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COMPETITIVENESS OF PENSION FUNDS IN INDIA

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Abstract
There are two groups of firms or companies in a market to influence the price of their products, namely, the price markers and price takers. The extent of market power and market concentration of these companies determine to which group they fall under. These issues needs a thorough discussion especially at the present time when Indian economy has shown a phenomenal trend because of changes in government policies as well as changing trends in lifestyle and saving pattern of people. Change in market concentration leads to change in market power. As concentration rate increases, level of competition decreases and vice versa. The issue is how to measure and interpret meaningfully the level or extent of market competition of the companies operating in pension market in India. Concentration Ratio (CR) and the Herfindahl-Hirschman Index (HHI) are two indicators. The present paper studies intensity of competition in pension market using the Herfindahl-Hirschman Index (HHI). The study provides inputs to the government & organizations to bring in further competitive strategies to benefit organisations. The H indices indicate near perfect behaviour of ICICI, Kotak, Reliance, HDFC & Birla Sun Life pension funds. SBI & UTI pension funds are monopolistic & exhibit monopoly power in their earnings. Given the present position, Pension Market Players (PMP) have a huge opportunity in Indian scenario as almost 94% of the total working population are not covered so far.
Key words: Pension savings, Pension Market Players, Insurance, Market structure, HH Index, competition, National Pension Scheme.

I. THE MEASURE

Competition refers to sharing available limited sources to meet unlimited demands of people. Companies compete with one another to establish market power by various ways and means mainly through differentiated product range/line and by offering products/services at a low cost. Competition can be treated as a means of access to market process. The efficiency of these products or services depends on how the firms in an industry perform and structure of the market. There are two theories backing this, one is the Structure-conduct-Performance theory (Bian, 1951) which states that "those firms with high concentration power have high market power, charge more price and earn higher profits". Secondly, the Efficiency Structure theory advocated by Demsetz (1973) which states that "efficient firms capture high market

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concentration through a low price policy offered to customers which leads to higher market share, higher concentration and higher profits". Finally, it means firms that have more competitive advantage achieve higher profits and efficiency. "It is important for these firms to offer well differentiated products or services to enhance market power", (Rhoades, 1985). Hence the following factors become important for study, namely, number of buyers and sellers, product differentiation, attitudes of customers, pricing strategies, advertisement and promotional strategies, number of policies issued, premium income earned, net claim incurred etc. Previous literature evidences use and applicability of index for various industries and companies. "HH index shows monopolistic competition in domestic freight and carrier markets and low concentration level in imported markets", (Kaynak and Ari (2011). Pulaj and Kume (2013), "the paper analyses both absolute and relative concentration ratio for construction industry in Albania using data for 10 years 2003 to 2012". Concentration ratio (CR4), HHI and Gini Coefficient methods reveal that concentration ratios for construction industry are much below the benchmark". Trish and Herrings' (2015) the paper tries to analyse the association that exists between fully insured health insurance premiums sponsored by the employer and the concentration level in local insurance and hospitals markets. The data for the study was from Employer Health Benefits Survey results (2006-2011). "The study evidences existence of difference in premiums for plans in different markets along with concentration and market power of insurers".

Herfindahl-Hirschman Index (HHI) is calculated as the sum of the squared market shares of all companies in a market or an industry. This index helps in interpreting market power and market concentration, non-concentrated, moderate concentrated and highly concentrated markets. It measures the size of the firm/company in relation to industry/market and provides information on the extent of competition that exist among them.

The formula is: HHI = $\sum_{i=1}^{n} S_{\text{i}}^{2}$

Here, HHI is the percentage of the sum of squared market shares of all companies in the industry, Si2 is the squared market share of the ith company in the industry.

HHI = 1/n and 1		HHI = 0 and 10000	
HHI = 1	Monopoly	HHI closer to 10000	Pure monopoly
HHI < 0.01	Highly competitive market	HHI closer to 0	Perfect and monopolistic competition
HHI < 0.15	Non-concentrated market		
HHI 0.15-0.25	Moderate concentration	HHI < 1500	Moderate concentration
HHI > 0.25	High concentration	HHI > 2500	Highly concentrated

Pavic, I & Galetić, Fran & Piplica, Damir. (2016) adopted by the author.

A market characterised by non- concentration or where the market power of players is limited a near perfect competition and a low degree of product differentiation are experienced. The market with a high degree of product differentiation, oligopoly means the one with moderate

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concentration and power. If one or very few companies dominate the market through their products and price features a high market concentration and power are witnessed. Given more number of companies and more range or product variants are many, HHI is a right measure of market concentration.

II. APPLICATION OF HH INDEX FOR PENSION FUNDS OPERATING IN INDIA

Individuals save for long term using various saving/investment avenues. Government and institutions such as pension funds, insurance companies, mutual fund and hedge funds intermediate and convert individual savings into institutional investments. One of the popular channels of savings and investment for long term returns by individuals is insurance and pension products. Pension markets work on annuity basis which are very complex in nature. Pension market institutions have to design policies that are market efficient i.e. free from distortions and information asymmetry. A market with more such institutional participation helps lowering transaction costs and in better and optimal transfer of benefits as returns to end users. Any pension savings and returns on accumulated savings is dependent on rate at which employee and employer are willing to contribute and also on size of pension savings at the time of maturity. The present study focuses on pension savings, institutions and organisations regulating and managing pension plans or products in India.

III. PENSION MARKET STRUCTURE IN INDIA

The pension system in India is categorised into Civil servants pension, Mandatory pension and pension for unorganised sector. National Pension Scheme (NPS) is a portable Defined Contribution pension scheme (DCPS) regulated by Pension Fund Regulatory and Development Authority of India (PFRDAI) to provide the sustainable old age pension to both the organized and unorganized sector workers. It comes in different variants targeting individual distinct group of workers. The accumulated contributions are intermediated through financial and capital markets. NPS has Tier I and Tier II with four categories of pension scheme based on investments. Plan A with investments in government securities, Plan D that has greater weightage given to equity than fixed income securities and Plan B and C that provides a balanced investment option. Administered by PFRDAI, seven pension fund managers appointed by PFRDAI manages the fund. LIC of India covers around 64% of private organisations pension schemes that cater to almost 43% of the informal workers. The average historical returns have ranged between 10-12%.

Performance of Pension Funds in Assets under Management (AUM)-Rs. in million

Pension Fund	**31/03/2018**	**31/02/2019**	**Increase in AUM Amount**	**%**
SBI Pension Fund Pvt Ltd.	8,92,832	12,19,590	3,26,758	36.60
LIC Pension Fund Ltd.	7,01,302	9,27,193	2,25,891	32.21
UTI Retirement Solution Ltd.	6,94,832	9,37,077	2,42,245	34.86

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HDFC Pension Management Company Ltd.	25,603	51,647	26,043	101.72
ICICI Prudential Pension Funds Management Company Ltd.	23,255	34,760	11,505	49.47
Kotak Mahindra Pension Fund Ltd.	5,362	7,847	2,485	46.34
Reliance Capital Pension Fund Ltd.	2,310	2,893	584	25.26
Birla Sun life Pension Management Ltd.	294	1,132	838	284.54
Total	**23,457,90**	**31,821,39**	**8,36,349**	**35.65**

Source: NPS trust, Annual Report 2018-2019

NPS Schemes have performed well with an overall growth of 35.65% AUM during 2018-19. The total AUM for March 2020 is Rs. 4, 06,952.62 crores, Number of subscribers 1, 34, 12,640 and a total contribution of Rs. 3, 15,470.69 in crores. All the schemes witnessed double-digit growth. Scheme CG for central government employees and Scheme SG for State Government employees recorded 28.32% growth and 36.98% growth in AUM. Pension Funds (PFs) managers have recorded an increase in AUM as for the year 2019 to the extent of 36.60% for SBI pension fund, 32.21% for LIC pension fund, 34.86% for UTI retirement solutions, 101.72% for HDFC pension fund, 49.47% for ICICI Prudential Pension fund, 46.34% for Kotak Mahindra fund, 25.26% for Reliance capital pension fund, 284.56% for Birla Sun life pension management. All the Pension Fund managers have performed well in terms of AUM. SBI Pension Fund has the largest corpus, Birla Sun life Pension Management Limited leads with highest growth in AUM in percentage terms. Given the incredible performance of PFs under AUM, it is pertinent to study the state of competition, conduct of firms & their performance.

IV. OBJECTIVES OF THE STUDY

The objective of the study is to assess the: (i) market structure, (ii) market conduct & (iii) market performance of Pension funds managers (market) in India**.**

V. DATA ANALYSIS AND INTERPRETATION

The reported figures of the firms form the basis of data set between 2013-2014 & 2018-19.

The study relates to seven schemes under both Tier I and Tier II contributory plans. The fund managers of select schemes are: SBI Pension Fund, LIC Pension Fund, UTI Retirement Solutions, ICICI Prudential Pension Fund, Kotak Mahindra Pension Fund, HDFC Pension Fund and Birla Sun Life Pension Fund. The schemes are categories under Equity, Government Bonds and Corporate debt segment. The study is based on secondary data drawn from PFRDA and NPS trust websites.

In the present study the Competitiveness Index calculated is based on the three defined criteria:

- Based on Pension Fund Manager's total contribution received and total Assets under Management (AUM) from 2013-14 to 2018-19.

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- Scheme wise: Equity, corporate Bond and Government Securities Tier I and Tier II, NPS lite, corporate sector, Central Government and State government sector.
- Sector wise: Central government, State Government, Corporate Sector, All Citizen Model and NPS Swavalamban.

Table No. 1: H Index computations for various Pension Fund Managers

PFM	**SBI**	**UTI**	**LIC**	**ICICI**	**KOTAK**	**REL**	**HDFC**	**BIRLA SUN-LIFE**
Mar-11	376306	291723	187785	1077	330	562	270	0
Mar-12	602321	511952	396896	2919	974	1115	786	0
Mar-14	186237	150326	141667	1752	548	435	59	0
Mar-15	314071	248314	240101	3690	1074.74	769.66	530.78	0
Mar-16	460188	359182	355119	7011	1727	1112	3762	0
Mar-17	667232	520431	527093	14415	3120	1690	11630	0
Mar-18	892832	694832	701302	23255	5362	2310	25603	294
Mar-19	1219590	937077	927193	34760	7847	2893	51647	1132
TOTAL	4718777	3713837	3477156	88879	20982.74	10886.66	94287.78	1426
% SHARE	0.389	0.306	0.286	0.007	0.002	0.0018	0.0078	0.0001
H INDEX	0.151428	0.093798	0.082224	5.37E-05	2.99E-06	8.1E-07	6.05E-05	1E-08

Source: Author calculations based on Fund managers Total AUM in (Rs. in lakhs)

INTERPRETATION

The H indices indicate near perfect behaviour of ICICI, Kotak, Reliance, HDFC & Birla Sun Life pension funds. SBI & UTI pension funds are monopolistic & exhibit monopoly power in their earnings. Are they transferring their earnings to the individual investors in pension schemes? There is tough competition between SBI & UTI in giving better returns on their annuity. However, there is no special thought on better rate of transfer of pension to investors.

Table No. 2: H Index based on various schemes

Sectors	**Mar-13**	**Mar-14**	**Mar-15**	**Mar-16**	**Mar-17**	**Mar-18**	**Mar-19**	**H INDEX**
E TIER I	0.562%	0.739%	0.809%	0.994%	1.455%	1.837%	2.274%	0.0013
E TIER II	0.047%	0.054%	0.054%	0.051%	0.072%	0.093%	0.102%	0.0000
CB TIER	0.431%	0.512%	0.580%	0.747%	0.965%	1.214%	1.390%	0.0006

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CB TIER II	0.053%	0.050%	0.046%	0.046%	0.058%	0.069%	0.066%	0.0000
GOVT SEC TIER I	0.820%	0.850%	0.954%	1.115%	1.436%	1.809%	2.167%	0.0014
GOVT SEC TIER II	0.043%	0.042%	0.044%	0.046%	0.064%	0.077%	0.083%	0.0000
NPS LITE	1.468%	1.753%	1.986%	1.774%	1.512%	1.281%	1.071%	0.0017
APY	0.000%	0.000%	0.000%	0.426%	1.080%	1.628%	2.156%	0.0009
CORP CG	2.323%	3.761%	5.077%	5.728%	6.160%	6.329%	6.500%	0.0198
CENTRAL GOVT	57.996 %	50.249 %	45.435 %	40.514 %	38.405 %	36.217 %	34.259 %	1.000
STATE GOVT	36.257 %	41.988 %	45.014 %	48.559 %	48.792 %	49.447 %	49.932 %	1.000

Source: Author calculations based on % share of actual AUM in crores for various schemes

INTERPRETATION

Given that monopoly exists between Central & State Governments pension schemes, all other pension schemes studied so far have been on a wicket of near perfect behaviour. The market competition is intense & all plans are competitively parallel in their efforts to capture the market. Tier II of CB & Government Securities deep towards perfectness in its structure while other plans are moving closely towards it. There is a need to introduce some more plans for pension returns to enable to induce investors as the market penetration rate is around 3% of the estimated potential.

Table No. 3: Index computations based on various sectors

Year	**CG sector**		**SG sector**		**All citizen model**		**Corporate model**		**NPS Swavalamban**	
	% contribution	**% AUM**	**% contribution**	**% AUM**	**% contribution**	**% AUM**	**% contribution**	**% AUM**	**% contribution**	**% AUM**
2020	0.32	0.34	0.52	0.52	0.045	0.032	0.103	0.102	0.009	0.009
2019	0.33	0.35	0.52	0.51	0.040	0.031	0.102	0.099	0.011	0.011
2018	0.34	0.37	0.51	0.50	0.032	0.025	0.098	0.093	0.013	0.013
2017	0.36	0.39	0.50	0.49	0.023	0.018	0.094	0.087	0.016	0.015

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2016	0.38	0.41	0.50	0.48	0.013	0.011	0.087	0.079	0.019	0.017
2015	0.43	0.45	0.47	0.44	0.008	0.007	0.075	0.070	0.022	0.020
2014	0.48	0.50	0.44	0.41	0.008	0.008	0.059	0.055	0.019	0.017
H Index	1.00	1.00	1.00	1.00	0.005	0.003	0.056	0.050	0.002	0.002

Source: Author calculations based on % contribution and % AUM for various sectors

INTERPRETATION

Insurance and pension markets are dynamic, very competitive at the same time very complex in nature. Market players and policy makers need to determine the nature of such markets and quantitatively examine the competition between the players. This is to be done keeping in view the benefit that they are actually transferring to the end users or beneficiaries. The present study examined seven pension fund managers including LIC in terms of their market share, number of subscribers, AUM etc. HH index helped to reveal the extent of market concentration and power among these fund managers. The five sector schemes of pension is a mix of monopoly & close to perfect structure. A market with monopoly indicates high prices and lower benefits in terms of returns and services to beneficiaries. NPS Swavalamban is a better option followed by the All Citizen model. The corporate model is not stable in the market. However, it exhibits signs of improvement because of market potential & a few players to compete with.

VI. CONCLUSION AND IMPLICATIONS OF THE STUDY

The study focused on analysing competiveness in the performance of pension fund managers in India. The results of the study reveals that that there is monopoly power exhibited by SBI, UTI and LIC who control 64.5% of the total market share. The H indices for SBI, UTI and LIC are H = 0.15, 0.09, and 0.08 respectively, the other five PFMs relatively show higher market competitiveness. However the three leaders exhibit their command over market and other five players are just followers. As per the latest reports public sector pension funds lead the fund management (34% by SBI, 32% by UTI and 32% by LIC) as per NPS trust reports. The leader-follower relationship is affecting the overall competitiveness which is not perfect. There is a need for the RBI and the government of India to initiate steps to make all the fund managers more competitive in capturing pension fund markets. The near perfectness of PFMs may help penetrating ratio improve faster and better in terms of reach of the potential common subscribers.

Monopoly & monopoly power of Pension Funds need be decentralized. There is an urgent need to marketize the schemes/plans of the Governments of Central & States in India. NPS as a pension plan, however, can be with the Government for some more time to appeal to labourers of unorganized sector. Once the market for pension expands & stabilizes, NPS can be in the market with appropriate caveats.

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VII. REFERENCES

[1] Bain, J. S. (1951). Relation of Profit Rate to Industry Concentration: American Manufacturing, 1936-1940. Quarterly Journal of Economics, 65(3), 293-324

[2] Demsetz, H. (1973). Industry Structure, Market Rivalry and Public Policy. Journal of Law and Economics, 16, 1-10.

[3] Kaynak, S., & Ari, Y. O. (2011). Concentration in Turkish automotive sector: An application on passenger and light commercial vehicles. Ekonomik Yaklasim Journal, 22(80), 39-58. http://dx.doi.org/10.5455/ey.20023

[4] Pavic, I & Galetić, Fran & Piplica, Damir. (2016). Similarities and Differences between the CR and HHI as an Indicator of Market Concentration and Market Power. British Journal of Economics, Management & Trade. 13. 1-8. 10.9734/BJEMT/2016/23193.

[5] Pulaj (Brakaj), E., & Kume, V. (2013). Measuring market concentration of construction industry. Vlora region evidence. European Scientific Journal, ESJ, 9(32). https://doi.org/10.19044/esj.2013.v9n32p%p

[6] Rhoades, S.A. (1985). Market Share as a Source of Market Power: Implications and Some Evidence. Journal of Economics and Business, 37 (4), 343-363.