lite are devoid of this choice. Besides, providing this choice to all the subscribers, the regulator shall create awareness about the "G" scheme for fulfilling this mandate.

D. INTRODUCTION OF NEW ASSET CLASS

Gradually, the regulator must allow for the introduction of some new ideas and new asset classes also called as alternate assets viz Real Estate,AIF (alternative Investment Fund), Commodity, and Infrastructure through new instruments like Investment Trusts, Infrastructure Investment Trusts - units, etc as a measure of diversification of assets followed in the various developed countries.

Real Estate Investment Trusts (REITS):

Globally, REITS are used to channelise and formalise investment in property, using capital market platform and all the risk-mitigation systems that comes with exchange traded mechanism (such as novation). SEBI recently notified regulations governing the activities of REITS. However, in addition to action by SEBI, this would also require setting up of an empowered and active housing regulator and formulation of a House Pricing Index.

Infrastructure Investment Trusts (IITs):

On similar lines, ISITs are likely to floated for financing roads, ports, airports, railways, power projects. With adequate credit enhancements, it should be possible to attract private – individual and institutional -- investments into the sector and fill up the gaps of equity that constrains financial closures.

Expansion of investment basket into these products for insurance and pension industries would have the following benefits:

A) Primary Benefits: Pension funds will find an avenue to notch up a real rate of return, which today is largely missing in fixed income securities, particularly government bonds.

B) Secondary Benefits: (a) This will help develop and broaden the financial markets, (b) It will provide liquidity and depth to the market of these instruments and discourage subscribers from investing into locked assets of the underlying products, (c) This will help institutionalise the existing investments in property in particular thus help mitigating at least partly concern of the nation.

ROAD AHEAD FOR NPS

The Broad road map for moving to Prudential investor regime, based on principles defined above would be as follows:

Phase I:

- Allowing private sector PFs to manage the funds of the Government sector employees
- Harmonization of the investment guidelines of the government and private sector.
- Shift away from the fixed income fixated investment pattern and allowing more play to pension fund managers in equity through following measures;-
- Allowing investment in equity to the extent of 50% by Government sector employees/ NPS lite subscribers.
- Allowing floating of life cycle funds with equity cap at 75%
- Moving away from passive investment to Active investment in equity.
- Allowing investments in shares which have derivatives in any stock exchange.
- Expanding the universe of investment of equity to NSE 100.
- Allowing investments in mutual funds/ ETFs/ Index funds with appropriate disclosures in cost .
- Allowing investments in primary and secondary capital market based on predefined parameters of networth, profitability and the like, with a cap of 2% of the total portfolio.
- Allowing investment in Mortgage backed securities , Covered notes, CPs, CDs
- Allowing investments in InVeits
- Removal of limits on SDLs under “G” Introduction of new asset classes within overall cap of 5% of the portfolio.
- Real estate through REITS
- Alternative Investment Funds (AIF)

Phase II

- Raising the ceiling on equity to 75%
- Further loosening ceilings on AIFs, Real estate,
- Introduction of IDRs
- Allow CBLO in both Corporate bonds and Government bond
- Allow Repo and Reverse Repo.
- Introduce commodity trading viz bullion through Gold ETFS with ceilings of 1%

Phase III

- No ceilings on asset classes
- Only A negative list of assets and instruments based on the experience of last 5 years
- Some prudential ceilings viz Concentration ceilings etc, or Risky and volatile asset classes/ instruments.

In case of offshore investments, since it amounts to relaxation of control over capital outflows, the macro-economic consequences of such measures have to be carefully considered. Currently, there is a prohibition on offshore investments by pension funds as per section 25 of Pension Fund Regulatory and Development Authority Act 2013. The economic logic is that the pension fund liabilities are domestic and so, by investing at home, assets and liabilities are denominated in the same currency. Investing overseas, in contrast, involves exchange rate risk. Although hedging against currency movements is possible and the products to achieve this are available in the market, there is a cost element involved; further, the complex financial instruments that hedging involves have been known to adversely affect even sophisticated investors. Further issues arise in the context of capital outflow controls in developing countries. Exchange controls have in the past been - justifiably - imposed during foreign exchange crises to deal with capital flight, to avoid a sharp and costly overshooting of the currency, but often kept in looser form once normal conditions were re-established; foreign investment may be seen as risky in the absence of appropriate derivatives markets for risk control;

PRECONDITIONS FOR MOVEMENT TO PRUDENT INVESTOR REGIME

The following pre-conditions have to be met before moving on to the prudent investment regime:-

A. <u>To allow for capacity building within the related institutional architecture, primarily to smoothen the journey to prudent investor regime. This will include putting in place :</u>
   i. Policy framework
   ii. Appropriate Regulatory oversight mechanisms and people capabilities with Regulators.
   iii. Corporate governance structures and processes
   iv. Risk management systems and processes
   v. Building up a pool of Trustees and Investment Managers

B. <u>Development of the Capital market and deepening of the corporate debt market characterised by :</u>
   i. <u>Regulated Market</u>: (a) Empowered, capable and motivated regulator and (b) Robust Regulation
   ii. <u>Developed Market</u>: (a) Range of Products, (b) Depth, Liquidity, Costs, Safety, Efficiency, and (c) Transparency, Research, Databases.
   iii. <u>Protected Market:</u> (a) Market Stability, (b) Market Surveillance, (c) Investor Protection (d) Governance of Investee and (e) Bankruptcy Laws.

C. <u>Widespread Financial literacy</u> to make informed choices pursuant to

creating awareness about the schemes and appertunant risks-rewards, parameters for selection of schemes / investment options , consequences of not excercising options etc

Some of the important preconditions are discussed below:

A) Financialisation of products, which are popularly perceived to be risky and volatile, such as bullion or real estate. Financialisation allows for exchange-traded instruments and provides liquidity. Exchange trading also provides guarantees against counter-party risk.

B) The commodity market, especially the futures market, also needs to be developed. This will be only possible when the commodity exchanges are brought under SEBI's umbrella.

C) Development of Credit enhancement facilities and mechanisms like bond guarantee funds to facilitate investments in infrastructure,

D) Re-focus on Indian Depository Receipts. The product already exists but suffers from poor marketing. In fact, there is also enormous scope for extending the rupee bonds market to wider range of overseas issuers. Currently, barring Standard Chartered Bank, only multilateral lending agencies have used that window, and that too sparingly. Such rupee bonds and IDRs provide a unique investment opportunity for insurance and pension companies. It not only gives them an opportunity to invest in select foreign companies without having to cross the national borders (currently they are prohibited from investing in overseas assets), it also insulates them from currency risks. There is another bonus: it provides them with the opportunity to upgrade their appraisal skills and benefit from an ability to invest in profitable overseas opportunities. Pension funds should be allowed to invest in such instruments.

E) The Government should look at launching some more infrastructure finance companies, in addition to the ones existing today – such as, Rural Electrification Corporation, Power Finance Corporation. This will automatically increase the supply of paper to the market.

F) The Government could examine the possibility of exempting income - arising out of investments in infrastructure made by pension funds -- from tax.

G) Greater regulatory clarity on whether investments made by pension funds in infrastructure funds should be classified as an investment in a mutual fund as this will allow greater flexibility in portfolio construction.

H) Existing rules and guidelines prohibit pension funds from investing in private limited companies. However, while this rule might have had some logic in the past, in the current scenario it seems to be having unintended consequences. For instance, most infrastructure projects are housed in private limited companies, termed as Special Purpose Vehicles, or SPVs. As a result, these remain out of the investment purview of insurance companies and pension funds. This rule, therefore, needs to be scrapped or modified.

I) Focus on skill development. Wide-ranging capacity building has to take place across the categories (insurance and pension) and sectors (public versus private) to enable fund managers, compliance officers, dealers, marketing experts, sales agents, board members, risk officers to improve their skills and help deliver improved returns to investors. It is, therefore, essential the while increasing the awareness and literacy of the individual subscribers under NPS is important, it is equally vital to appoint —fit and proper trustees on provident funds which work on pooled investment principle. It is, therefore, clear that no liberalisation of investment pattern is complete without simultaneously increasing the administrative and governance capacity of the trustees of the provident funds. This in-house capacity creation is required for monitoring external fund managers -- so that not only investment objectives are satisfied but also volatility of investment returns is minimised. Wide-ranging capacity building has to take place across the categories sector (public versus private) to enable fund managers, compliance officers, dealers, marketing experts, sales agents, board members, risk officers to improve their skills and help deliver improved returns to investors.

J) Strengthening of Regulatory framework-Pension fund assets under management (AUM) under NPS have been growing at a rapid pace. As the momentum picks up further, there could be an imbalance between the demand from pension funds and supply in the local securities market which may cause significant distortions in asset pricing, concentration of exposures and price bubbles. This calls for constant and coordinated efforts to improve the regulatory frameworks for both pension funds and securities market.

Internationally, the prudential ceiling laid down by the Regulator on self investment, group companies etc , even in countries following Prudent investor regime an important tool for mitigation of Concentration risk. Historically too, the countries following the Prudent investor rule have also been stipulating some limits *viz* on self-investment for the simple reason that they are considered necessary for prudent investments.(Annexure IV)

In case of Private sector Investment Guidelines, presently, following prudential norms have been stipulated:

S no	Head	Prudential norm
1.	Investment in Liquid assets under E/C/ G	Not exceeding 10% of Scheme Corpus on temporary basis
2.	NPS investment of sponsor group companies**	5 % in paid up* equity capital of all sponsor group companies OR 5% of Total AUM under equity exposure Whichever is lower in Each respective scheme.
3.	NPS investment in Equity of Non sponsor group companies **	10 % in paid up equity capital of all Non sponsor group companies OR 10% of Total AUM under equity exposure Whichever is lower in Each respective scheme.
4.	NPS investment in debt securities of sponsor group companies **	5% of net worth of all sponsor group companies OR 5% of total AUM in debt securities(Excluding Govt Securities) Whichever is lower in Each respective scheme.
5.	NPS investment in debt securities**	10 % in Net worth of all Non sponsor group companies OR 10% of Total AUM in debt securities(Excluding Govt Securities) Whichever is lower in Each respective scheme.
6.	Investment exposure to single industry**[7]	15% under all NPS schemes by each Fund Manager as per level-5 NIC classification. Investment in scheduled commercial bank FDs should be exempt from Exposure to Banking Centre.
7.	Investment in State Govt	10% of AUM of Govt Securities of Each

[7] **** Not applicable in case the schemes mirror index funds / ETF/ Debt Mutual Fund . But if addition there is investment in shares , concentration limits in these index funds / ETF/ Debt Mutual Fund shall be considered before making investment in these shares.**

	Bonds	respective scheme AND 5% to any individual state govt of AUM of Govt Securities of Each respective scheme

- **Paid up share capital means market value of paid up and subscribed equity capital.**

Besides, following Prudential norms for Govt Sector subscribers:-

1.	Investment in dedicated mutual funds of Govt securities	Upto 5% of total portfolio of Gsec securities.

The PFMs have been experiencing difficulty in complying with the Prudential guidelines, especially in case of smaller Private sector PFMs leading to exceptional reporting by the PFMs. It has apprised that this is a practical problem – investment is subject to minimum market lot and in absence of sufficient inflow of subscription, it is not possible to deploy funds in compliance with the current Concentration limits till critical mass of AUM is reached.

However, the important objective of Risk management also needs to be balanced with ease of doing business specially in a nascent sector as Pension with players having small AUMs. Hence it may be prudent to fix graded prudential guidelines linked to AUM of the Pension Funds, to allow them enough elbow room for investments to deliver optimum returns.

Further, with the opening of the Govt Sector to the Pvt sector PFs, availability of choice to employees between EPFO and NPS, greater tax sops for NPS subscribers, announced in this years' budget the private sector employees shall also reach critical mass and overcome the issue of small trickle of inflows.

Hence in the opinion of the Committee, the concentration limits may continue for the purpose of risk management, although the same may be reviewed from time to time.

Chapter No VII

PFs: SELECTION AND PERFORMANCE REVIEW METHODOLOGY

The PFRDA Act mandates provision of subscriber choice. However, in order to facilitate meaningful choice, subscribers should have access to adequate, and reliable information (available in the public domain), which they can use to compare and take an educated decision before choosing any pension scheme or pension fund. Therefore, a framework for disclosures about the performance of pension funds is necessary for generating healthy competition and for meeting the high standards of transparency. PFRDA has already put in place such a framework for disclosures. However, effective monitoring and supervision of the Pension Fund managers also entails a framework of performance evaluation based on diverse parameters.

While generation of adequate returns is one of the prime functions of the Pension Fund Managers, given the long term nature of Pension Product, the performance evaluation criteria should not be centred only on returns generated but should also include risk management parameters so that a holistic view of the performance of PFMs is taken. Performance evaluation parameters would therefore consist of risk adjusted returns, asset liability matching, liquidity profile, credit quality, tracking error, yield to maturity etc.

SNAPSHOT OF PARAMETERS COVERED FOR PERFORMANCE REVIEW OF PFs

Scheme Name	Issuer Concentration risk	Industry Concentration Risk	Equity Liquidity	Debt / Gilt Liquidity	Credit Quality	Maturity Profile	Tracking Error	Risk-adjusted return	Yield to Maturity (YTM)
Scheme CG	√	√	√	√	√	√	×	√	√
Scheme SG	√	√	√	√	√	√	×	√	√
Scheme NPS Lite	√	√	√	√	√	√	×	√	√
SchemeCorporate– CG	√	√	√	√	√	√	×	√	√
Scheme E - Tier I	√	√	√	×	×	×	√^	√*	×
Scheme C - Tier I	√	√	×	√	√	√	×	√	√
Scheme G - Tier I	×	×	×	√	×	√	×	√	√
Scheme E - Tier II	√	√	√	×	×	×	√	√	×
Scheme C - Tier II	√	√	×	√	√	√	×	√	√
Scheme G - Tier II	×	×	×	√	×	√	×	√	√

I. A performance matrix may then be developed with the above mentioned parameters. A moving scale may be designed for each parameter and appropriate weights assigned to them. Just for the sake of clarity an example is given below:

Parameter	Sliding scale	Weights assigned
Risk-adjusted return	**1-25 based on say Sharpe ratio or Treynor measure**	**20**
Current Yield to Maturity (YTM)	**1 to 10 based on deviation from a benchmarked yield to maturity.**	**20**
Portfolio level Equity Liquidity	**1 to 5 based on number of days required to liquidate as per current trend**	**5 (as the universe is currently limited to exchange traded shares with derivatives, lower weight may be provided. This may be reviewed on change in guidelines**
Portfolio level Debt Liquidity	**1 to 15 based on number of days required to liquidate as per current trend**	**15**
Portfolio level Gilt Liquidity	**1 to 10 based on number of days required to liquidate as per current trend**	**5**
Credit Quality	**1 to 15 based on probability of default**	**15**
Maturity Profile	**1 to 10 based on deviation from the desirable maturity profile determined by age profile of subscribers.**	**10 (As the system matures in next 10 years and number of exits increase the weights would have to increase)**
Issuer Concentration risk	**To be developed as per the investment guidelines stipulated by the Regulator**	**5**
Industry concentration Risk	**To be developed as per the investment guidelines stipulated by the Regulator**	**5**
Total		**100**

In dynamic financial world today, the Regulations have to be an evolutionary platform. Hence, the actual weights, methodology, tools and indicators will have to be dynamically worked out in greater detail as per the focus area at the given point of time

Once the performance evaluation framework is in place; it will be easier to rank the Pension funds in each of the areas as well as in their overall performance. While this may be an aid to more effective monitoring and supervision by PFRDA, this would also enable the Pension Funds to tailor their approach in accordance with the laid down objectives and focus areas of PFRDA.

However, sharing the ranking of Pension Funds, in the pubic domain by the PFRDA could militate against the premise of a neutral Regulator as it could be construed as an endorsement of one PF over the other.

However, keeping in view the low levels of financial literacy of the subscribers and complex nature of the product, barely having a plethora of disclosure would only

obfuscate the subscriber. Hence, adequate evaluation of the performance in simple form is necessary to enable the subscribers to exercise their choice. Infact, this is where the PFRDA is expected to step in, (in accordance with the section 14 (2) (g) of the Act stating that it is the mandate of PFRDA) to promote professional organizations connected with the pension system. Professional organizations for analyzing the data, comparisons, and evaluation will have to fostered with appropriate nurturing and Regulations. They may take the form of analysts, retirement advisors or consumer protection forums.

Benchmarks for Pension Fund Managers

While on the subject of performance evaluation, the natural corollary is the benchmarking. Benchmarking is one activity that fiduciaries engage in to satisfy the standard of care imposed upon them by the prudent investor rule. First, the benchmarking activity is an on-going procedural activity that responds to the procedural component of the rule. Second, benchmarking helps to satisfy a substantive aspect of the rule. Under the prudent investor rule, plan or fund trustees and other fiduciaries are required to act as an ordinary prudent investor of business entrusted with the management of another's money. To find out what ordinary prudent investor are doing, one might, quite naturally, look at a peer average or relevant index as a benchmark. Indeed, trustees are likely to find themselves in breach of their fiduciary obligations – and potentially legally liable – if their plan's investment performance (or the performance of any investment manager that they have engaged on behalf of the plan or fund) is consistently below average and they have not taken steps to address the situation[8].

However, the next stage is of the selection of appropriate benchmarks. Selection of the benchmarks would depend upon a number of factors:-

a) The prescribed investment guidelines- e.g. if the investment guidelines prescribe mimicking of a particular index, the natural benchmark would be that index from which the tracking error would be derived.

b) The carve outs in the investment guidelines- the concentration limits, prudential ceilings in the investment guidelines would lead to deviations from the stipulated benchmark. In such cases, a synthetic benchmark will have to be created with these carve outs.

c) The objective of the Regulator. – The bench marks could be an effective tool to nudge the Pension funds to deliver on the expected parameters.

d) Availability of information – Construction of synthetic benchmarks requires adequate and free-flowing information on the constituents.

[8] **PRUDENT INVESTOR RULE" STANDARD FOR THE INVESTMENT OF PENSION FUND ASSETS , Russell Galer, OECD November 2002**

e) Valuation policy followed- the methodology of valuation of securities has to be factored in while creating the benchmarks.

With the growth of the NPS AUM, the benchmarks specific to the NPS schemes may have to be evolved for the purpose of evaluation and the actual performance of the Pension funds against these benchmarks disclosed in public domain.

Further, the benchmarks will continue to evolve as the movement to "Prudent Investor regime" progresses. For example as there is movement away from passive investment to active investment and the universe of investible shares is expanded from Nifty 50 to Nifty 100 with derivatives traded in stock exchanges, the benchmark will change from Nifty 50 to CNX 100 minus stocks without derivatives (there are few such stocks) .

The benchmarks to be change only whenever there is a major change in the prescribed investment guideline. Too frequent changes destabilize the system and can lead to micro management of PFs through vicarious means.

SELECTION OF DEFAULT PENSION FUND MANAGER

The PFRDA Act mandates provision of subscriber choice. However, the provision of the choice assumes certain awareness levels and capability of the subscriber to make such choices. In the absence of widespread literacy, one cannot wish away the ground reality that majority of the subscribers either are incapable or are unwilling to make a choice of PFs or asset allocation. In such a scenario, the practise has been to provide for a default option in accordance with the principle of Paternalistic Protectionism.

While the life cycle fund is unambiguously the default option as far as asset allocation is concerned, the choice of default PFM needs to be considered carefully. Internationally there are various parameters used for selecting the default PFs, including.

a) directing the new subscribers into least cost PFs for first 12 / 24 months with switch over fees or based on returns etc

b) Performance parameters including risk adjusted returns of at least three previous years (moving averages)

c) Quality of the portfolio viz Concentration (Issuer & Industry), Liquidity, Credit Quality, and Maturity profile etc The Performance Evaluation Criteria devised above could therefore form cornerstone of the selection of default PFM.

d) Default option could also take into account the operational costs of the PF, the fee charged by the pension fund manager in the scenario of differential fee structure.

e) The rate of growth of AUM and subscribers in last three years. Here care has to be exercised to ensure that the extant default PF does not get any unfair advantage, and hence its growth figures would have to be suitably adjusted.

However, the concept of selection of default PF by the Regulator is not without running the risk of being labelled as subjective. Hence the Committee was strongly of the view that the exercise of the choice of Pension Fund has to be a conscious decision by the subscriber. Even in case some default PF has been declared for operational purposes like transfer of assets for interim period when one of the pension funds moves out of the NPS System, it has to be a conscious choice of the subscriber.

Although PFRDA is in the unique position of being the promoter, developer as well as Regulator of NPS, there has to be a candid separation between the Regulatory role and operational role of the Regulator.

The committee was, however, also mindful of the low level of financial literacy in the country which has necessitated the stipulation of the default PF.

Chapter VIII

MINIMUM ASSURED RETURNS SCHEME UNDER NPS

Any depreciation of capital in the retirement corpus because of market fluctuations can cause inconvenience to the individual as money invested today towards retirement planning is important for individuals' post-retirement well-being. The impact of safety feature gets amplified in any investment decision for retirement when the income sources are likely to dry up.

One popular fear in a DC pension plans is that subscriber may end up with a level of savings at retirement that is less than the amount put in as contributions. One of the major uncertainties for retirement planning is inflation, which reduces the purchasing power of an individual and thus affects the standard of living. Financial planning from a pension perspective gets affected greatly by small fluctuation of 2-3% in inflation. It can even deplete the investment corpus guaranteeing that investors will at least get back the money they contributed (in nominal terms) makes saving for retirement in DC pension plans more attractive and may help increase coverage.

Introducing minimum return guarantees could alleviate the impact of market risk on DC pension plan members by setting a floor on the value of the accumulated savings at retirement, either in nominal or real terms. Guarantees could therefore strengthen and complement the risk-reducing properties of life-cycle investment strategies.

A brief international perspective on the MARS scheme is provided in the attached PPT- Annexure II A

Section20(2)(d)(a)of PFRDA Act prescribes that "Subscribers seeking minimum assured returns, shall have an option to invest funds in such schemes providing Minimum Assured Returns as may be notified by the Authority". Further, Section 20(2)(g)prescribes that "There shall not be any implicit or explicit assurance of benefits except market based guarantee mechanism to be purchased by the subscriber"

The Act does not define minimum assured returns or market based guarantee mechanism. Dictionary meaning of both assured and guaranteed is the same i.e. made certain or sure.

Enhancing NPS with the product features of capital and inflation protection and/ or assuring minimum returns will appeal to potential NPS subscribers and enable its off take.

The mandate of the Act can be carried out through one of the following ways or a combination of the three:

Offering capital protection -Capital guarantee and inflation protection features attached to the product will definitely boost take-up of the product. This can be done by allocating NPS investments to

a. Capital/inflation Indexed Bonds – Inflation index bonds of different maturities could allow NPS hedge inflation risk and in turn offer investment products to retail clients that are protected against inflation. RBI is already issuing Inflation indexed bonds. They had earlier issued capital indexed bonds in 1997 which had not received an enthusiastic response. NPS can greatly benefit from investments in such bond and can offer inflation protection feature to boost the take up rates. With NPS planning a huge outreach in coming months, RBI can be convinced of the continuous demand for such bonds.

b. Capital guarantee funds (CGFs) / Capital protection funds (CPFs) – CPFs are structured to ensure the protection of original investment at the scheme's maturity with or without external support. CPFs in India are required to ensure capital protection only through portfolio characteristics and are not permitted to buy third party protection such as insurance. SEBI allows only closed ended CPFs. Debt investments by a CPF can only be in the highest rated investment grade papers. The two most common types of CPFs work on static hedge and dynamic hedge approaches. These approaches provide capital protection through debt-equity portfolios. Initial corpus is invested in secured debt instrument growing forward. The difference between the capital raised and the present value of the capital is invested in equity and the remainder goes into debt. The investments in debt are done on HTM basis.

By allocating fund towards CPFs or functioning in their approach NPS can offer capital guarantee to its subscribers, which will influence investment decisions of NPS subscribers. NPS can then offer returns above the minimum by investing the rest of the funds in long horizon money in Index funds.

Table 1: Debt-Equity allocation for Capital Protection

Investment Horizon	Market Interest Rate	PV of Initial Investment	Investment in Debt	Investment in Equity
(Years)	(%)	(Rs.)		
10	7.99%	46,355	46,355	53,645
15	8.32%	30,156	30,156	69,844
20	8.34%	20,130	20,130	79,870
25	8.40%	13,316	13,316	86,684
30	8.43%	8,821	8,821	91,179

The table above shows that for an initial investment amount of Rs. 1,00,000

capital protection can be offered by investing only Rs. 8,820 in Government securities for 30 years. The remaining Rs.91,180 can then be invested in Equity for capital appreciation.

MINIMUM ASSURED RETURN

For the sake of Analysis, we have compared three different designs on the basis of feed back received from various Pension funds to arrive at our recommendations. Based on the feedback received, while we have included some quick estimates for guarantee charges and level of assured returns, they need to be backed up with statistical modelling for the associated risk.

For appropriate management and pricing of risks, we recommend that the authority should prescribe the broad contours of scheme design and let the PFMs decide the exact level of guarantee and guarantee charges after following disclosure norms as prescribed by the Authority.

CAVEATS FOR MINIMUM ASSURED RETURN SCHEME

While several such products can be offered by the pension funds Viz Capital protection, product with minimum assurance of returns etc , it is essential to have suitable caveats upfront made known to the subscriber opting for such a product, including higher and market determined cost for the product, cost of possible sub optimal returns on account of an investment strategy adopted to service the liability under the assurance rather than optimising the returns, low probability of the guarantee being actually invoked , lower replacement incomes under the guaranteed products than non-guaranteed products. The offering of the minimum assured returns products by Pension funds would also entail strengthening the risk management systems of the PFs including increase in the regulatory capital, stipulating solvency ratios, stringent ALM parameters, periodic Actuarial evaluations, building capital protection fund if required , devising separate investment guidelines for the products. While the minimum assured return products may increase the outreach, the regulator may need to balance the aspect of adequacy of replacement income under such products. The Committee however noted that past experiences in India and abroad have not always been successful

.

	Capital Guarantee	Floating assurance on short term assets	Assurance on long term assets
Scheme description	Return of capital (with say a minimum non-Zero return of 0.01%) at redemption on a scheme investing in short term assets subject to minimum holding period of 3 years.	Floating rate Minimum assured return on a scheme investing in short term assets, assured at redemption on a scheme investing in short term assets subject to minimum holding period of 3 years.	Fixed/ floating minimum assured returns from a scheme investing in long term assets, assured at redemption on a scheme investing in short term assets subject to minimum holding period of 3 years.
Indicative minimum assured return	Return of capital i.e. Total Contributions-cumulative withdrawals at cost-charges levied by intermediaries during the year1.Capital guarantee shall not apply on switch outs from the scheme.	Minimum assured return of (ReverseReporate-2%-PFM fee- guarantee charge)on (Scheme Balance of the subscriber at the beginning of financial year-withdrawals at cost during the year-charges levied by intermediaries other than PFM during the year).Capital guarantee shall not apply on switch outs from the scheme.	Minimum assured return equal to savings deposit interest rate or Reverse Reporate-3%
Possible Scheme investment	T Bills, Short term Govt. securities, AAA instruments of maturity not exceeding 12 months	T Bills, Short term Govt. securities, AAA instruments of maturity not exceeding 12 months or the next reset date for the minimum assured return	Long term Govt. securities and AAA corporate bonds
Risks faced by PFM	1. Credit risk: risk of default by the borrower	1. Credit risk: risk of default by the borrower	1. Credit risk: risk of default by the borrower

	Capital Guarantee	Floating assurance on short term assets	Assurance on long term assets
	2. Interest Rate risk: a. Price risk: Losses from fall in realizable value exceeding the interest accrual if invested in long-term assets. b. Reinvestment risk: Reduction in interest rates to a level below PFM fee plus guarantee cost resulting in inability to generate the assured return	2. Interest Rate Risk: a. Ten or mismatch: Inability to earn the benchmark return caused by mismatch between the assets which are expected to generate benchmark return vis a vis the assets in which the scheme funds are deployed(e.g. Minimum assured return linked to Reverse repo rate can be generated by deploying the scheme funds in short term money market assets. However, if the scheme funds are invested in10year bonds, the interest income would be locked in whereas the assured return would change with changes in Reverse repo rate) b. Price Risk: Losses from movement in realizable value due to ten or mismatch explained above c. Timing mis-match: Inability to deploy scheme assets at interest rate above minimum assured return resulting from change in the benchmark rate before assets are deployed d. Basis risk: Inability to deploy scheme assets at interest rate above minimum assured return because the benchmarking was wrong/relationship between benchmark and the scheme assets has changed temporarily/structurally	2. Interest Rate Risk: a. Yield movement: Inability to deploy scheme assets at interest rate above minimum assured return due to fall in market interest rates. In such a scenarios, the PFM may not be able to generate assured rate of return on fresh in flows as well as on reinvestment of principal/interest cash flows of existing portfolio. b. Price risk: Losses from movement in realizable value of the deployed assets .In such as scenarios, the PFM may not be able to meet the redemption requirements of subscriber/when the PFM exits NPS on completion of its term

	Capital Guarantee	Floating assurance on short-term assets	Assurance on long term assets
Risk mitigation	1. To mitigate credit risk, invest only in highest credit quality papers rated AAA. Diversify portfolio and limit exposure to a single borrower. 2. Limit the tenor of investments to limit potential losses in realizable value due to interest rate hikes. 3. Ensure minimum holding period of 2-3 years by the subscribers so that there is adequate interest earning period to compensate any losses in realizable value. 4. Mitigate investment risk by reviewing sustainability of the assurance periodically. 5. Assurance of terminal/redemption value would allow exceptional circumstances of negative income in short periods to be set off against coupon accrual in rest of the period.	1. To mitigate credit risk, invest only in highest credit quality papers rated AAA. Diversify portfolio and limit exposure to a single borrower. 2. To mitigate risk from ten or mismatch and price risk, match the tenor of investments to the implicit tenor of the benchmark and frequency of reset of the benchmark for calculating the minimum assured returns. This requires careful designing of the scheme investment guidelines and reset frequency of the floating rate benchmark. Subscribers may preferred setting the minimum assured returns annually. This requires the scheme assets to be locked in for a year on the reset date so that interest rate risk is minimized. However, this may imply that contributions paid during the year may not enjoy the assurance. Alternatively, the minimum assured return may be reset monthly/daily along with investment tenor/reset frequency of the scheme investments.	1. To mitigate credit risk, invest only in highest credit quality papers rated AAA. Diversify portfolio and limit exposure to a single borrower. 2. Mitigating interest rate risk on long-term bonds is difficult as these are subject to fluctuations in price as well as reinvestment yield over a long period of time. Hold to maturity (HTM) valuation is sometimes thought as a solution to this problem. HTM accounting does not give protection from reinvestment risk. Rather, by allowing redemptions (whether at 60yearsorforswitches), HTM accounting accentuates the problem as the remaining portfolio is exposed to higher marked to market(MTM) losses, causing panic and systemic risks. The only way to mitigate interest rate risks on a long-term fixed income portfolio would be through Interest rate options.

		3. Assurance of terminal value after Minimum scheme subscription period of 3years as discussed earlier.	
Guarantee charge	0.10%p.a.	A minimum assured return of (Reverse repo-2%-PFM fees-Guarantee charge) reset monthly/quarterly may cost about 0.25%p.a. However, if the minimum assured return is reset annually for outstanding and incoming flows, the cost my increase significantly to atleast 0.50%p.a.	While the guarantee charge would depend on the level of minimum assured returns, we believe the charge would need to be significant for an assurance on existing and future subscriptions. More work needs to be done to arrive at a firm estimate.
Capital requirement	A simple capital guarantee can be provided by the PFMs within existing networth of Rs. 25crore provided the credit exposure is restricted only to AAA and Interest Rate Risk is controlled through short term investments.	A floating rate assurance can be provided within existing networth of Rs25crore required to be held by PFMs provided it is priced at an adequate spread below market rates to provide buffer against market movements, the credit exposure is restricted only to AAA and Interest Rate Risk is controlled through short-term investments matching with benchmark reset frequency. The authority may also	Providing assurance on long-term assets would require significant additional capital as absence of adequate capital to back the long-term assurance may result in panic amongst subscribers and systemic crisis during periods of high volatility. Currently, PFM portfolios in scheme G have an average modified duration of about .Applying a standardized

	Capital Guarantee	Floating assurance on short-term assets	Assurance on long term assets
		Consider guidelines where by guarantee Charge is used by the PFMs to create a reserve upto a specified level to meet assured minimum returns.	Interest rate shock of 2-3% and Assuming that the initial pricing of the assured returns was below the market rates so that capital to meet a 0.25%-0.50%shock is considered adequate, indicates capital requirement of approximately 2%-4%
Governance structure for guarantee management	Board of the PFM should approve the provision of the guarantee. PFM may voluntarily seek approval from sponsor based on its internal policies.	Considering the complex nature of risks and limited risk management expertise at the PFMs, approval from Board of the PFM as well as blessings from the Board of its sponsor should be mandated.	Considering the complex nature of risks and limited risk management expertise at the PFMs, approval from Board of the PFM as well as its sponsor would be necessary.
Mechanism for transfer of guarantee obligation when PFM changes	A portfolio of short-term AAA assets at market value is expected to meet the assurance at all times-short-term and long-term. An outgoing PFM's liability can therefore be easily crystallized as the difference market value of assets and guaranteed capital as on the date of exit.	Under the structure for floating minimum assured returns and matching short-term scheme investments as discussed above, the scheme investments are designed to generate returns consistent with the assurance on an annual basis. Therefore, an outgoing PFM's liability can clearly be crystallized as the difference market value of assets and assured minimum returns till the date of exit.	Fixed minimum assured returns are exposed to significant interest rate risks from movement in market rates and changes in contribution/redemption behavior of subscribers. Accordingly, when a PFM managing the scheme changes (on completion of 5years term or otherwise),it would necessitate evaluation of the assets as well as the PFM's liability to meet minimum assured returns based on prevailing market rates and the expected future subscriptions and redemptions of all the subscribers. This would be a very complex calculation subject to various actuarial assumptions and models and therefore prone to the risk of disputes/litigation.

Recalibration of guarantee	Periodic review would be required to assess the risk of interest rates falling/staying below cost of guarantee plus FMC. Currently we believe that the risk is very low given the low cost structure of NPS (current FMC of 0.25%p.a.)and the nominal expected cost of guarantee of about 0.10%p.a.	Periodic review would be required to confirm ongoing relevance of the benchmark and the spread below benchmark (2% plus FMC, guarantee charges discussed above) that can be reasonably be expected to be generated by deploying short-term assets upto the next reset date. Currently we believe that the risk is very low given the low cost structure of NPS (current FMC of 0.25%p.a.)and the expected cost of guarantee of less than 1.00%p.a.	Frequent (quarterly) reviews would be required to confirm that the assured returns are sustainable under the changing market conditions.
CRA system requirement	CRA should be able to assess whether minimum assured returns have been generated for each investor, aggregate it and report it to PFMs at the time of redemption and annually at the end of each financial year.	CRA should be able to assess whether minimum assured returns have been generated for each investor, aggregate it and report it to PFMs. A minimum assured return reset daily would imply complex calculations by CRA, but would needless frequent (annual) reporting to PFMs as the risk faced by PFMs is less. If reset annually for outstanding and incoming flows, the PFMs would require frequent (atleast monthly) reports by CRA.	CRA should be able to assess whether minimum assured returns have been generated till date for each investor, aggregate it and report it to PFMs. Further, CRA systems would need to develop significantly to generate expected future subscriptions and redemptions by subscribers to help PFMs assess their liability towards the minimum assured returns. This may require either full sharing of subscribed at a by CRA or developing capability to generate stochastic scenarios on subscriber behavior and provide aggregated to PFMs.

Modelling & capability for risk management	As long as the interest rates stay positive and assets are strictly invested in short term assets, it would be sufficient if the PFM has the capability to manage the credit risk.	PFM would need capability to manage the credit risk and interest rate risk vis a vis benchmark used for defining the minimum assured returns.	In addition to the capabilities so managing credit risk and interest rate risk of fixed income instruments, this would necessitate complex modeling and risk management capabilities to model future subscriptions and redemptions by subscribers under different market scenarios.
	The PFRDA may consider introducing a capital guaranteed scheme considering low cost to subscribers, simple structure that is easy for customers to understand and absence of any further requirement of capital and other capability development.	The product design may be discussed and debated to introduce a well designed product with minimum assured returns scheme with adequate caveats to cover systemic risks.	Assuring returns on a long term fixed income portfolio is risky and should not be considered till interest rate options are easily available in India. If assured returns have to be provided with long term investments, the PFRDA may consider introducing series of many close ended schemes with definite maturity dates so that the assurance is provided only on subscriptions made (and not future subscriptions)for a defined period(a definite redemption date).

Exact cost would depend on conditions such as the spread below Reverse Repo, minimum lock in period etc. Cost increases significantly here as the amount of inflows for which the assurance is provided is unlimited. In a scenario where the market interest rates fall (to a level below the assured return) after the assured return is frozen, more subscribers would contribute into the scheme given the attractive assurance there by increasing the cost of the guarantee. One approach to reduce the cost of guarantee is to reduce the minimum assured return, say to Reverse repo- 3%-PFM fees Guarantee charges

Disclaimer: This a conceptual discussion and all estimates are purely indicative and need to be firmed up with detailed modelling.

Chapter -IX

VALUATION OF ASSETS: METHODOLOGIES AND OPTIONS

Pension funds are following the "fair market" value principle to value their assets and declare NAV on every business day. However, Pension funds have very small liquidity needs in relation to their total assets under management. This means that they do not need to sell assets at current prices to meet benefit payments and other expenditures as they can rely on the regular flow of contributions and investment income therefore. The valuation of the portfolio at mark to market, when predominant part of the portfolio consists of Fixed Income securities raises questions about the "fairness of the Valuations". The present fair value system also induces market linked volatility in the declared NAV, based on short term fluctuations, while the long term valuations are in intact. This perceived volatility runs the risk of inducing pro-cyclical behavior in the pension funds which are under pressure of showing short term returns. Hence there is a need to introduce a system of valuations that is sync with the tone and tenor of the pension funds rather than mutual funds or other short term funds. A point in case is the recently revised principle IFRS 9 wherein partial fair value model has been introduced[9] . Thus Debt securities need to be segregated into HTM and MTM categories. Investments in debt securities shall be classified as held-to-maturity only if the reporting entity has the positive intent and ability to hold those securities to maturity .Rest of the securities may be valued at MTM. However, movement between the categories to be authorized by the Pension fund Boards. Prudential guidelines may be set by the regulator for holding securities in each category. NAV based on these valuations may be declared by the pension fund as hitherto

CLASSIFICATION OF SECURITIES:

At acquisition, an entity shall classify debt securities and equity securities into one of the following three categories:

a. Trading securities. If a security is acquired with the intent of selling it within hours or days, the security shall be classified as' trading security'. However, at acquisition an entity is not precluded from classifying as 'trading security' it plans to hold for a longer period. Classification of a security as trading security shall not be precluded simply because the entity does not intend to sell it in the near term

b. Available-for-sale securities. Investments in debt securities and equity securities that have readily determinable fair values not classified as trading

[9]The IASB initially planned to require complete fair valuation of all financial assets and liabilities. However, at the end of 2008, critics loudly blamed fair value accounting for accelerating the financial crisis as banks, and to some extent insurance companies and pension funds, were forced to sell market-valued assets at depressed prices, further depressing the markets. Ultimately, the IASB adopted a partial fair value accounting standard called IFRS 9, which requires entities to measure financial assets basically held for the purpose of collecting interest and principal cash flows on an amortised cost basis. The partial fair value model has met with broader acceptance than the requirement for full fair valuation

securities or as held-to-maturity securities shall be classified as available-for-sale securities.

c. Held –to- maturity securities investment in debt securities shall be classified as held-to-maturity only if the reporting entity has the positive intent and ability to hold those securities to maturity.

DETERMINING WHETHER A SECURITY QUALIFIES FOR HELD-TO MATURITY CLASSIFICATION

An entity's decision to classify a security as held-to-maturity means that, during the term of the security, its intentions with respect to that security will not be affected by interest rate changes or prepayment expectations. Thus, entities that use an active asset-liability management program to manage interest rate risk will find it difficult to classify securities as held-to-maturity if those securities are subject to sale in response to the asset-liability program. The management may be required to classify as available-for-sale or trading all securities that might be sold to achieve the desired matching of assets of asset and liability maturity dates and interest rates.

Similarly, an entity that maintains a dynamic hedging program in which changes in external factors require that certain securities be sold to maintain an effective hedge would not have the intent and ability to hold those securities to maturity. However, entities may designate certain debt securities as unavailable to be sold to accomplish those ongoing adjustments deemed necessary under its asset-liability program, thereby enabling those debt securities to be accounted for at amortized cost on the basis of a positive intent and ability to hold them to maturity.

In addition, a debt security should not be classified as held-to-maturity if that security can contractually be prepaid or otherwise settled in such a way that the holder of the security would not recover substantially all of its recorded investment,. Furthermore, securities with those types of characteristics should be evaluated to determine whether the security has an embedded derivative that must be accounted for separately.

The determination of an entity's intent to hold a security to maturity should also consider its operating policies regarding investments. In establishing the ability to hold a debt security to maturity, an entity should consider future business plans and expected cash flow needs. ..
However, the intent and ability to hold to maturity need not consider extremely remote "disaster scenarios" that could not have been anticipated by the entity, such as a run on a bank or an insurance entity. In establishing intent, an entity should consider pertinent historical experience, such as sales and transfers of debt securities classified as held-to-maturity. Such a pattern of sales or transfers is inconsistent with an expressed current intent to hold similar debt securities to maturity.

In developing the guidance on investments in debt and equity securities, the regulators need to be aware that financial institutions can, under appropriate circumstances, conclude that the continued ownership of any asset represents an undue safety and soundness risk to an institution and, accordingly, require the divestiture of that asset. A regulator's overall divestiture authority cannot be considered as an automatic

impairment of an institution's ability to hold a debt security to maturity, because such a conclusion would have precluded any use of the held-to-maturity category by regulated financial institutions. However, specific facts and circumstances could indicate than an institution does not have the ability to hold a debt security to maturity .

Investments in debt securities and equity securities shall be measured subsequently as follows:

a. Trading securities. Investments in debt securities that are classified as 'trading security' and equity securities that have readily determinable fair values that are classified as 'trading security' shall be measured at fair value in the statement of financial position.

b. Available-for-sale securities. Investments in debt securities that are classified as available for sale and equity securities that have readily determinable fair values shall be measured at fair value in the statement of financial position.

Unrealized holding gains and losses for available-for-sale securities (including those classified as current assets) shall be excluded from earnings and reported in other comprehensive income until realized except as indicated in the following sentence.

c. Investments in debt securities classified as held-to-maturity should be measured at amortized cost in the statement of financial position. Dividend and interest income, including amortization of the premium and discount arising at acquisition, should be included in earnings.

d. The held-to-maturity category includes only debt securities that management has both the positive intent *and* ability to hold until maturity. A positive intent and ability to hold a security to maturity is distinct from the mere absence of an intent to sell. The definition of the held-to-maturity category is restrictive because it is believed that the use of amortized cost must be justified for each investment in a debt security. If the entity is uncertain of its intention to hold a debt security to maturity, it should not carry that investment at amortized cost.

This category does not include securities the entity intends to hold for only an indefinite period. As a result, a security should not be classified as held-to-maturity if, for example, the entity considers that the security would be available to be sold in response to changes in market interest rates, changes in prepayment risk, changes in liquidity needs, changes in the availability of and the yield on alternative investments, changes in funding sources and terms or changes in foreign currency risk

The extent of documentation that companies should maintain for assigning classifications, such as held-to-maturity, will depend largely on the extent of sales activity and the size of the portfolio. Entities purchasing debt securities for the held-to-maturity portfolio should maintain records documenting their positive intent and ability to hold each security to maturity.

MARK TO MARKET VALUATION –SHIFT FROM PORTFOLIO LEVEL VALUATION TO SECURITY LEVEL VALUATION

Currently, fair market valuation principle is being used for valuation of the portfolio. In the Mutual Fund industry, there is a movement for industry wide uniform valuation of securities based on the concept of realizable value of the securities. In NPS, there is a single umbrella brand of NPS, with a common Trust and hence it is imperative that valuation remains uniform across NPS Schemes. The PFMs are accountable for the NAV valuation and hence they should be collectively responsible for the valuation process / methodology. The valuation policy for NPS should be revised in light of the experience gained so far and there should be a movement toward the concept of realizable value of securities

Debt securities can be classified in the following categories for valuations:

- ***Traded security***

- ***Non-traded Securities***: When a security (other than Government Securities) is not traded on NSE for a period of thirty days (instead of the existing provision of 60 days) prior to the valuation date, the scrip must be treated as a 'non-traded' security.

- ***Thinly Traded Debt Securities:*** A debt security (other than a Government Security) that has a trading volume of less than Rs. 5 crore in the previous calendar month shall be considered as a thinly traded security based upon the information provided by NSE on the volume of debt securities traded.

  i) Valuation of Traded Securities:
  The same current "fair market valuation is effective in case of frequently traded security . The last traded price for these reported trades can be used for valuations.However, the designated platforms, for benchmarking the valuations to be expanded from time to time. eg in case of fixed income securities, trades on F-TRAC (maintained by the FIMMDA), NSE and BSE may be considered for determining market price.

  ii) Valuation of Thinly Traded
  The same principle, however, cannot be applied in case of thinly traded securities or non traded securities. It is important to note as few and far between trades may not represent the market. An appropriate review process should therefore, be in place to weed out such outlier trades. Factors such as traded lot size, minimum number of trades, movement in yields on a given day etc. can be considered for this purpose. Matrices provided by specialized agencies can be considered for pricing non-traded securities. The price can be fine-tuned by applying an appropriate mark-up or mark-down to the corresponding matrix level. The mark-up and mark down can be based on a scientific approach to arrive at realizable market

value of the security.

(iii) Non – traded security

Securities can be valued on an amortization basis. The amortization price should however should be compared with the market price to ensure that it is not significantly different from market levels. Matrices can be used for calculating the market price. Security level prices provided by independent specialized valuation agencies can also be considered for valuing traded and non-traded debt and money market securities.

Chapter X

RISK MANAGEMENT IN PENSION FUNDS

The supervisory authorities around the world have been following other financial sectors and moving towards a risk-based approach to pension supervision. This can be recognized as a structured process aimed at identifying the most critical risks that face each pension fund and, through a focused review by the supervisor, assessing the pension fund's management of those risks and the pension fund's financial vulnerability to potential adverse experience. A key part of a risk-based approach to pension supervision involves the supervisory authority transitioning from checking detailed compliance requirements for the operation of pension funds to reviewing the internal decision-making processes and competencies of bodies of these funds. One of the main objectives of risk-based supervision is to ensure sound risk management at the institutional level taking into account both the quality of risk management and the accuracy of the risk assessment.

The Three pillars of the Risk Based supervision essentially are:

- ✓ Capital Adequacy to mitigate Credit Risk, market risk and operational risk.
- ✓ Supervisory review
- ✓ Market Discipline including disclosures

a. CAPITAL ADEQUACY:

Traditionally under the risk based supervision model, there is a stipulation of regulatory capital to meet the credit risk, market risk and operational risk. The same takes the form of Capital Adequacy ratio in banks under Basel II / Basel III and solvency ratio in the case of Insurance industry. The stipulated regulatory capital provides the requisite cushion against insolvency.

In case of Defined Contribution Schemes like NPS, the market risk and credit risk is borne entirely by the investor. Hence, there has been no stipulation of any kind of Regulatory capital except minimum Tangible Net worth requirement of Rs 25 crore for the Pension Funds.

However, the position needs to be reviewed in view of the following provisions in the PFRDA Act 2013:-

a) Minimum Assured return scheme to be provided by the Pension Fund.
b) Penal provisions under the PFRDA Act

The requirement of minimum assured return by the Pension Fund would result in imposition of regulatory capital on them as a cushion for the liability that would arise against it. The amount of the stipulated regulatory capital would depend upon the form of scheme offered by the pension fund. However, broadly speaking, the Pension funds may have to maintain a solvency ratio of 150% for MARS scheme, which is the trend in the insurance companies.

Further, the Minimum Net Worth criterion also needs to be reviewed in view of the experience gained in the working of the NPS in the last few years. As the NPS was a nascent scheme, in order to keep low entry barriers, the Net Worth was stipulated at low minimum of Rs 25 Crore. However, same may have to be reviewed to take into account the following:

a) Even if the pension funds do not have to bear investment risk – market risk or credit risk, they may have to contend with operational risk, for which adequate provision needs to be maintained.

b) The Pension funds are subject to penal provisions under the Act, which may run into crore of rupees. As NPS matures and pension funds become vehicles for managing huge AUMs running into hundreds of thousands of crore, and subject to various regulations, It would be desirable to have their increased stake in the system.

c) Besides, with the opening of the Govt sector to the private PFs, they are also expected to get a bigger share of the NPS AUM Pie.

Hence, Minimum tangible net worth may be increased to Rs 100.00 crore in a phased manner linked to the overall size of NPS AUM. Till the AUM size of Rs 10,000 crore, the regulatory Capital may remain at Rs 25 crore, pursuant to which the regulatory capital may be increased in a phase wise manner.

Similarly, a solvency ratio of 100% at all times may be stipulated for minimum assured returns scheme.

SUPERVISORY REVIEW AND DISCLOSURES:

GOI / PFRDA has put in place systems and processes for supervisory review through the PFRDA Act, Policies, Guidelines, Directions and is also in the authority of framing regulations under the Act. The PFs are also subject to a system of disclosures and review by external agencies *viz* Auditors, External review by CRISIL etc.

However, Currently the Risk management system is essentially rule based with all PFs given the same attention by the Regulator, for the simple reason of small number of players in the market. However, as the system matures and there are more number of players under NPS and other pension schemes regulated by PFRDA, the regulator may have to move to Risk Based Supervision. The main reasons for adopting RBS for pension sector supervision are:

- Limiting the maximum loss to members of DC plans to adverse movement in asset prices.
- Efficiency gains from improvement in risk return trade off in light of

movement towards " Prudential Investor regime"

- Increasing complexity of financial instruments and markets
- Efficient allocation of supervisory resources.
- RBS is already being followed in other financial sectors.

A step in this direction could be introduction of

A) Risk Based Scoring Model based on the performance indicators identified in preceding chapters.

B) Stress Testing for all the PFs with Traffic light approach. Rather than imposing a single potential scenario of adverse market conditions the Regulator may establish two sets of parameters for each risk factor, which effectively imply a mild and a strong stress test.

- ✓ Funds which remain theoretically solvent after the strong test are put in the green zone.
- ✓ Those which remain theoretically solvent under the mild test but not the strong test are placed in the yellow zone and is treated as an early warning indicator implying intensified supervision .
- ✓ If a fund is put into theoretical insolvency by the mild test it is deemed to be in the red zone. It may be subjected to more drastic intervention and shall become subject to PROMPT CORRECTIVE ACTION FRAMEWORK (PCA) .

PROMPT CORRECTIVE ACTION FRAMEWORK

The PCA framework shall be devised with identification of the triggers and take following steps in accordance with the ranking/ Zone in which the Fund falls :

- ✓ Enhanced oversight: First Stage involves more intense monitoring with more frequent meetings with trustees, meetings with auditors and collection of additional information and a readiness to step up supervisory or enforcement action quickly if there is any further deterioration.

- ✓ Mandated Improvement: When a fund is rated in this category, PFRDA will direct PFM to develop and implement plans to correct the weaknesses it has identified. These may originate in management, asset composition, operational controls or the trustee board itself. PFRDA may accept legally enforceable undertakings from PFs in regard to their remediation plans. It may also issue a 'show cause' notice requiring PF to explain why the regulator should not take more severe action.

Enforcement Action- At this point, the fund has encountered serious financial difficulty or is at such risk , or members' investments are considered to be in jeopardy . PFRDA may consequently apply its stronger enforcement and remedial powers. These include appointing an investigator; suspending and replacing individuals; and issuing directions to restrict fund operations, superseding the Board of PFs. Its primary objective is to ensure that members' funds are safeguarded as

far as possible. Where appropriate, these funds should be transferred to another PF. Following investigation, disciplinary actions against the Board and auditors will may be

Chapter- XI

ASSET LIABILITY MANAGEMENT

In all the financial sectors, be it Banking or the life insurance industry, Asset Liability Management has assumed a crucial importance in recent years. But the importance is more pronounced for pension funds, which emanates from different factors specific to pension funds, as explained below.

Firstly, the savings for retirement is no more a small portion for the household but it is a necessary component of the budget, because of increased life expectancy and enhanced standards of living.

Secondly, ALM is a key point for pension funds because of duration. To be efficient, the members of a fund must enter the plan young enough (at least before 45 for example). The average duration will be far longer than duration of traditional life insurance schemes. Considering the heterogeneity in term of volatility and trend of different types of assets during the previous century optimization of the allocation is one of the pillars of pension industry.

Thirdly, pension funds have to manage very different profiles. Long duration, uncertainty of life expectancy, heterogeneity of contribution between members, choice of annuities, differing lump-sum – annuity withdrawal ratios, possibility of partial withdrawals, could be various elements to take into account in the optimization. Hence, Mathematical reserves, contributions and benefits cannot be predicted with so much of certainty.

ALM has also to be a very serious matter to secure the scheme whatever the profile of the accumulation period and benefit period .ALM is far more important in case of Defined contribution schemes ,because in these schemes risk is transferred to the members . In this ALM one has to take into account their retirement date, their gender, their contribution profile and the type of benefits they want to receive.

There can be two alternative methods of achieving the same[10]:-

- The first one would be to create one segregated fund for each residual duration: in this scheme the subscriber will have to change his funds regularly.

- The second one is described below: you create one fund by generation of people. The allocation of each fund will change continuously.

A generation recovers working people who will retire at the same period of time. For example, 5 generations could be defined (Graph 4):

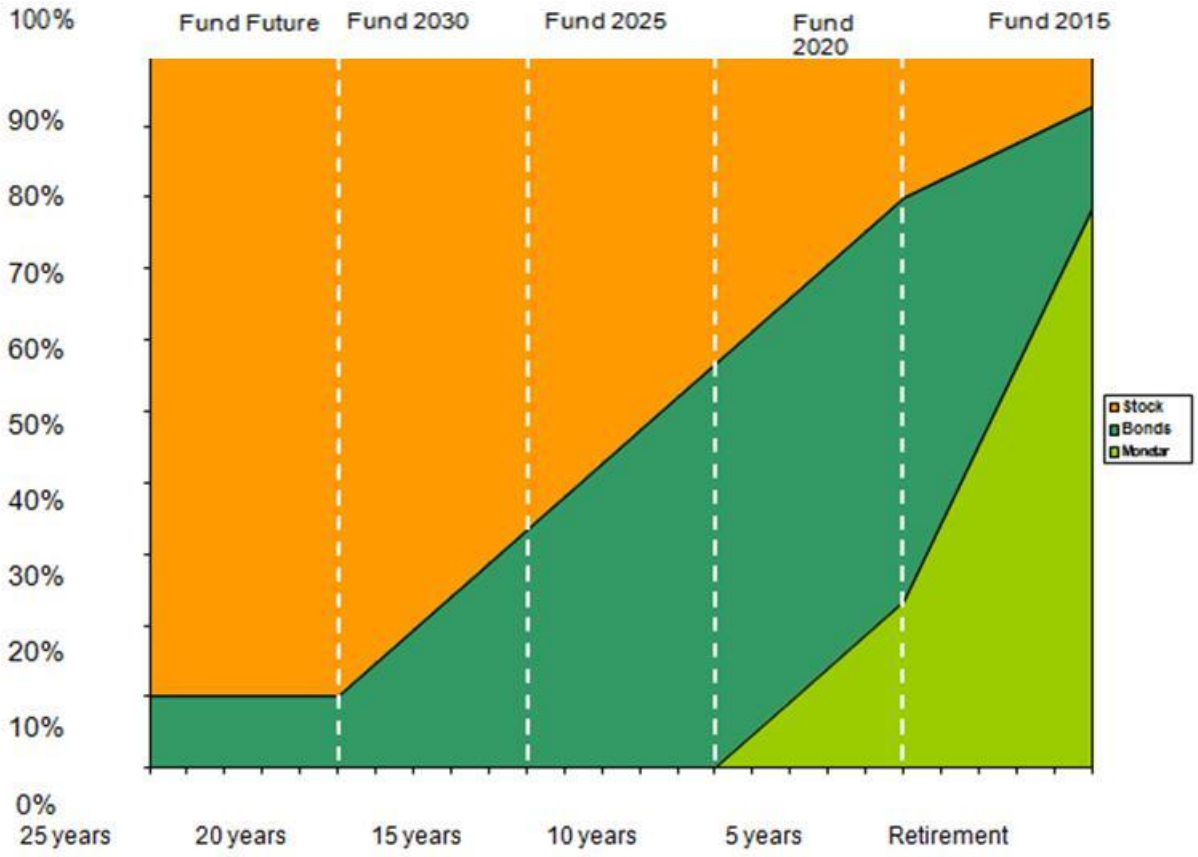
- fund 2015 : people retiring between 1/1/2013 and 31/12/2017

[10] ALM ISSUES IN THE MANAGEMENT OF PENSION FUNDS: INTERNATIONAL EXPERIENCE AND RELEVANCE FOR INDIA by Renaud Dumora and R.Kannan**

- fund 2020 : people retiring between 1/1/2018 and 31/12/2022
- fund 2025 : people retiring between 1/1/2023 and 31/12/2027
- Future Fund : people retiring after 1/1/2032.

To adapt each fund to the profile of people of each generation the exposure of each fund to stock will decrease for example by 3/5% per year. Each fund will disappear after the last retirement of the generation. One new fund for young workers will be created every five years.

Graph 4 : Generation of funds



A brief comparison of models[11]:

Most risk management literature and regulatory guidance is pre-emptive, and focuses on minimizing looses. It offers little advice on how to s make money using proactive risk allocation techniques. For Pension Funds, proactive ALM first requires that pension liabilities be incorporated into the asset allocation process. To measure market risk, liabilities can be viewed as negative cash flows projected with some degree of confidence to occur at different points in the future. Many plan sponsors are beginning to convince the actuarial world with the capital markets side of the business by reviewing their true economic risk as the risk to the pension surplus. They can then analyze pension liabilities as a portfolio of zero coupon bonds, making the fund's ALM process analogous to that of a bank or an insurance company.

Of course, ALM for pension funds differs from ALM for financial institutions in that it may require less fixed income immunization and more equity-like investments to match the variability of the uncertainty in liability projections. Still, the principles that commercial and investment banks use to allocate risk adjusted capital daily may be applied to monthly pension fund benchmarking as well.

Further, by benchmarking their lower-returning assets to correlate better with their liabilities, plan sponsors can minimize pension surplus risk. Then they can add higher- returning, more volatile benchmarks to the portfolio without exceeding overall risk limits.

Multiple-factor models, by contrast, decompose risk further by linking macroeconomic variables to the pricing characteristics of capital market and actuarial instruments. These models measure the impact of macroeconomic factors such as inflation, unemployment, corporate bond spreads, commodity prices, foreign exchange rates, GDP growth, and yields on both pension assets and liabilities.

Asset allocation models seek to balance optimal risk and return. The risk side of an optimization may involve variance/covariance estimates of risk, so it does not necessarily entail enormous computational intensity. The return side, meanwhile, requires equilibrium expected returns to start. Since the plan sponsor is often in touch with only a few of the global markets, certain equilibrium returns must be adjusted to reflect his or her market directional views.

The adjacent efficient frontier depicts how increased cash flow matching between assets and liabilities can minimize surplus risk. Instead of choosing the minimal-risk, fully matched strategy, plan sponsors may instead decide on a duration-linking strategy- the mid-range of the frontier which generally allows more room for higher returning, equity- like investments. The reason is that a fully matched pension balance sheet usually results in an expected pension surplus return significantly below the sponsoring company's targeted return on equity.

[11] ALM ISSUES IN THE MANAGEMENT OF PENSION FUNDS: INTERNATIONAL EXPERIENCE AND RELEVANCE FOR INDIA by Renaud Dumora and R.Kannan**

CONCLUSION :

Presently, the NPS is predominantly in the accumulation phase. However, about 2.25 lakh subscribers are expected to exit the NPS system in the next five years calling for an efficient Asset Liability Management to meet the payouts at least cost to the system on account of duress sales of securities etc. The NPS Portfolio today predominantly consists of fixed income securities. The regulator can therefore prescribe a dynamic and comprehensive asset-liability management module, which could include, among others, prudential duration gap limits, prudential limits for interest rate sensitivity and a structural liquidity framework. A format on the lines of a Debenture Redemption Reserve could be considered over a three year period to redemption so that there is no worry of sales of investments under duress, which can hurt those staying behind more than those getting paid out. The first step in this direction would of course be periodic sharing of relevant data by CRM relating to exits with the PFMs. Based on the prudential guidelines stipulated by the Regulator and available data, the PFMs to formulate their individual ALM polices (within the framework of DRR stipulated by PFRDA) and file the same with the regulator. **(Ref : TOR VI)**

Chapter XII

MARKETING OF NPS BY PENSION FUNDS

1. **MANDATE UNDER THE PFRDA ACT** -As per the PFRDA Act section 14(1), the Authority shall have the duty, to regulate, promote and ensure orderly growth of the National Pension System and pension schemes to which this Act applies. Hence, like other financial regulators, the onus of growth and development of the Pension sector has also been cast on PFRDA, besides regulation of the sector.

2. An analysis of the year on year growth of NPS in the various NPS reveals that while the growth of NPS has been satisfactory in the *viz* Central Govt , State Govt sectors , the growth under NPS has been tardy in the Non-mandated, Non- Government retail segment, notwithstanding some unique features, which have the potential to provide old age income security in a self - sustainable manner to its subscriber . This has necessitated a review of the present dispensation for increasing the outreach of the NPS in the retail segment.

3. **MARKETING UNDER PRESENT DISPENSATION AND EXPERIENCE SO FAR** – The NPS is presently operated under unbundled architecture with each intermediary assigned a specific role. Under the present dispensation, the Points of Presence have been allocated the role of marketing the NPS product. NPS is a push product, as is the case with other financial products. However, empirical evidence suggests that PoPs have failed to provide the requisite push. Despite enlisting about 30,000 PoP – SPs, only 10% of the PoP-SP have actually marketed any NPS account.

4. While lack of awareness is often cited as one of the reasons for slow off-take of the product, the reluctance by the POPs especially bank-POPs in pushing NPS products may partially be explained by lop-sided incentive structure in the financial products. NPS, as a financial product, competes with a bouquet of financial products on the PoP Counter, including Insurance products; Mutual funds etc which are hard sold by them on account of much better incentive structures, often multiple times the incentives provided under the NPS. It's empirically proven that the POPs refrained from actively marketing the product, even after higher incentives were announced by the PFRDA mainly because the incentive differential remained too wide to be covered by a low cost product like NPS.

Thus, in absence of the requisite push from the PoPs, the growth of NPS in the retail segment has been tardy.

5. **MARKETING BY PENSION FUNDS-** In the absence of PoPs taking the onus of actively canvassing the NPS accounts, it may be required to assign the role additionally to an intermediary which has greatest stake in the growth of NPS, i.e. the Pension Fund. They are the only intermediaries which are exclusively within the regulatory jurisdiction of PFRDA. Further, among all the intermediaries, it would seem that the PFs have perhaps been the worst affected by the slow growth of NPS, whose sole source of revenue is Fund management

fee. Despite being the final recipients of funds in the NPS chain and hence an important stakeholder in the system, they presently have little control over the process of accumulating the AUM.

6. There are some legitimate concerns expressed about going down this path, namely the conflict of roles and the possibility of mis-selling being the most important one. A view has been often expressed that under the unbundled architecture, a PFM is a specialised entity focused on understanding the stock and bond markets and therefore, may be ill-equipped to take on the role of selling NPS. The role of PFs in marketing NPS has been deliberated in detail in the CRIISP Committee report wherein it was agreed that in order to increase the uptake of NPS, it was important to allow a wide spectrum of entities to distribute NPS including Pension Funds. However, the hazard of mis-selling had weighed on the mind of the committee, wherein it had stated that "the hazard of mis-selling is very real and cannot be wished away. However, on balance any possible misdoing would be substantially mitigated by a combination of strict regulations that ensures full transparency and disclosure". Therefore, the Committee had at that time opted to walk the middle path. It had recommended that PFMs should be allowed to sell NPS but not directly but through their own PoPs / subsidiaries. However, with the notification of the PFRDA Act, consequent empowerment of PFRDA through various provisions on investigations, enquiry, penalty and other enforcement actions besides other customer protection measures envisaged in the various Regulations under the Act, the issue of mis-selling will stand addressed. Regulation and supervision will provide a good oversight of the PF's functionality. The time is, therefore appropriate, to allow PFs to market the NPS product themselves, as they are the only entities in the entire NPS system that have direct stake in the expansion of NPS and are also the only entities that are entirely regulated by PFRDA and hence, best suited to expand coverage under NPS.

7. In accordance with the recommendations of the CRIISP committee, the Pension Funds were permitted to market the NPS product for a brief period in 2013 under the PFRDA (Registration of Pension Fund Managers) 2012 Guidelines. The empirical data suggests a spurt in the enrolment of the subscribers during this short period of marketing by pension Funds. The subscriber registration leaped to an average of 15,000 per month from an average of about 8000 per month in the retail segment. However, the enrolment resumed to its previous level of about 8,000 per month as soon as marketing was stopped by the Pension Funds in November 2013.

▪ STRENGTH	▪ WEAKNESS
▪ Pension Funds have greatest stake in the System. ▪ Pension Funds exclusively regulated by PFRDA ▪ Empirical data supports the strategy ▪ The Strategy was successful with minimalist cost, retaining the USP of NPS product i.e low cost. ▪ Strategy more cost effective than incentivizing the PoP, who do-not get any trail income on contribution ▪ Barrier of low awareness overcome, as Pension Funds well acquainted with the product.	▪ Absence of huge network- ▪ Mitigation- Leverage Group company's network or tie up with other PoPs ▪ Absence of dedicated marketing staff ▪ Mitigation- Recruit dedicated staff for marketing
▪ OPPORTUNITY	**▪ THREAT**
▪ Opportunity for Private sector pension funds to reach critical mass of AUM ▪ Opportunity for Pension funds to improve their viability by earning marketing fee and trail management income on the AUM garnered ▪ Viable pension Funds would attract better talent *viz* Pension fund managers leading to better construction of portfolios. ▪ Viable and stable pension industry.	▪ Conflict of interest as pension funds would solicit funds for their themselves, thereby stifling customer choice. ▪ Mitigation- a) The subscriber has the choice of chosing the pension fund at the time of entry through the PoP, irrespective of the PF which canvasses the product. ▪ The subscriber has the choice of changing the pension fund every year. ▪ Mis- selling ▪ Mitigation-a) NPS is a standardized product with adequate transparency and disclosures. ▪ notification of the PFRDA Act, consequent empowerment of PFRDA through various provisions on investigations, enquiry, penalty and other enforcement actions besides other customer protection measures envisaged in the various Regulations under the Act.

FEE FOR PENSION FUNDS:

If PFs are to act as an alternative channel for garnering new investments, the current fee structure (at 0.01% of the average monthly assets under management) seems way too low for them to even meet their costs, let alone provide them with additional incentive to actively start championing NPS. Therefore, there is substantial scope for revision in the selection process adopted for PFs . The existing system of bidding is borrowed from the EPFO system but does not seem to have given optimum results it was expected to yield. The reasons are not far to seek. The EPFO funds are a captive market of the funds collected under EPFO Act and are generally invested into G-Sec Bonds, requiring little fund management skills with the comfort of fall back on the sovereign fiscal for funding the shortfall in returns. On the other hand, NPS requires marketing efforts (by subsidiary or otherwise) ,efficient fund management and generation of optimum returns to stay in business. The present bidding system has only created "a race to the bottom" leading to uneconomical bids being forced on all the Pension funds. Thus, there is a need to review the system of selection of Pension Funds having a bearing on the determination on the Pension Fund Management fee.

8. Marketing by Pension funds and Fee - The marketing of NPS by Pension Funds would entail certain establishment, personnel and other expenditures for which the Pension funds should be compensated. During the short period of time, when pension funds were marketing the product, they were able to achieve the spike in NPS subscribers within the Pension Fund fee of 0.25% p.a. (inclusive of Fund management fee). The all in cost of NPS remained well within 0.50% thus retaining its USP of the being a low cost product. Thus, the strategy yielded better results than incentivizing the PoPs, who offer a bouquet of products with much higher incentives, often multiple times the incentives provided under the NPS. NPS would find it difficult to close in on the huge incentive differential without losing out its USP of being a low cost product. While the exact structure of the Fee for the pension funds may be worked out separately, it may be stated that pension funds are better suited to market the NPS at much lower cost than PoPs, as they have added incentive to earn trail income every year by way of management fee on the AUM garnered by them.

The regulator, may perhaps, introduce a fixed and variable component in the fee, with pension funds being incentivized to quote lowest fixed fee in the bid. However, the variable fee shall depend upon other performance indicators *viz* relative Returns generated etc. This model is being followed in one of the European countries where the maximum rate of variable fee is 0.06% of assets annually (for the best performing pension fund) the minimum is 0% (for the worst one) with average of 0.03%. Another variable factor could be distribution fee, which could be paid on the contributions of the fresh subscribers garnered during the year by the PFs, instead of loading the entire fee with marketing fee. Similar methods of charging fee may also be examined by the PFRDA for arriving at an economically viable incentive structure, without compromising on the cost.

Chapter XIII

IDEATING ORDERLY GROWTH OF PENSION SECTOR

The Financial sector regulatory landscape is dotted with essentially four regulators *viz* Reserve Bank of India (RBI) , Securities Exchange Board of India (SEBI), Insurance Regulatory and Development Authority (IRDA) and the Pension Fund Regulatory and Development Authority (PFRDA).The domain of each regulator is carved out in its backing statute, as under:-

RBI: To Regulate the banking sector

SEBI: To protect the interest of Investors in security and to promote development of and to regulate the security market.

IRDA: To protect the interest of holders of insurance policies and to regulate, promote and ensure orderly growth of insurance industry.

PFRDA: To promote old age security, establishing, developing and regulating pension funds to protect interest of subscribers to the schemes of pension funds.

However, historically, some overlapping has been witnessed in the jurisdictions of these Regulators leading to apprehensions of either over-regulation at one hand and regulatory arbitrage on the other. Either of these scenarios do not bode well for the development of financial sector and the consumers.

One case in point is the Pension products.
The PFRDA Act has been notified on 01.02.2014 with the specific mandate to promote old age income security. As per Section 12 of the PFRDA Act , while National Pension System is explicitly within the regulatory ambit of PFRDA, it is also laid down that the Act shall also apply to any other pension scheme not regulated by any other enactments .

While the domain of PFRDA shall become explicitly clearer once the regulations are in place, it cannot be overemphasized that a specific regulatory carve out has been made for Pension Products in the financial sector by the Parliament in the form of the PFRDA Act, to achieve the much required timely and orderly growth of Pension sector. This was found essential in order to meet the humungous challenge of dealing with dwindling demographic dividend in the coming decades amidst fiscal constraints. This would involve developing a contiguous Pension system involving collection, investment, fund management, record keeping and pay outs in a targeted and focused manner.

This would essentially require inter regulatory coordination by signaling to the market of the new dispensation. Pension products have in the past been registered with SEBI and IRDA and in fact been actively promoted by the regulators. Recently, SEBI Board has approved issuing regulations for Mutual Fund linked Retirement product (MFLRP) which is in spirit and implementation is a pension scheme and hence should logically be registered with PFRDA after the notification of the PFRDA Act. Conflicting signals will only hamper the growth of the still nascent Pension sector , which is in clear need of nurturing. IRDA has also issued guidelines on pension product

A clear cut signal to the market shall have to be made that SEBI shall continue to regulate the securities, including those used as vehicle for optimizing pension wealth, IRDA shall continue to regulate the annuity market, while any Scheme aimed at accumulation of funds for providing old age income security by way of annuity, or pension etc shall be registered and regulated by PFRDA. This would be in harmony with the parliamentary intent as also letter and spirit of the SEBI, IRDA and PFRDA Acts.

There can be no doubt that SEBI is a market regulator for Securities whereas IRDA and PFRDA are product regulators for Insurance and Pension sector products respectively. Here, it may be mentioned that both IRDA and PFRDA regulated entities invest the funds collected as a contribution in the securities like shares, bonds, mutual funds etc. regulated by the security market regulator SEBI. However, the mandate of the SEBI is to provide general regulation for securities market whereas, keeping in view, goal, sensitivity and priority of the products like pension and insurance PFRDA and IRDA have been established to have undivided attention, forceful direction and pointed focus to the respective sectors. Further, the role of PFRDA is not only regulation of investment of pension funds but also regulations related to promotion, collection, functional, operational issues of record keeping, management and portability of account etc. with a long term view. Here, the subscriber contributes regularly for a long term for their old age security throughout various economic cycles. The subscribers of pension belong to diverse socio economic class and they need awareness and financial literacy to enroll for the pension scheme and regular motivation to continue regular contribution for their old age. Pension regulation are more wide ranging than that of life insurance, notably on the liabilities side. Pension regulations include those of transferability, indexation and annuitisation, none of which are typically regulated for life insurers. This in turn reflects the broader objective of pension regulation, including retirement income security rather than merely protecting against market failures in finance

It may not out of place to mention that most of the sponsors of the Pension funds (PFs) are regulated by SEBI and IRDA. They shall now be required to provide financial and other support to the still nascent Pension Funds in devising new products like minimum assured products mandated by the PFRDA Act. There is a need for inter regulatory coordination to discuss and devise these products requiring multiple regulatory approvals to avoid delays/ regulatory overreach on one hand and Regulatory arbitrage on the other, in the best interest of the subscribers

The current fragmented and heterogeneous pensions sector could pose some challenges on regulation and supervision resulting in regulatory arbitrage and regulatory gaps. The scope and types of products covered under “pensions” as defined under the PFRDA Act does not comprehensively capture the multitude of providers, intermediaries and products. Addressing this gap is important to effectively regulate the sector. If unaddressed, this may open up some kinks for misconduct, which may adversely affect the confidence of the various stakeholders and market participants. The need for a unified pension regime and unified regulations therefore is critical for the orderly growth and stability of the pension industry.

TAX EQUIVALENCE:

While reviewing the external environment for the pension Funds, one cannot but help notice the uneven playing field for the NPS. The PFRDA will have to play an active advocacy role in getting a level playing field for the subscribers. The tax treatment to NPS compares unfavorably with the other long term saving instruments in the market and this has been perhaps one of the reasons for its slow off-take in the Private sector. The principal of EET has been applied to NPS.The tax treatment also creates an invidious distinction between pre-2004 and post 2004 Government employees. a) Level playing field- EET TAX REGIME: NPS is subject to tax at the hands of the assesse under sub-section (3) of Section 80CCD of the Income Tax Act. This compares unfavourably with Govt employees joining prior to 1.04.2004 - wherein commutation of pension is allowed exemption from taxation as per section 10 (10A) of the Income Tax Act at the time of retirement. Further, all the other long term saving instruments such as mutual funds, LIC, PPF, GPF etc are enjoying Tax benefits at the time of withdrawal. In order to ensure development of the pension sector in general and NPS in particular, it is essential that distortions across financial instruments and group of assesses are resolved and appropriate fiscal incentives are provided. Iniquitous tax treatment not only disadvantages one financial product against the other, it also creates avenues for tax arbitrage.

Table1: IRDA's guidelines on pension product: Exposure draft

All the pension products offered shall comply with the following objectives.

1. A pension product (deferred annuity contract) shall have an assured benefit disclosed at the time of sale, where the assured benefit is an amount in absolute terms which becomes payable on the vesting date.
2. For the purpose of financial planning, any pension product offered by the insurer shall comply with the sales literature guidelines issued by the Life Insurance Council circular number LC/SP/Ver 1.0 dated 3rd February, 2004 and shall also necessarily disclose:

2.1 An illustrative target purchase price for each policyholder considering the premium payment capacity, age, vesting age and the future expected conditions.

2.2 Possible risks involved, if any, in meeting the targeted purchase price.

2.3 Possible risks involved, if any, in purchasing the targeted pension rate/annuity rate.

2.4 An illustrative target annuity/pension rates for the illustrative target purchase price.

3. Any pension product offered by the insurer may have an optional insurance cover throughout the deferment period or may offer riders, which are approved under the file and use procedure.
4. At the date of vesting or at the date of surrender, the policyholder shall be given an option to commute up to a 1/3 rd of the amount realized.
5. At the date of surrender, the balance amount remaining after commutation shall be utilized to purchase pension, guaranteed for life, at the then prevailing annuity /pension rate.
6. At the date of vesting, the balance amount remaining after commutation shall be utilized to purchase pension, guaranteed for life, at the then prevailing annuity rate.
7. The prevailing annuity rate shall mean the annuity rates that shall be allowed to be applied to each of the pension products as per the latest approval accorded by the Authority as per the file and use procedure.
8. If the policyholder dies during the deferment period, the nominee shall be entitled to:

8.1 utilize the entire proceeds of the policy as on that date including the rider benefits, if any, or part thereof for purchasing an annuity at the then prevailing rate; OR

8.2 withdraw the entire proceeds of the policy;

9. At the time of vesting, the annuity shall be provided by the same insurer who contracted the original deferred annuity policy.
10. All the unit linked pension products shall comply with IRDA (Treatment of discontinued linked insurance policies) Regulations 2010.

Annexure1 : An international study for Investment limits

Area	Country	Investment only in authorized instrument	Limits by Instruments	Limits by set of Instruments	Foreign limits
	Argentina	√	√		√
	Bolivia	√	√	√	√
Latin America	Brazil	√	√		√
	Chile	√	√	√	√
	Colombia	√	√	√	√
	Costa Rica	√	√	√	√
	El Salvador	√	√	√	√
	Peru	√	√	√	√
	Mexico	√	√	√	√
	Uruguay	√	√	√	√
CEE	Czech Republic	√	√		√ (*)
	Estonia	√	√		√ (*)
	Hungary	√	√		√ (*)
	Poland	√	√	√	√ (*)
	Kazakhstan	√	√		√ (*)
NorthAmerica	Canada		√		√
	United States				
Western Europe	Netherlands				
	Sweden		√		
	United Kingdom				
Asia - Pacific	Australia				
	Hong Kong				
	Japan				

Annexure 2: Portfolio limits on Developed countries pension fund investment in selected asset categories

Country	Equity	Real Estate	Bonds	Retail Investment Funds	Private Investment funds	Loans	Bank deposits
Australia	**- No limit.**	**- No limit.**	**- No limit**	**- No limit**	**- No limit**	**- No limit** **- Loans or financial assistance to members and their relatives are not permitted.**	**- No limit**
Japan	**- No limit.**	**- Not permitted.**	**- No limit.**	**- No limit.**	**- No limit.**	**- Not permitted.**	**- No limit.**
United Kingdom	**- No limit.**	**- No limit.**	**- No limit.**	**- No limit.**	**- No limit.**	**- No employer-related loans.**	**- No limit.**
United States	**- Some limits on employer securities.**	**- Some limits on real estate leased to employers.**	**- Some limits on employer bonds.**	**- No limit.**	**- No limit.**	**- No employer-related loans**	**- No limit.**

Annexure 3: Portfolio limits on Developing Countries pension fund investment in selected asset categories							
Country	Equity	Real Estate	Bonds	Retail Investment Funds	Private Investment funds	Loans	Bank deposits
Chile	- Max Limit for variable income securities8: • 80% fund A • 60% fund B • 40% fund C • 20% fund D • 5% fund E - Min Limit for variable income securities: • 40% fund A • 25% fund B • 15% fund C • 5% fund D • 0% fund E - Domestic public limited companies (sub-limit): • 60% fund A • 50% fund B • 30% fund C • 15% fund D • 5% fund E	-Direct investment is not allowed	- Government bonds: • 40% fund A • 40% fund B • 50% fund C • 70% fund D • 80% fund E - Bond of Public and private companies, including convertible and commercial papers: • 60% each type of fund - Convertible bonds, local plus foreign (sub-limit) • 30% fund A • 30% fund B • 10% fund C • 10% fund D • 3% fund E - Not investment grade bonds (sub-limit): • 5% fund A • 4% fund B • 3% fund C • 2% fund D • 0% fund	- Joint limit for closed-ended and open-ended mutual funds shares and committed payments: • 40% fund A • 30% fund B • 20% fund C • 10% fund D • 5% fund E - Sub-limit mutual fund shares: • 5% for each type of fund, including fund E. - committed payments for closed-ended funds: 2% for each type of fund, including fund E.	- Not allowed.		
Brazil	- The investments classified as	- 11%25	- No limit for federal government bonds,	- See Equity	- See Equity	-15% for loans	- 80%

	variable income must observe, the resources from each plan, the limit of up to sixty percent, observed the following limits: I – up to seventh percent in shares issued from listed companies admitted for trading at the Novo Mercado from BM&FBovespa; II – up to sixty percent in shares issued from listed companies admitted for trading at Level 2 segment from BM&FBovespa; III – up to fifty percent in shares issue from listed companies admitted for trading at BovespaMais		treasuries - 80% others bonds.				

	segment from BM&FBovespa;						
South Africa	- 75% (overall limit). - 5% in unlisted shares, unlisted convertible debentures, shares and convertible debentures listed in the Development Capital Sector of the Johannesburg Stocks Exchange (JSE).	- 25%	- No limit on bills, bonds and securities issued and guaranteed by the government.	- Not allowed.	- Not allowed	- 5% to participating employer. It can increase to 10% with the approval of the Registrar and members of the fund. - Housing loans to members limited to 95% of the fair value of the fund.	- No limit on total of deposits in banks, mutual banks and South African Futures Exchange (SAFEX) - 20% limit per bank or mutual society

Annexure 4: Stipulation Of Prudential Ceilings In Various Countries

Area	Country	Limits by issuer	Limits by risk	Foreign limits
Latin America	Argentina	√	√	√
	Bolivia	√	√	√
	Brazil	√	√	√
	Chile	√	√	√
	Colombia	√	√	√
	Costa Rica	√	√	√
	El Salvador	√	√	√
	Peru	√	√	√
	Mexico	√	√	√
	Uruguay	√	√	√
CEE	Czech Republic	√		√ (*)
	Estonia	√		√ (*)
	Hungary	√		√ (*)
	Poland	√		√ (*)
	Kazakhstan	√		√ (*)
North America	Canada	√		√
	United States			
Western Europe	Netherlands			
	Sweden	√		
	United Kingdom			
Asia - Pacific	Australia			
	Hong Kong			
	Japan			

Developed Countries	**Investment limit in single issuer/issue**	**Self-investment / Conflicts of interest**	**Other quantitative rules**	***Ownership concentration limits***
Australia	- None, but trustees must consider diversification in making asset allocation.	- Limited to 5%.	- None.	- None.
Japan	- EPF37, DB: None, but the pension legislation stipulates that each pension fund should endeavour to avoid concentration of investment on a specific asset category. - TQP38: not regulat	EPF, DB: Investment on securities with the purpose of pursuing interests of someone other than the pension fund is prohibited.	EPF, DB: None.	- EPF, DB: None.
United Kingdom	General requirement for diversification and suitability	Yes, employer-related investment is limited to 5%.	- No other quantitative portfolio restrictions	- None.
United States	- General requirement for diversification. An exception applies for holding employer securities or real property under certain DC plans.	No self dealing, representing two sides of a single transaction, kickbacks to fiduciaries, or transactions with parties in interest, unless an exemption applies. - Special restrictions apply to certain types of investments, including ownership of pass through entities (partnerships and S corporations) and collectibles (art, coins, etc.). - No employer securities or real property in excess of 10% of plan assets, but an	- Indicia of ownership of plan assets must be under the jurisdiction of US courts. - Investment vehicles with <25% benefit plan investors not subject to ERISA. Fiduciaries remain liable, however, for decision to invest in such vehicles.	- None.

		exception applies for holding employer securities or real property under certain DC plans.		

Developing Countries	Investment limit in single issuer/issue	Self-investment / Conflicts of interest	Other quantitative rules	*Ownership concentration limits*
Chile	Financial sector (individual funds): • Max. 10%*VF33*RF34 in current account and time deposits and debt securities issued by a single issuer. • Max. 7%*VF in current account and time deposits, debt securities and shares issued by a single issuer. - Foreign sector (individual funds): • Max. 1%*VF in equities issued by a single issuer. • Max. 5%*VF*RF in debt securities issued by a single issuer. • Max. 5%*VF in a single open ended fund, closed ended fund or exchange traded fund (ETF). • Max. 1%*VF * RF in structured notes (capital protected notes) issued by foreign institutions. • Max. 0.5%*VF in short-term deposits. • Max. 4%*VF each local or foreign counterparty in OTC. - Company sector: (individual funds):	- No allowed securities issued or granted by the AFP or a related company	Net foreign currency exposure without hedging: • 50% fund A • 40% fund B • 35% fund C • 25% fund D • 15% fund E - Risk hedging operations: • The limit is given by the total fund investment subject being hedge. • Max 3% * VF in not hedge derivatives. • Max 1/3 of foreign assets of each fund is allow to be lent in securities lending operations. • Max 15% local assets of each fund is allow to be lent in securities lending operations. • Risky assets (not investment grade, illiquid and high-risk instruments) • 20% fund A • 17% fund B • 14% fund C • 10% fund D • 0% fund E	- Max 15% * VF (individual funds) in all shares, bonds and commercial paper issued or guaranteed by companies belonging to a single group. • Max. 35% shares issued by local investment funds or outstanding shares of local mutual funds, for the sum of the Funds of the same AFP. • Max. 7% subscribed shares in public limited local company shares, for the sum of the Funds of the same AFP. • Max. 35% of single issue of bonds, commercial papers, or securitized loans, for the sum of the Funds of the same AFP. • The sum of

	• Max. 7%*VF*RF in debt securities issued by a single company. • Max 5% x VF x FC in public limited company shares (FC: concentration factor). • Max. 7%*VF in bonds, commercial papers and shares issued by a single company. • Max. 5%*VF in a local closed ended fund. • Max. 1%*VF in a local open ended Fund. • Max 0.3%*VF in risky securities			investments by all funds from the same AFP, in bonds and commercial papers issued or granted by a single company may not exceed 12% of the company assets.
Brazil	None for the federal government's bonds; and - 30% for single issuer or connected group of companies.	Max. 10% may be invested in the sponsoring employer or connected group of companies.	- 80% in fixed income securities with low credit risk and up to 20% in fixed income securities with medium/high credit risk. - Derivatives: when for protection, until the limit of the financial positions, and when for speculation, the pension funds should have disentailed federal government's bonds of any operations44.	- Pension Funds in Brazil can hold a maximum 20% of the capital of a single company.
South Africa	- Max. 20% in securities issued by a single banking institution or mutual bank. - Max. 20% in bills, bonds and securities issued or	- Max. 5% in investments in the business of the participating employer (up to 10% with the approval of the registrar and	- Max. 5% on South African Futures Exchange (SAFEX).	None

	guaranteed loans to or guaranteed by a single local authority, development boards, Rand Water Board, Eskom, Landbank of South Africa, Local Authorities Loans Fund Board. - Max. 5% in a single property or property development project. - Max. 15% in shares and convertible debentures listed on the JSE of any one company with a market capitalisation of R2 billion or more. - Max. 10% in shares and convertible debentures listed on the JSE of any one company with a market capitalisation of less than R2 billion - Max. 2.5% in any asset that is not listed in regulation 28	members of the fund).		

Bibliography

1. **World Bank Paper on "Pension Risk and Risk Based Supervision in Defined Contribution Pension Funds" by Tony Randle and Heinz P. Rudolph; March 18, 2014.**
2. **"Financial instruments- the complete standards by KPMG ; July 2014 Issue 2014/13.**
3. **"ALM issues in the management of pension funds: international experience and relevance for india" by Renaud Dumora and R.Kannan.**
4. **RBI Circulars on Capital Adequacy - Risk weightage on Lending through Collateralized Borrowing and Lending Obligation (CBLO).**
5. **Report of the Committee to "Review Implementation of Informal Sector Pension (CRIISP)"; By Bajpai Committee; 2011.**
6. **"Report on Investment regulations for the New Pension System for the informal sector", By Parekh Committee; February 17, 2009.**
7. **"Asset allocation of Pension Funds around the world"; By Mercer; February 2014.**
8. **"OECD Private Pension Outlook"; 2008.**
9. **"Fees in Individual Account Pension Systems: A Cross-Country Comparison", OECD Working Papers on Insurance and Private Pensions, No. 27, OECD publishing by Tapia, W. and J. Yermo (2008).**
10. **"Survey of investment regulation of pension funds." By OECD – June 2011.**
11. **"Pension Funds' Performance in Strongly Regulated Industries in Central Europe: Evidence from Poland and Hungary" by Martin T. Bohl, Judith Lischewski and Svitlana Voronkova.**
12. **"Pension Market in Focus" by OECD ; 2013.**
13. **Prudent person rules or quantitative restrictions? The Regulation of long-term insitutional investors' Portfolios by E Philip Davis.**
14. **"Prudent person rule" standard for the investment of pension fund assets" Russell Galer, OECD; November 2002.**
15. **"Risk-Based Supervision of Pension Funds in Australia" Graeme Thompson- World Bank; February 2008.**
16. **"Pension Funds' Risk-Management Framework: Regulation and Supervisory Oversight", OECD Working Papers on Insurance and Private Pensions, No. 40, OECD publishing, by Stewart, F. (2010).**
17. **"Long-term Pension Investment Strategies under Risk-based Regulation Amsterdam", By Dr. Gerhard Scheuenstuhl & Dr. Christian Schmitt ; 7th April 2014.**
18. **"The Effect of Solvency Regulations and Accounting Standards on Long- Term Investing: Implications for Insurers and Pension Funds", OECD Working Papers on Finance, Insurance and Private Pensions, No. 30, OECD Publishing by Severinson, C. and J. Yermo (2012).**
19. **"Certain investments in debt and equity securities Accounting Standards Codification 320" Revised July 2013; Ernst and Young.**
20. **IOPS Working Papers on "Effective Pensions Supervision", No.20 update of iops work on fees and charges; Liviu Ionescu and Edgar A. Robles (April 2014).**
21. **"Global Pension Assets Study" , By Tower Watson**

22. **"A First Cut Estimate of the Equity Risk Premium in India" : Jayanth R Varma & Samir K Barua; IIM Working Paper Number 2006-06-04, June 2006.**

23. **"The Equity Premium: A Puzzle" by Rajnish Mehra& Edward C Prescott.**

24. **"Prudent person rule" standard for the investment of pension fund assets" by Russell Galer, OECD November 2002.**