PENSION BULLETIN

February-March 2025

Volume XIV

Issue II & III

पेंशन बुलेटिन

फरवरी - मार्च 2025

Volume XIV

Issue II & III

Acknowledgment

The Pension Bulletin is issued monthly by the Department of Policy Research, Market Watch, and Systemic Risk under the direction of the Pension Bulletin Editorial Committee. The Committee and PFRDA are not responsible for the interpretation and opinions expressed. In the case of articles, the responsibility is that of the author and not of the PFRDA.

Comments and observations may please be forwarded to the department at market.watch@pfrda.org.in.

प्रमाणन

पेंशन बुलेटिन प्रत्येक महीने नीति अनुसंधान, मार्केट वॉच और सिस्टमिक रिस्क विभाग द्वारा, पेंशन बुलेटिन संपादकीय समिति के निर्देशन में जारी किया जाता है। समिति और पीएफआरडीए व्याख्याओं और प्रकट किए गए मतों के लिए उत्तरदायी नहीं हैं। लेखों के मामले में, जिम्मेदारी लेखक की होती है, न कि पीएफआरडीए की।

तिप्पणियाँ और अवलोकन कृपया विभाग को market.watch@pfrda.org.in पर अग्रेषित किए जा सकते हैं।

Glossary

AA	Account Aggregators
AIF	Alternate Investment Fund
DPDP Act	Digital Personal Data Protection Act, 2023
APY	Atal Pension Yojana
ASP	Annuity Service Provider
AUM	Assets Under Management
CAGR	Compound Annual Growth Rate
CDD	Client Due Diligence
CFT	Combating the Financing of Terrorism
CIP	Customer Identification Procedures
CKYCR	Central KYC Records Registry
CRA	Central Recordkeeping Agency
CPI	Consumer Price Index
DC	Defined Contribution
Debt-VRR	Debt Voluntary Retention Route
E	Equity and Related Instruments
EPF	Employees Provident Fund
EPFO	Employees Provident Fund Organization
ETF	Exchange-Traded Fund
EU	European Union
FAR	Fully Accessible Route
FBIL	Financial Benchmarks India Pvt. Ltd.
FII/FPI	Foreign Institutional Investors/Foreign Portfolio Investors
FIP	Financial Information Providers
FIU	Financial Information Users
FSDC	Financial Stability and Development Council

G	Government Bonds and Related Instruments
G-sec	Government securities
GBP	Pound Sterling
GDP	Gross Domestic Product
GST	Goods and Service Tax
GSTN	Goods and Services Tax Network
IGB	Indian Government Bonds
INR	Indian Rupee
IIP	Index of Industrial Production
IRDAI	Insurance Regulatory and Development Authority of India
IT Act	Information Technology Act, 2000
KYC	Know Your Customer
LTCG	Long Term Capital Gain
NBFC	Non-Banking Financial Company
NPS	National Pension System
OECD	Organization for Economic Cooperation and Development
PIPE	Private Investment in Public Equity
PoP	Points of Presence
RBI	Reserve Bank of India
REIT	Real Estate Investment Trust
STCG	Short Term Capital Gain
USD	United States Dollar
VCF	Venture Capital Fund
WPI	Wholesale Price Index

Table of Contents

Section 1/खंड 1

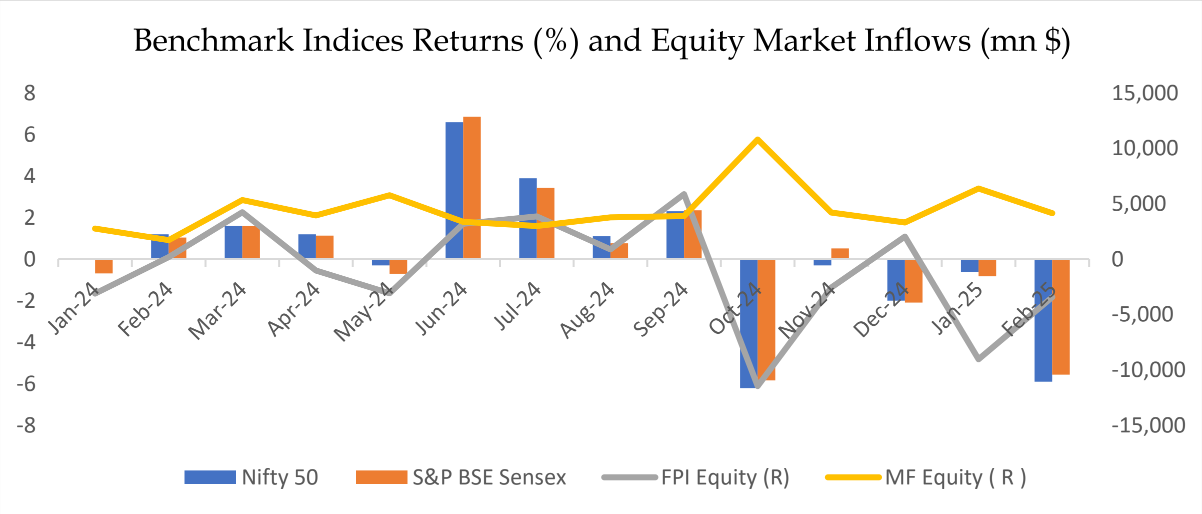
Economy/ अर्थव्यवस्था

Indian Economy[1]

Capital Market

In February 2025, the Nifty Next 50, which represents the next tier of liquid stocks after the Nifty 50, experienced significant selling pressure, leading to a notable 9.6% decline. This drop marked its lowest point in five years, reaching levels last seen during the market downturn in March 2020. Among the hardest-hit segments were small-cap and mid-cap stocks, with the Nifty Smallcap 100 and Nifty Midcap 100 posting their worst returns since the pandemic. The Nifty Smallcap 100 saw a sharp drop of 13%, while the Nifty Midcap 100 declined by 10.8%.

This sharp pullback can largely be attributed to foreign portfolio investor (FPI) outflows, which had a particularly strong impact on the small- and mid-cap sectors. As FPIs typically play a significant role in driving liquidity and overall market sentiment in these segments, their exit exacerbated the sell-off. The widespread market correction reflects heightened investor caution and a diminished appetite for risk, especially in more volatile stocks.



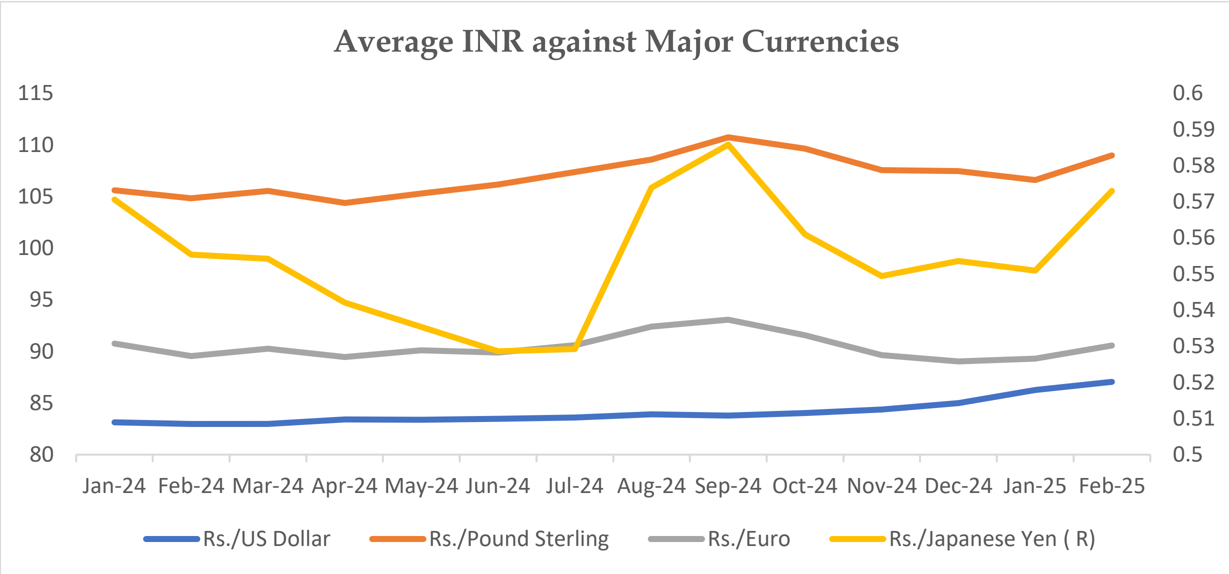
Foreign Portfolio Investments (FPIs) recorded outflows from Indian capital markets for the second consecutive month in February 2025, although the outflows have decreased. Over the past five months, FPIs have pulled funds from India in four of those months, starting from October 2024. This trend follows the imposition of tariffs by US President Trump, which raised concerns about a potential trade war. In response, FPIs shifted their investments away from emerging markets like India, opting for safer assets such as gold and US Treasury bills. In February 2025, net FPI outflows slowed to USD 2.1 billion, a significant reduction from USD 9 billion in January 2025.

[1] The data used in this section has been taken from CMIE's Economic Outlook and MOSPI. While every effort is made to ensure the accuracy and reliability of the content, the Authority makes no representations regarding the accuracy, or reliability of any information provided.

From October 2024 to February 2025, total Foreign Portfolio Investment (FPI) outflows from Indian markets amounted to USD 22.8 billion. FPI outflows from Indian equity markets have remained persistent since October 2024, with the exception of December. In February 2025, equity market outflows totalled USD 3.4 billion, a notable decrease from the USD 9 billion outflow recorded in January 2025.

Despite the significant FPI outflows from equities in February 2025, Domestic Institutional Investors (DIIs) provided strong support by investing USD 7.45 billion into Indian equities. DIIs have consistently stepped in to back the Indian stock market during periods of heavy FPI withdrawal.

Currencies



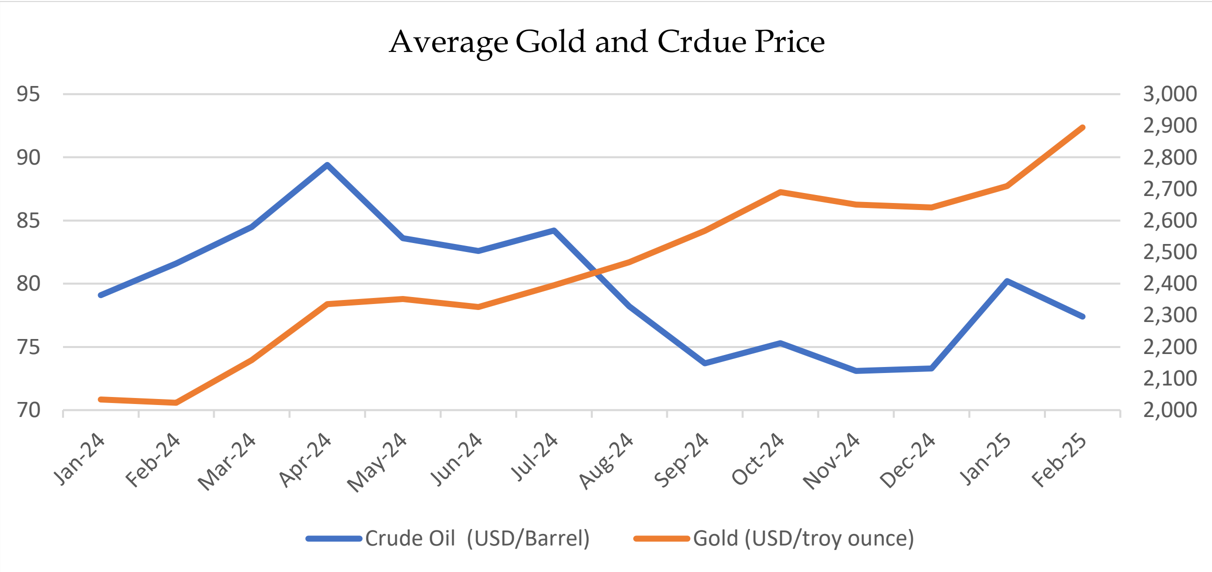
In February 2025, the Indian Rupee (INR) weakened against all major currencies. The INR has been on a consistent downward trajectory against the US Dollar (USD) for almost a year, with the exception of two months—May 2024 and September 2024. In February 2025, the INR depreciated by 0.9% against the USD, following a 1.5% decline in January 2025. The average exchange rate in February stood at Rs. 87.05 per USD, compared to Rs. 86.27 per USD in January. Since the start of 2025, the INR has weakened by 2.3% compared to December 2024. Notably, in the first week of February, the INR experienced its worst weekly decline in two years, depreciating by 0.86%.

The INR also saw depreciation against other major currencies in February 2025, including the British Pound (GBP), Japanese Yen (JPY), and the Euro. Among these, the INR experienced the sharpest decline against the JPY, falling 3.9% to an average rate of Rs. 0.57 per JPY. This marked the first time in five months that the INR weakened against the GBP, depreciating by 2.2% to an average of Rs. 110.03 per GBP, compared to Rs. 109.4 per GBP in January. Additionally, the INR weakened by 1.4% against the Euro, averaging Rs. 90.58 per Euro in February, marking the second consecutive month of depreciation against the Euro.

Bullion and Crude

In February 2025, gold prices on the London Bullion Market reached an all-time high, averaging USD 2,894.7 per troy ounce. This marked a 6.8% month-on-month increase, the sharpest rise in ten months and the second consecutive monthly gain. The surge in gold prices is largely attributed to heightened global trade tensions and policy uncertainty, driven by the continued imposition of tariffs by U.S. on various economies. During periods of uncertainty, investors typically seek refuge in safe-haven assets like gold, fuelling its price increase.

Meanwhile, the price of India's crude oil basket fell by 3.5% in February, dropping to USD 77.4 per barrel from USD 80.2 per barrel in January. This decline follows a significant 9.3% surge in crude oil prices the previous month. Notably, the second week of February witnessed a 3.3% drop—the steepest weekly decline in nearly four months.



Securities and Bonds

In February 2025, yields on government securities (G-secs) across 1-year, 3-year, and 5-year residual maturities continued their downward trend for the third straight month. The benchmark 10-year G-sec yield also declined after rising in the previous month.

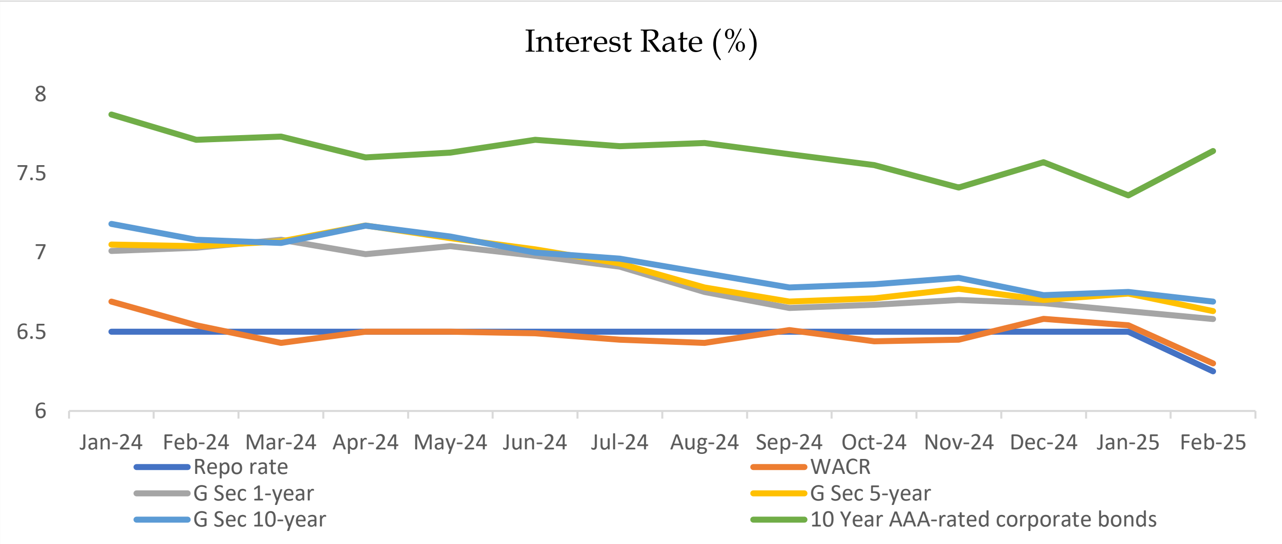
- The 1-year G-sec yield dropped five basis points (bps) to 6.58%, down from 6.63% in January. The 3-year G-sec yield fell by nine bps, settling at 6.61%, compared to 6.70% the previous month. The 5-year G-sec yield recorded the largest decline, slipping 11 bps to 6.63% from 6.74% in January. The 10-year benchmark G-sec yield fell six bps, reaching 6.69%, down from 6.75% in the previous month.

In February 2025, yields on AAA-rated corporate bonds exhibited varied movements across different maturities. While short- and medium-term bond yields declined, the 10-year AAA corporate bond yield rose sharply, leading to an inverted yield curve.

The 1-year AAA corporate bond yield fell by 4 basis points (bps) to 7.76%. The 3-year and 5-year yields both declined by 3 bps, settling at 7.56% and 7.42%, respectively. Contrary to this trend, the 10-year AAA corporate bond yield surged by 28 bps, climbing to 7.64% from 7.36% in the previous week.

The risk premium—the spread between AAA-rated corporate bonds and government securities (G-secs)—expanded across all tenures, with the 10-year spread widening significantly due to the divergence in yields.

The 10-year risk premium surged to 95 bps in February, up from 61 bps the previous week, driven by a sharp rise in corporate bond yields alongside a decline in the 10-year G-sec yield. The 5-year risk premium increased by 8 bps to 79 bps. The 3-year risk premium rose by 6 bps, reaching 95 bps. The 1-year risk premium, already at elevated levels, increased slightly by 1 bps to 118 bps.



CPI Inflation

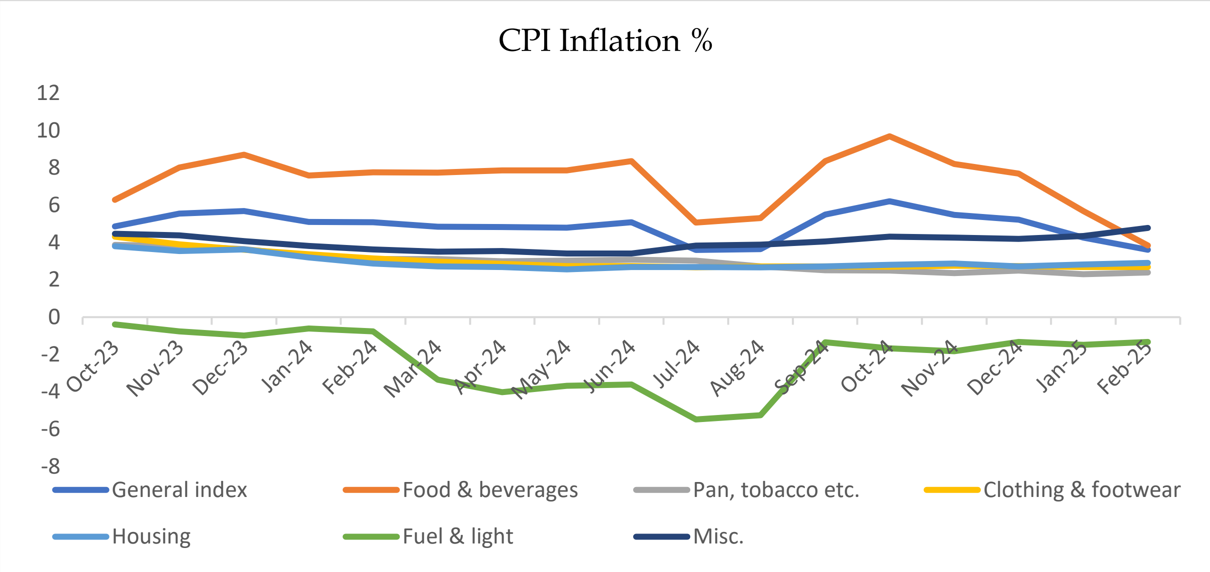
In February 2025, India's retail inflation, as measured by the year-on-year Consumer Price Index (CPI), dropped to a seven-month low of 3.61%, marking a significant decline from January's revised rate of 4.26%. The sharp fall was primarily driven by a steep decline in food inflation.

Food inflation has been easing steadily since its October 2024 peak of 10.9%, and in February, it fell to 3.8%, down from 6% in January. The most significant relief came from the vegetable basket, where prices witnessed a sharp correction, alongside softening inflation in eggs, fish & meat, pulses, cereals, and dairy products.

Vegetable inflation, which had averaged 24.8% between April 2024 and January 2025, turned negative in February, recording deflation of 1.1% largely due to seasonal price corrections following the arrival of winter crops.

Despite the broader easing trend, some food categories experienced an uptick in inflation. Fruits inflation climbed to 14.8% (up from 12.2% in January). Oils & fats inflation edged up to 16.4% from 15.6% the previous month.

Core inflation, which excludes food and fuel, rose to 4% in February, increasing by 26 bps. The spike was largely driven by soaring gold and silver prices, which fall under the personal care & effects sub-group. Personal care & effects inflation spiked to 13.6%, up from 10.6% in January.



WPI Inflation

In February 2025, wholesale price inflation edged up slightly to 2.38% from 2.31% in January. This marginal increase was driven by higher inflation in manufactured products and the fuel & power category, which offset a notable moderation in primary articles.

Inflation in primary articles eased to 2.8% in February, down from 4.7% in January. The decline was largely attributed to a sharp fall in food article inflation, which dropped to 3.4% from 5.9% in January, marking the fourth consecutive month of price declines. Deflation in crude petroleum and natural gas deepened to -4.1% from -0.5% in January, as crude petroleum prices fell by 4.3%, reversing an 8.8% rise in the previous month. However, non-food primary articles saw inflation rise to 4.8%, up from 3%, despite a month-on-month price decline of 0.4%.

Inflation in manufactured products rose to 2.9% in February, up from 2.5% in January, reaching a two-year high. The key contributors include Basic Metals for which the Prices increased by 0.4%. For Manufactured Food Products inflation surged to 11.1%, the highest since November 2021. Chemicals & Chemical Products Inflation edged up to 1.3% from 1%.

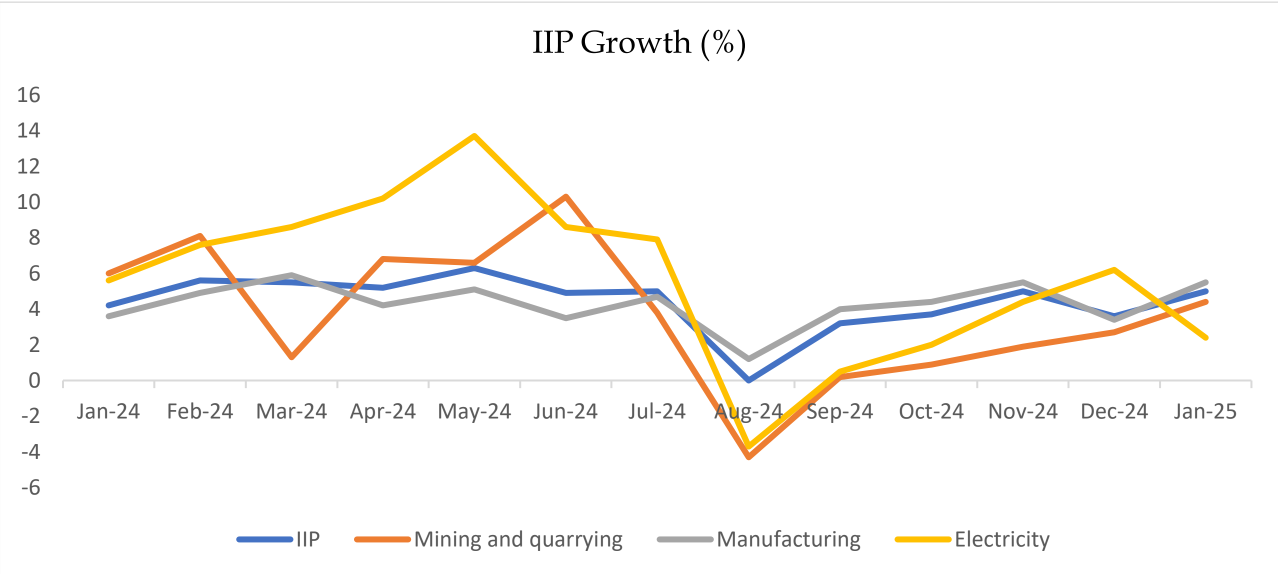
Deflation in this Fuel and Power narrowed to -0.7% from -2.8% in January. Mineral oil prices rose by 1.9%, while electricity prices increased sharply by 4.3%.

IIP Growth

The Index of Industrial Production (IIP) surged by 5% in January 2025 compared to its level in January 2024, marking the fastest year-on-year (y-o-y) growth in eight months. This sharp acceleration significantly outpaced the 3.6% growth observed in December 2024 and was primarily driven by robust expansions in the manufacturing and mining sectors. However, growth in electricity generation decelerated during this period. The manufacturing sector output growth climbed to 5.5% in January 2025 from 3.4% in December 2024.

Other non-metallic mineral products, including cement, saw a striking growth of 10.2% in January, up from a modest 2.8% in December. Manufacturing growth in January 2025 was broad-based, with 19 out of 23 industry segments recording positive growth. Notable segments included basic metals and food products. However, declines persisted in industries such as leather and related products, paper and paper products, printing and reproduction of recorded media. Additionally, the pharmaceuticals, medicinal, chemical, and botanical products segment contracted slightly by 0.7%.

The mining sector also gained momentum, with y-o-y growth rising to 4.4% in January 2025, up from 2.6% in December 2024. However, electricity generation growth slowed significantly to 2.4% in January, compared to 6.2% in December, making it the primary drag on overall IIP growth for the month.



Q3 FY 2025 GDP Growth

As per the National Statistical Office (NSO)'s quarterly estimates, real Gross Domestic Product (GDP) grew by 6.2% year-on-year (y-o-y) in the December 2024 quarter. This marks an improvement from the revised 5.6% growth in the September 2024 quarter.

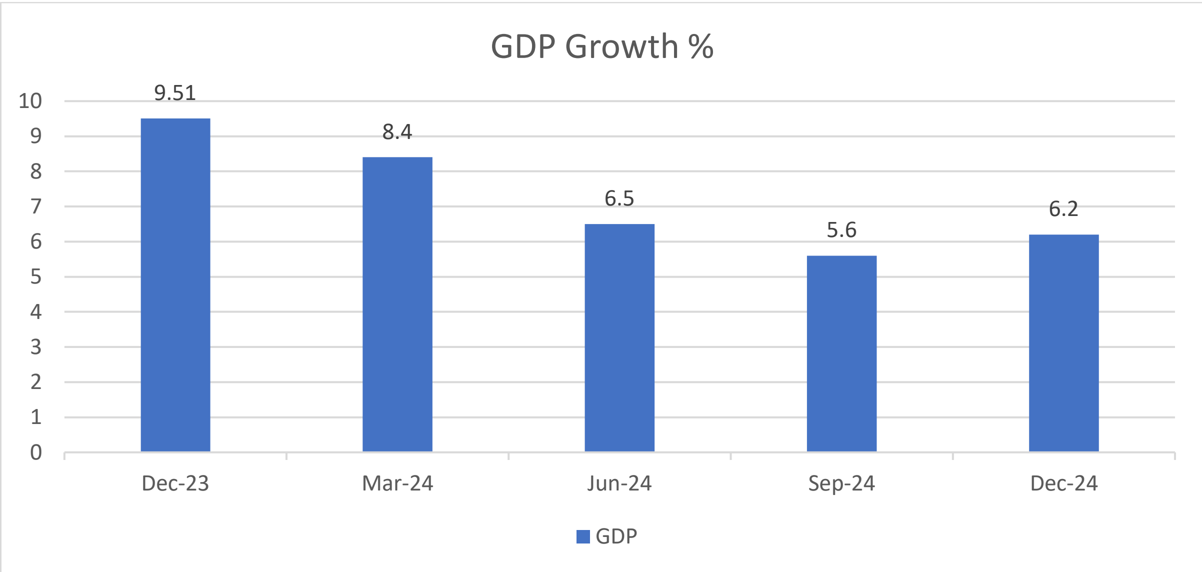
The primary driver of GDP growth in Q3 FY25 was Private Final Consumption Expenditure (PFCE), which accelerated to 6.9% y-o-y, up from 5.7% in the same quarter of the previous year.

Despite robust consumption, investment activity remained subdued, weighing on overall GDP growth. Investment demand, which constitutes about 30% of GDP, is reflected in Gross Fixed Capital Formation (GFCF), which slowed to 5.7% in December 2024, down from 9.3% in the same quarter of the previous year.

Government Final Consumption Expenditure (GFCE) expanded by 8.3% y-o-y in December 2024, a notable acceleration from 2.3% in the year-ago quarter.

The Centre's revenue expenditure grew by 11.2% in nominal terms, recovering from a 7.5% contraction in the same period last year.

Exports surged by 10.4% y-o-y, significantly higher than the 3% growth in December 2023. Imports, in contrast, declined to just 1.1% growth, compared to 11.3% in the previous year.



Data Table

Economic Indicators

Indicators	Feb-24	Jan-25	Feb-25	YoY change (% / bps)
FPI Equity Investments (USD billion)	0.186	-9.042	-3.415	-1936.02
Rupees per dollar	82.97	86.27	87.05	4.92
Rupees per Pound Sterling*	104.82	106.61	108.98	3.97
Rupees per Euro*	89.56	89.30	90.58	1.14
Rupees per Japanese Yen*	0.5554	0.5509	0.5730	3.17
Gold (USD/troy ounce)*	2023.20	2709.70	2,894.70	43.08
Crude Oil (USD/Barrel)*	81.60	80.20	77.40	-5.15
Weighted Average Call rate (%)	6.64	6.54	6.30	-34
Market repo rate (%)	6.50	6.50	6.25	-25
G sec 1-year (%)	7.03	6.63	6.58	-45
G sec 10-year (%)	7.08	6.75	6.69	-39
AAA rated corporate bond 10-year (%)	7.71	7.36	7.64	--7
CPI Inflation (%)	5.09	4.26	3.61	-148
WPI Inflation (%)	0.20	2.31	2.38	208
IIP# (%)	4.20	3.20	5.00	80

 # IIP data as on Jan 2024, Dec 2024 and Jan 2025 respectively.
** Average Monthly Exchange Rate*

Section 2/खंड 2

Management Speaks/ प्रबंधन का वक्तव्य

Innovation in National Pension System[2]

I thank Outlook Money for this opportunity to be part of this august gathering. I propose to discuss how innovation in the National Pension System (NPS) has made pension accessible to all.

Pension is a Necessity

Prudent financial planning, especially early retirement planning, is important for longterm financial well-being. Pension as a financial product is not readily substitutable with any other financial assets. Pension provides lifelong financial security to self and spouse on retirement. Pension assumes added urgency at the current juncture of our socioeconomic development. In this context, I may highlight a few issues.

First, rising longevity: The share of population over the age of 60 years is projected to increase from 10.5 percent in 2022 to 20.8 percent by 2050.[3] This aging is likely to accentuate as every fifth Indian is expected to be over 60 years of age by the middle of this century. Life expectancy is also showing a steady increase with improved nutrition and health-care. Rise in the share of older people coupled with higher longevity would imply that income provision has to be made for longer periods for a decent post-retirement life.

Second, increasing dependency: The old-age dependency ratio is expected to increase from 18 percent in 2020 to 30 percent by 2050 exerting pressure not only on our younger generation but also on our overall financial resources. Its financial implication will be disproportionately large unless working-age population makes provision for their future.

Third, rising healthcare costs: As people age, healthcare expenses typically increase. A well-planned pension provides the resources to manage these costs and makes old-age care affordable.

Fourth, changing family dynamics: The implied insurance of traditional family structure, where elderly parents largely relied on their children for support, is changing.

Adequate pensions offer financial independence to manage one's affairs.

Features of the National Pension System (NPS)

Against this backdrop, how is NPS positioned to cater to the wider need for pension? NPS is a flexible, digitally enabled, easily accessible, low-cost pension product with marketdriven competitive returns.

The introduction of the NPS in India marked a paradigm shift in transition from a defined benefit (DB) to a defined contribution (DC) system enhancing the stability of our pension system. In the past, pension was perceived to be the privilege of government employment. It is no longer so with the introduction of NPS in 2004, first for the government employees, and then extended to private corporates including the common person, and now to children with the scheme of NPS Vatsalya. NPS Vatsalya can be seamlessly ported to a workplace pension on the child coming of age and joining the workforce, thereby providing continuity to

[2] Address by Dr. Deepak Mohanty, Chairperson, Pension Fund Regulatory and Development Authority (PFRDA) at Retirement Expo event: 'Outlook Money 40After40', Jio World Convention Centre, Mumbai, February 07, 2025.

[3] UNFPA India Ageing Report 2023.

one's retirement savings account. Thus, any member of the family from infancy to 70-years old can join NPS now.

Flexibility in NPS is the result of innovation informed by user experience. First, NPS has an unbundled architecture with each intermediary at the background undertaking a specialized activity in a professional and cost-effective manner attaining economies of scale. This architecture helps minimizes risk of sole dependency on entities involved and eliminates risk of failure of the system.

Second, digitalisation has played a crucial role. It eases onboarding and significantly reduces the cost to the subscriber. One could join NPS digitally by using net banking, mobile apps or eNPS; or physically through bank branches including that of many RRBs.

Third, NPS offers flexibility in selecting pension funds and asset allocation. It offers auto-choice and active-choice of asset allocation. In auto-choice, one gets to select any one of the four life cycle funds which balance risk with age among various asset classes. For example, as one ages, the equity allocation tapers down. Alternatively, there is active-choice where the subscribers chose their mix of asset classes depending on their risk appetite. For example, one can invest upto 75 percent in equity, irrespective of one's age.

Fourth, NPS provides a very low threshold of entry making it a people's product. The NPS account remains active, only with an annual contribution of ₹1,000. It is not necessary to contribute every month. Thus, NPS is also suitable for people with irregular income. There is no upper limit for contribution. It has its own advantage. For example, youngsters contemplating to retire early can front-load their contribution to achieve their retirement goal. Similarly, a subscriber can defer his/her exit and stay invested in NPS upto 75 years of age. Additionally, the subscriber has an option to withdraw the lumpsum amount in the form of systematic lumpsum withdrawal (SLW) in a phased manner upto the age of 75 years or withdraw anytime the entire amount.

Fifth, tax efficiency; both the employer and employee enjoy income tax deductions upto 14 percent of the employer's contribution contributed to NPS under the new tax regime. Of course, under the old tax regime there is an additional benefit of ₹ 50,000, exclusively for NPS.

Progress of NPS

At present, NPS has around 16 million subscribers: 9.6 million government and 6.4 million private subscribers with a corpus of almost ₹ 13.4 trillion. On a voluntary basis, both private citizens and corporates have enrolled with NPS. Private sector NPS assets have also shown a robust growth in recent years. The corpus from the private sector is about ₹ 2.8 trillion. There were over 19,000 corporates with over 2.2 million subscribers including 1.3 million from the private corporate sector. The adoption of NPS by private corporate employees, however, is not commensurate with the large number of corporates that have joined, underscoring the need for concerted efforts to tap into the potential.

The popularity of NPS is also rising among the individual subscribers with a subscription base of 4.2 million expanding at a compound annual growth rate of 22 percent surpassing the growth of employer-based subscription.

The schemes under NPS have generated attractive returns. The average annual returns since inception under the equity scheme of NPS have been over 13 percent, with 9 percent for corporate debt scheme and 8.8 percent for government securities scheme.

Why is still pension coverage inadequate?

The pension coverage in India is inadequate, mainly because 80 percent of our workforce is engaged in the unorganized and informal sectors where they do not have access to occupational pension as in the organized sector. As per the Economic Survey 2024-25, around 58.4 percent of workforce was self-employed and 19.8 percent was casual labour where there is no statutory access to social security benefit like workplace-related pension. Similarly, on the eShram portal of the Ministry of Labour and Employment over 305 million unorganised workers were registered, suggesting that the bulk of our work-force goes uncovered by pension.

This challenge is not limited to us. A recent study by the Organisation for Economic Co-operation and Development (OECD)[4] showed that Asia and the Pacific region's pension systems are facing common challenges as they attempt to expand coverage, and ensure adequacy and fairness, while maintaining fiscal sustainability. While pension system designs vary, coverage of contributory schemes is a common challenge because of stubborn informality. At the same time, regional and global experience suggests potential for coverage expansion by focusing on workers not yet covered by design such as self-employed, business owners, those in enterprises below a certain size, and gig and platform workers.

Conclusion

I may conclude. There is a need to expand pension coverage so that people have adequate post-retirement income to lead a life of dignity. However, the adoption rate is low, even among people who have the income to contribute, partly due to inadequate appreciation of the need. I hope events like this focused on retirement-planning will help in improving awareness. The NPS has made pension available to all irrespective of one's income and employment status. We have been working on improving the accessibility of NPS, both digitally and physically, to every citizen of India, and also to increase awareness.

Once again, I thank Outlook Money for inviting me to interact with you.

Thank you.

*****

[4] Pension at a Glance – Asia Pacific 2024

Social Security through Pension[5]

Dignitaries on the dais, distinguished guests, and members of the actuarial community. It is an honor to interact with you today at the 24th Global Conference of Actuaries. I thank Ms. Preeti Chandrashekhar, President, Institute of Actuaries of India (IAI) for this opportunity. This forum has long served as a platform for discussions on risk management, financial security, and long-term sustainability.

As we experience rapid economic and demographic shifts, discussion on pension and social security has never been more critical. The role of actuaries in shaping the future landscape of pension in India cannot be overstated, and today, I want to outline the challenges and opportunities we face, in our quest for achieving a universal pension coverage.

In the economic context of Amrit Kaal, where we are working towards becoming a developed nation by 2047, the financial security of our ageing population ought to be a key pillar of this progress. For us, this translates into "Pension for All" by 2047 – a commitment to ensuring that every citizen, whether from the formal or informal sector, has the means of a reliable retirement income. Attainment of this goal requires continuous innovation, robust governance framework and a seamless process leveraging the use of technology.

Pension Coverage Gaps

I seek some indulgence on the basic aspect of pension. Pension is a regular flow of income post one's retirement. It stays with the person through his or her life. Of course, it is a financial product; but with a distinction. It is not readily substitutable with other financial products. As professionals, you could well appreciate how difficult it is to design an annuity product? One would have to gaze into the future both in terms of longevity and uncertainties of the financial market.

The other critical issue is that of "adequacy". Is the pension amount one gets is adequate to defray at least one's living expenses? As one ages the odds of contingencies also rise, particularly health expenses. This is an issue engaging the attention of all the jurisdictions, be advance or emerging market economies. For example, in advanced countries, generally people have access to three sources of post-retirement income: basic social security, occupational pension and personal pension. Even with multiple pensions, post-retirement income is inadequate for many people.

While significant progress has been made, the pension coverage in India is inadequate, mainly because 80 percent of our workforce is engaged in the unorganized and informal sectors where they do not have access to occupational pension as in the organized sector. According to the Economic Survey 2024-25, approximately 58.4 percent of India's workforce is self-employed, and 19.8 percent is casual labor - neither of whom benefit from occupational pension schemes, unlike those in the formal sector. The eShram portal indicates that over 305 million unorganized workers are registered, highlighting a substantial coverage gap.

While programs such as that of Employees' Provident Fund Organisation (EPFO), National Pension System (NPS), Atal Pension Yojana (APY), and Pradhan Mantri Shram Yogi Mandhan (PM-SYM) are there, their coverage remains limited. The pension amounts

[5] Address by Dr. Deepak Mohanty, Chairperson, Pension Fund Regulatory and Development Authority (PFRDA) at 24th Global Conference of Actuaries, organised by Institute of Actuaries of India, Mumbai, March 18, 2025.

provided are often inadequate. A significant gap is the "missing middle" — the middle class. While those who have low-income are covered by various government programs, and the wealthy can easily access private financial advice, the middle class often lacks the financial literacy and resources to plan for retirement.

There are two key learnings from this. First, to lead a dignified post-retirement life, one source of income is never adequate. Second, retirement savings should be self-initiated, that too early in one's life to harness the power of compounding.

Global trends

The challenge of pension coverage is not unique to India. According to the Organisation for Economic Co-operation and Development (OECD), the Asia-Pacific region faces similar struggles in expanding pension coverage. Coverage remains low, especially among informal workers such as the self-employed, business owners, and gig workers. Participation in contributory schemes is below 10 percent of the working age population in a number of economies.

There is a negative correlation between the informal employment and the coverage of pension systems. It has been observed that the mandated approaches are not able to expand coverage in settings where informal work dominates. Therefore, some Asia and the Pacific economies have introduced voluntary schemes for informal sector workers that provide a matching contribution and other incentives for old age savings. For example[6],

- bundling retirement savings with short-term benefits to address the multiple needs of informal workers and with respect to old age savings: this may include life and health insurance and access to other financial products such as microfinance;
- use of auto-enrollment, auto-deductions, or auto-escalation with opt-outs;
- expansion of distribution channels to increase coverage and peer incentive effects;
- ease of contribution, in particular, use of mobile payments, platforms (e.g., WhatsApp), and convenience stores.

Across Asia, there are significant differences in the targeting methods. In some countries, the pension provision is universal, while in many countries, it is means-tested[7]. Some countries also use Pension-tested[8] or Age-based[9] targeting. Some also provide a social floor that offers benefits to those who have had some participation in the contributory scheme. Targeted social pensions can be seen as a complement to contributory system and directed at those most in need.

Expanding pension coverage

Efforts have been made over time to expand pension coverage to wider sections of our society. First, the Atal Pension Yojana (APY) catering to the informal sector, particularly the low-income and underprivileged sector, has an active subscriber base of 66.6 million[10] with a corpus of almost ₹ 50,000 crore. It provides guaranteed pension in the range of ₹ 1,000-5,000. In order to ensure that the APY corpus in adequately funded, there is actuarial assessment every year.

Second, since its launch in 2004, NPS has evolved into a tool accessible to all Indians, including children through the NPS Vatsalya

[6] Pensions in Aging Asia and The Pacific: ADB Working Paper No. 746, Oct 2024.

[7] where benefit entitlements or amounts depend on income or wealth or both, e.g. S Korea, India, Malaysia etc.

[8] where formal scheme benefits exclude individuals from eligibility for social pensions, e.g. Nepal & Thailand.

[9] where eligibility age is substantially above age 65, e.g. Indonesia and Myanmar.

[10] Including NPS lite

scheme, ensuring that retirement savings can begin from an early age and continue throughout life. As of now, NPS has over 16.4 million subscribers with a corpus of ₹13.5 trillion, with 9.8 million government subscribers and 6.6 million private sector subscribers.

While progress has been made, the challenge remains in tapping into the vast potential of the private sector, including the self-employed and professionals, and small businesses. A recurring concern regarding the NPS is the unattractive annuity rates provided at the time of retirement. On exit, an NPS subscriber has necessity to annuitise at least 40 percent of her corpus. With increasing number of subscribers superannuating from NPS in the coming years, there is lot of opportunity in the NPS annuity segment. It is reasonable to expect the actuaries to design innovative products, particularly variable annuity that provides a hedge against inflation risk.

The NPS for the central government subscribers is morphing into the Unified Pension Scheme (UPS) which is a fully funded defined-contribution (DC) and defined-benefit (DB) scheme. In this scheme, the actuaries will have a major role to play in the periodic assessment of the sustainability of the scheme.

Conclusion

Our demographic landscape is undergoing a significant transformation. By 2050, the proportion of the population over 60 is projected to increase from 10.5 percent to 20.8 percent. Our old-age dependency ratio will rise, and the financial strain on the younger generation will increase. Healthcare costs for older population continue to rise, and the traditional family structure, once a support system for the elderly, is changing. In this context, an accessible and inclusive pension system becomes even more critical to manage not only old-age income but also healthcare costs. The need for financial independence through pension has never been more urgent.

To achieve "Pension for All" by 2047, we need to focus on:

- Expanding Coverage: Ensuring that informal sector workers are brought into the pension fold through voluntary contributory schemes with incentives.

- Enhancing Financial Literacy: Sensitising the middle class about the importance of early retirement savings and the power of compounding.

- Innovating Pension Products: Developing flexible, affordable, and adequate pension products, particularly for NPS retirees, with a focus on variable annuities to mitigate various risks.

- Leveraging Technology: Utilizing mobile platforms, digital payments, and artificial intelligence to enhance accessibility and efficiency.

By embracing innovation, improving governance, and drawing from global experience, we can create a sustainable, and inclusive pension system that will serve every citizen. Actuaries will play an important role in designing and evaluating these systems, helping to ensure that our pensions remain adequate, fair, and fiscally sustainable.

Thank you.

*****

Section 3/खंड 3

Article/ लेख

Understanding Innumeracy & its Interaction with Financial Literacy[11]

I. Financial Literacy

The contemporary landscape of personal finance is characterized by an escalating reliance on individual decision-making. Of particular significance are retirement savings and home acquisition, including associated financing, which exert profound and enduring impacts on household economic stability. The inherent complexity of these financial instruments has amplified the potential for adverse outcomes, particularly for individuals lacking adequate preparation.

The global financial crisis of 2008 precipitated a surge in scholarly inquiry aimed at elucidating the root causes of the elevated delinquency rates observed in the sub-prime mortgage market. These investigations consistently identified a fundamental and pervasive deficit in financial literacy within the American populace (Hung et al., 2009; Lusardi & Tufano, 2009).

Empirical evidence furnished by the Federal Reserve Bank of Atlanta demonstrated a statistically significant negative correlation between numerical proficiency, a constituent element of financial literacy and various metrics of loan delinquency and default (Gerardi et al., 2010). Specifically, a dwindling of the numerical competence was associated with an increased probability of loan default. Extensive empirical studies conducted across diverse global contexts corroborate the observation that financial literacy is unevenly distributed within populations, with a generalized deficiency in financial acumen being a prevalent characteristic. This issue assumes particular importance for women, who are statistically more likely to exhibit longevity, shorter career durations, lower income levels and diminished interaction with financial products and services (Lusardi & Mitchell, 2008). A robust comprehension of economic and financial principles is indispensable for individuals operating within a market-driven economy (Ferguson, 2002).

As articulated by Alan Greenspan, former Chairman of the U.S. Federal Reserve, "educated consumers are simply less vulnerable to fraud and abuse." Furthermore, the collective exercise of sound personal financial judgment by millions of informed consumers serves to fortify the economy at its foundational level (Ferguson, 2002).

In accordance with these observations, a heightened emphasis has been placed on the cultivation of financial literacy. While the term 'financial education' is frequently employed synonymously, a discernible conceptual distinction exists between the two (PACFL, 2008):

- Financial literacy is defined as the capacity to effectively deploy knowledge and skills for the purpose of managing financial resources throughout the lifespan, thereby ensuring enduring financial well-being.
- Financial education refers to the process through which individuals augment their understanding of financial products, services and concepts, thus empowering them to make informed choices, mitigate risks, identify sources of assistance and undertake other actions conducive to their present and future financial stability.

The OECD International Network on Financial Education (INFE) defines financial literacy as:

[11] Authored by Sh. Prodeepto Chatterjee, AGM, PFRDA. The views expressed in the article are personal and do not necessarily represent that of the Authority.

"A combination of awareness, knowledge, skill, attitude and behaviour necessary to make sound financial decisions and ultimately achieve individual financial wellbeing." (OECD INFE 2009)."

II. Financial Literacy & Numeracy

The attainment of financial literacy is recognized as a critical life skill, exerting substantial influence on both individual economic well-being and societal prosperity. Conventional governmental and policy interventions aimed at mitigating the pervasive challenge of inadequate financial literacy have predominantly centered on the intensification of financial education and training initiatives, a remedial approach advocated by numerous scholars (Hilgert & Hogarth, 2003; Lusardi & Mitchell, 2007).

As articulated by Fernandes et al. (2014) in their seminal work, "Financial Literacy, Financial Education and Downstream Financial Behaviours," "…Policy makers have embraced financial education as a necessary antidote to the increasing complexity of consumers' financial decisions over the last generation…" However, this silver- bullet, one-size-fits-all, inputs-based methodological approach, characterized by the proliferation of training programs, has yielded limited efficacy and demonstrated ineffectiveness (Skagerlund et al., 2018), explaining a negligible variance in observed financial behaviours (Fernandes et al., 2014). This ineffectiveness is particularly pronounced within low-income demographic segments.

To address this apparent dichotomy, scholarly investigations have explored the influence of previously under-examined and unexplored third variables, which may possess explanatory power in determining and impacting financial behaviour. These studies have focused on the individual cognitive capacities of individuals, exploring the interplay of cognitive and emotional factors in the attainment of financial literacy. Through regression analysis, it has been established that a central component of financial literacy can be attributed to "numeracy" and the emotional disposition towards numerical concepts, specifically mathematical anxiety (Skagerlund et al., 2018). It was concluded that a key determinant in achieving financial literacy lies in the capacity to comprehend numerical information and that a significant portion of the "financial literacy" construct can be explained by numeracy, which may function as the computational engine for financial decision-making grounded in theoretical financial understanding (Skagerlund et al., 2018).

Numeracy, a relatively nascent term, denotes mathematical literacy, encompassing not only mathematical skills but also the knowledge and abilities required to effectively utilize numbers and manage the mathematical demands inherent in diverse everyday situations (Darriet et al., 2021). Numeracy has been broadly defined by the OECD (2012) as "…the ability to access, use, interpret and communicate mathematical information and ideas…".

The OECD Programme for the International Student Assessment (PISA) provides a definition of "mathematical literacy" instead of numeracy, defining it as (P. OECD, 2003): "the capacity to identify, to understand and to engage in mathematics and to make well-founded judgements about the role that mathematics plays, as needed for the individual's current and future private life, occupational life, social life with peers and relatives and life as a constructive, concerned".

A substantial body of psychological and applied research underscores the critical role of numeric ability, often termed numeracy, in the quality of decision-making and, consequently, life outcomes (Peters, 2020).

While financial literacy encompasses familiarity with financial concepts and products, numeracy is more directly correlated with cognitive ability, particularly the capacity to process numerical information and perform basic calculations (Almenberg & Widmark, 2011). Thus, the relationship between financial literacy and numeracy can be conceptualized as a two-piece jigsaw puzzle, each component complementing and supplementing the other in the formation of an individual's financial competence. The absence of either component results in a compromised or incomplete financial ability (refer figure 1).

In her publication, "Innumeracy in the Wild: Misunderstanding and Misusing Numbers," Ellen Peters outlines three distinct facets of numeracy, elucidating their respective significance (Peters, 2020):

a. Objective Numeracy: This construct encompasses the capacity to comprehend and apply fundamental probability and mathematical principles. It also pertains to an individual's proficiency in acquiring, processing and interpreting essential quantitative information, particularly within health-related contexts, to facilitate informed decision-making (pg. 5).

b. Subjective Numeracy: This dimension refers to an individual's perceived confidence in their ability to understand and utilize numerical information and mathematical concepts. It is also conceptualized as numeric self-efficacy, reflecting one's self-assessment of their numerical competence (pg. 3).

c. Intuitive Numeracy: This aspect denotes an evolutionarily ingrained sense of magnitude, enabling rapid discrimination between numerical quantities. This intuitive numerical sense allows for swift comparative judgments between numerical values, such as mortgage rates and facilitates rapid estimations of quantities, such as the number of coins in a container (pg. 4). This construct is also known as the approximate number sense (ANS). Inter-individual variability exists in this intuitive numerical capacity. Research posits that this rapid, intuitive apprehension of "bigness" serves as a foundational element for subsequent mathematical learning (pg. 127)."

III. Innumeracy

The term "innumeracy" is a relatively recent construct, widely attributed to Douglas R. Hofstadter, who introduced it in his May 1982 article, "On Number Numbness." Hofstadter (1982) lamented a perceived global decline in the appreciation and comprehension of "large numbers." John Allen Paulos's influential book, "Innumeracy: Mathematical Illiteracy and Its Consequences," published in 1988 (Paulos, 1988), further popularized the concept, stimulating public discourse and subsequent research.

Innumeracy, as a passive state, represents a deficit in knowledge, practical skills, or cognitive patterns. Unlike illiteracy, which is readily apparent, innumeracy can remain covert, manifesting as an inability to navigate numerical concepts beyond basic arithmetic. However, this paper posits that the term's origins predate both Hofstadter and Paulos, citing S.C. Deshpande's 1981 article, "Innumeracy and Economic Behaviour," published in the Economic and Political Weekly (Deshpande, 1981). While Deshpande's analysis focused on the impact of innumeracy on the economic and financial behaviour of the Warli tribal population in Maharashtra, the consequences he identified—economic backwardness, lack of foresight, resistance to technological adoption and vulnerability to financial exploitation—remain relevant in contemporary contexts.

IV. Possible Causes of Innumeracy

Paulos (1988) defines innumeracy as "mathematical ignorance or an inability to deal comfortably with the fundamental notions of number," a definition that encompasses Peters' (2020) classifications of objective, subjective and intuitive numeracy. Paulos further identifies romantic misconceptions about mathematics as contributing factors to innumeracy and the "perverse pride in mathematical ignorance." He argues that the consequences of mathematical ignorance are often less conspicuous than those of other cognitive deficits. These misconceptions, fostering a hostile intellectual environment for mathematical education, underlie much of the prevalence of innumeracy.

These misconceptions, as identified by Paulos, include:

- Mathematics is merely computation.
- Mathematics is strictly hierarchical.
- Mathematics is an exclusive domain.
- Mathematics restricts personal freedom.

A review of existing literature reveals that low numeracy levels or innumeracy can be attributed to the following-

a. Psychological Blocks (Math Anxiety)

Math anxiety, defined as "feelings of tension and anxiety that interfere with the manipulation of numbers and the solving of mathematical problems in a wide variety of ordinary life and academic situations" (Richardson & Suinn, 1972), significantly impedes mathematical proficiency. This anxiety adversely affects educational attainment and professional development, given the pervasive integration of mathematical concepts in various domains.

b. Genetic Factors

Behavioural genetics examines heritability, defined as "the proportion of observed variation among individuals in a population that can be attributed to underlying genetic differences" (Peters, 2020). While mathematical ability is universally attainable, genetic predispositions may influence the processing of symbolic and non-symbolic numerical information. Although contentious, research suggests a modest heritability of math anxiety (Tosto et al., 2014; Wang et al., 2014), necessitating further empirical investigation.

c. Education System

Math anxiety often originates in early education, where teachers' anxieties can be transmitted to students (Klinger, 2011). A bidirectional relationship exists between math anxiety and poor math performance (Maloney et al., 2015). Research also indicates a social contagion effect, wherein math-anxious parents negatively impact their children's mathematical development (Peters, 2020; Maloney et al., 2015).

d. Interaction of Causes

The causes of innumeracy are interconnected and mutually reinforcing. Math anxiety, a primary contributor, is influenced by educational systems, gender stereotypes and, to a lesser extent, genetic factors. Intergenerational transmission of math anxiety, from educators and parents to students, exacerbates the issue (Klinger, 2009, 2011; Peters, 2020).

Tobias (1980) highlights the societal construction of gendered educational and career choices, particularly concerning mathematics. Gender disparities in literacy rates and limited access to quality education further compound the problem. Ernest (1976) notes that gender stereotypes lead to differential attributions of mathematical failure, with girls more likely to internalize their perceived incompetence.

Additionally, the Pygmalion effect, wherein teacher expectations influence student performance, may contribute to observed gender disparities.

Conclusion

This analysis underscores the intricate interplay of cognitive, psychological and societal factors contributing to innumeracy. Addressing this challenge necessitates a holistic approach that extends beyond conventional financial education. Fostering a culture that promotes numeracy, challenges detrimental stereotypes and provides targeted interventions for math anxiety is essential. By recognizing the interconnectedness of these elements, we can empower individuals to make informed financial decisions, enhance their resilience to economic challenges and contribute to a more equitable and prosperous society.

Bibliography and References

Almenberg, J., & Widmark, O. (2011). Numeracy, financial literacy and participation in asset markets. 40.

Ashcraft, M. H. (2002). Math Anxiety: Personal, Educational, and Cognitive Consequences. Current Directions in Psychological Science, 11(5), 181–185. https://doi.org/10.1111/1467-8721.00196

Brown, R. P., & Josephs, R. A. (1999). A burden of proof: Stereotype relevance and gender differences in math performance. Journal of Personality and Social Psychology, 76(2), 246–257. https://doi.org/10.1037/0022-3514.76.2.246

Darriet, E., Guille, M., & Vergnaud, J.-C. (2021). Financial Literacy and Numeracy. 28.

Deshpande, S. H. (1981). Innumeracy and Economic Behaviour. Economic and Political Weekly, 16(10/12,), 501+503+505+507+509+511+513.

Ferguson, R. W. (2002, May 13). Remarks by Vice Chairman Roger W. Ferguson, Jr. Before the National Council on Economic Education, Washington, D.C. May 13, 2002. The Federal Reserve Board. https://www.federalreserve.gov/boarddocs/speeches/2002/20020513/default.htm

Fernandes, D., Lynch, J. G., & Netemeyer, R. G. (2014). Financial Literacy, Financial Education, and Downstream Financial Behaviors. Management Science, 60(8), 1861–1883. https://doi.org/10.1287/mnsc.2013.1849

Gerardi, K. S., Goette, L. F., & Meier, S. (2010). Financial Literacy and Subprime Mortgage Delinquency: Evidence from a Survey Matched to Administrative Data. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.1600905

Hilgert, M. A., & Hogarth, J. M. (2003). Household Financial Management: The Connection between Knowledge and Behavior. 15.

Hofstadter, D. (1982). On Number Numbness.

Hung, A. A., Parker, A. M., & Yoong, J. K. (2009). Defining and Measuring Financial Literacy (p. 28) [WR-708]. RAND Corporation.

Klinger, C. M. (2009). Passing it on: Linking Adult Innumeracy to Mathematics Attitudes, Low Self-Efficacy Beliefs, and Math-Anxiety in Student Primary Teachers. 10.

Klinger, C. M. (2011). Addressing Adult Innumeracy Via an Interventionist Approach to Mathematics Aversion in Pre-service Primary Teachers. 6, 10.

Lusardi, A., & Mitchell, O. S. (2007). Financial Literacy and Retirement Planning: New Evidence from the Rand American Life Panel.

SSRN Electronic Journal. https://doi.org/10.2139/ssrn.1095869

Lusardi, A., & Mitchell, O. S. (2008). Planning and Financial Literacy: How Do Women Fare? American Economic Review, 98(2), 413–417. https://doi.org/10.1257/aer.98.2.413

Lusardi, A., & Tufano, P. (2009). Debt Literacy, Financial Experiences, and Overindebtedness.pdf. NBER Working Paper No. 14808.

Maloney, E. A., Ramirez, G., Gunderson, E. A., Levine, S. C., & Beilock, S. L. (2015). Intergenerational Effects of Parents' Math Anxiety on Children's Math Achievement and Anxiety. Psychological Science, 26(9), 1480–1488. https://doi.org/10.1177/0956797615592630

Martens, A., Johns, M., Greenberg, J., & Schimel, J. (2005). Combating stereotype threat: The effect of self-affirmation on women's intellectual performance. Journal of Experimental Social Psychology, 42(2), 236–243. https://doi.org/10.1016/j.jesp.2005.04.010

Mercer CFA Institute Global Pension Index 2021. (2021). 97.

OECD. (2012). Literacy, Numeracy and Problem Solving in Technology-Rich Environments: Framework for the OECD Survey of Adult Skills. OECD. https://doi.org/10.1787/9789264128859-en

OECD, I. (2009). Measuring Financial Literacy (OECD Working Papers on Finance, Insurance and Private Pensions 1; OECD Working Papers on Finance, Insurance and Private Pensions, Vol. 1). https://doi.org/10.1787/5kmddpz7m9zq-en

OECD, P. (2003). OECD- Mathematical Literacy. OECD. https://www.oecd.org/education/school/programmeforinternationalstudentassessmentpisa/33707192.pdf

PACFL. (2008). President's Advisory Council on Financial Literacy. https://www.treasury.gov/about/organizational-structure/offices/Domestic-Finance/Documents/PACFL-recommendations.pdf

Paulos, J. A. (1988). Innumeracy: Mathematical Illiteracy and Its Consequences. Hill and Wang.

Peters, E. (2020). Innumeracy in the wild: Misunderstanding and misusing numbers. Oxford University Press.

Richardson, F. C., & Suinn, R. M. (1972). The Mathematics Anxiety Rating Scale: Psychometric data. Journal of Counseling Psychology, 19(6), 551–554. https://doi.org/10.1037/h0033456

Skagerlund, K., Lind, T., Strömbäck, C., Tinghög, G., & Västfjäll, D. (2018). Financial literacy and the role of numeracy–How individuals' attitude and affinity with numbers influence financial literacy. Journal of Behavioral and Experimental Economics, 74, 18–25. https://doi.org/10.1016/j.socec.2018.03.004

Tobias, S. (1980). Overcoming Math Anxiety. Houghton Mifflin Company.

Tosto, M. G., Petrill, S. A., Halberda, J., Trzaskowski, M., Tikhomirova, T. N., Bogdanova, O. Y., Ly, R., Wilmer, J. B., Naiman, D. Q., Germine, L., Plomin, R., & Kovas, Y. (2014). Why do we differ in number sense? Evidence from a genetically sensitive investigation. Intelligence, 43, 35–46. https://doi.org/10.1016/j.intell.2013.12.007

Van Rooij, M., Lusardi, A., & Alessie, R. (2011). Financial literacy and stock market participation. Journal of Financial Economics, 101(2), 449–472. https://doi.org/10.1016/j.jfineco.2011.03.006

Wang, Z., Hart, S. A., Kovas, Y., Lukowski, S., Soden, B., Thompson, L. A., Plomin, R., McLoughlin, G., Bartlett, C. W., Lyons, I. M., &

Petrill, S. A. (2014). Who is afraid of math? Two sources of genetic variance for mathematical anxiety. Journal of Child Psychology and Psychiatry, 55(9), 1056–1064. https://doi.org/10.1111/jcpp.12224

Section 4/खंड 4

International Section/ अंतर्राष्ट्रीय खंड

Pension System in Vietnam

Vietnam's pension system is a mix of compulsory and voluntary schemes, designed to address the needs of its aging population. The Vietnamese pension system consists mainly of two components: the state-run social insurance system and private savings plans.

1. ***Social Insurance System***: The Vietnamese government operates a compulsory social insurance program that covers employees in the formal sector, providing financial assistance during retirement. The social insurance program is a pay-as-you-go system, which means current workers' contributions fund the pensions of retirees. The system is managed by the Vietnam Social Security (VSS).

To qualify for a pension, an individual must contribute to the system for a minimum of 20 years. The pension amount is based on the number of years worked and the average monthly salary during an individual's working life. The longer someone works and the higher their contributions, the greater their pension benefits.

2. ***Private Savings Plans:*** In addition to the state-run system, private pension schemes and voluntary savings plans are becoming more popular in Vietnam, especially among higher-income individuals. These private plans allow workers to save additional amounts for retirement and often include investment options such as mutual funds and insurance policies.

However, private pension schemes are still in their infancy in Vietnam, and there is limited public awareness about their availability. The government has been taking steps to encourage the development of these plans through tax incentives and educational campaigns, but the overall uptake remains low.

Vietnam Social Security (VSS) manages and administers social security contributions and benefits (including pensions) for both private sector workers and government workers. The current pension scheme is a pay-as-you-go defined benefit (PAYG DB) scheme. Employees pay 8% of monthly salary/wage for retirement benefits. Vietnam's pension system also requires employers to contribute 14%, making the total contribution 22% of the monthly wage. The minimum and maximum monthly earnings for contribution and benefit calculation purposes are the minimum wage and 20 times of the minimum wage, respectively.

Challenges

Vietnam's pension system faces a number of challenges:

Low Coverage in the Informal Sector: While employees in the formal sector are typically covered, a large portion of the population works in the informal sector (e.g., farmers, street vendors, and small business owners), who are not required to contribute to social insurance and thus miss out on pension benefits.

Aging Population: Like many countries, Vietnam's population is aging rapidly. By 2030, it is estimated that nearly 30% of the population will be over 60 years old. This places significant pressure on the pension system as the ratio of workers to retirees declines.

Insufficient Pension Amounts: For those who do qualify, the pension amount often does not provide a comfortable retirement.

Many retirees in Vietnam continue to work in some capacity after reaching retirement age due to the low pension payout.

Table 1: ***Key Indicators***

		Vietnam
Life expectancy (2022)	at birth (Men/Women)	70/79
	At age 65 (Men/Women)	18.4/22
Demographic old-age to working-age ratio (2023)	the number of individuals aged 65 and over per 100 people aged between 15 and 64	13

Outlook:
Vietnam's rapidly aging population poses significant challenges to its pension system and has undergone significant reforms in recent decades as the country modernizes and adapts to global economic trends.

Building a coherent multi-tier pension system will be key for Vietnam to build a universal and adequate pension system that is financially sustainable in the context of demographic ageing. A key implication of moves towards a multi-tier system is the creation of new pension arrangements for workers in the “missing middle” that combine different financing sources (contributions and the state budget). A wide array of different design options exists, with a key consideration being how to combine a contributory principle (that those who contribute more receive higher pensions) and strong elements of solidarity and redistribution.

Despite the urgency to strengthen the pension system in the context of demographic change, building a multi-tier pension system in Vietnam is likely to be an incremental process that responds to wider economic, social and demographic developments.

Similarities with Indian Pension System

The pension systems in India and Vietnam have similarities in certain aspects, though they also differ in key ways due to each country's economic context and demographic factors. Some of the common elements between the pension systems of India and Vietnam are

1. Coverage of Formal Sector Employees

India: The formal pension system mainly covers employees in the organized sector who are part of the NPS. Those working in government or public-sector organizations may be covered by specific pension schemes.

Vietnam: The public pension system in Vietnam primarily covers formal sector workers in state-owned enterprises, private companies, and certain government employees. Similar to India, informal sector workers may not have access to the public pension system unless they voluntarily contribute.

2. Contribution-Based

India: Both employees and employers contribute a percentage of wages to the National Pension System (NPS), which is then used for retirement benefits.

Vietnam: In Vietnam, both employers and employees contribute to the pension system. The contribution rate is based on the employee's monthly salary, and like

India, the contributions fund retirement benefits.

3. Pension for Informal Workers

India: While the majority of formal sector workers are covered by the pension scheme, Government schemes such as the Atal Pension Yojana (APY) have been launched to cover the informal and unorganised sector.

Vietnam: Similarly, Vietnam faces challenges in extending the pension system to informal sector workers, despite efforts to increase coverage.

4. Basic Social Pension for Non-Contributors (State Pensions)

India: India has social pension schemes like the Indira Gandhi National Old Age Pension Scheme (IGNOAPS) that provide a basic pension to elderly individuals who are below the poverty line.

Vietnam: Vietnam also offers a social pension for elderly people who are not covered by the formal pension system, though this is generally a low-level pension aimed at providing a basic safety net.

*****

References:

1. ILO, Multi-tier pensions in Vietnam: Features and Options

2. Vietnam Social Security: Pension: A Pillar of Support After Retirement Age in Vietnam and Foreign Countries, Jan/06/2025

https://vss.gov.vn/english/news/Pages/external-information.aspx?ItemID=12401&CateID=184

3. OECD (2024), Pensions at a Glance Asia/Pacific 2024, OECD Publishing, Paris, https://doi.org/10.1787/d4146d12-en.

4. World Bank Group: Data: World Bank staff estimates based on United Nations Population Division's World Population Prospects: 2024 Revision.

*****

Section 5/ खंड 5

Did You Know?

क्या आप जानते हैं?

Pensions in Aging Asia and the Pacific: Policy Insights and Priorities
ADB Economics Working Paper Series; October 2024

The Asian Development Bank's (ADB) October 2024 working paper titled "Pensions in Aging Asia and the Pacific: Policy Insights and Priorities" focuses on the challenges that aging populations present for pension systems in the Asia-Pacific region. With demographic shifts and a growing number of elderly people, the paper explores the effectiveness of current pension systems and outlines critical policy recommendations for making these systems sustainable, inclusive, and equitable.

Demographic Trends and the Challenge to Pension Systems

Asia and the Pacific is home to some of the world's most rapidly aging populations, particularly in countries like Japan, China, South Korea, and several others in Southeast Asia. In these nations, aging is occurring at a faster rate than in other parts of the world, presenting significant challenges for pension systems. The region is experiencing a demographic transition where the number of elderly individuals is rising sharply while the working-age population is shrinking.

The dependency ratio—the number of elderly people relative to working-age people—continues to increase, putting pressure on pension systems that depend on intergenerational transfers (i.e., contributions from current workers funding the pensions of retirees). With fewer workers contributing to pension funds, systems are increasingly strained, especially in countries with low birth rates and increasing life expectancy.

Current Pension Systems: Coverage, Adequacy, and Gaps

Despite efforts to improve pension systems, many countries in Asia and the Pacific still struggle with low coverage and inadequacy of pension benefits. In many countries, pension schemes are either insufficient or do not reach a significant portion of the population. For instance, in countries with high rates of informal employment, such as India, Indonesia, and the Philippines, a large portion of the workforce remains excluded from contributory pension systems, leaving them vulnerable to poverty in old age.

Adequacy of pension benefits is another significant issue. While some countries have established public pension programs, these often provide minimal income, insufficient to meet the needs of retirees, especially those with low lifetime earnings or irregular employment histories. The lack of financial literacy and awareness regarding long-term retirement savings further exacerbates this problem, leaving elderly people in many parts of Asia facing financial hardship.

Gender Disparities in Pension Systems

The working paper highlights the issue of gender disparities in pension systems. Women in the region often face lower pension benefits compared to men due to various factors, including interrupted career paths due to caregiving responsibilities, lower lifetime earnings, and longer life expectancy. This makes it more difficult for women to accumulate sufficient savings for retirement, leading to higher vulnerability to poverty in old age. Moreover, gender-based pension gaps are often exacerbated in developing countries where women face greater economic insecurity and limited access to financial resources.

The paper calls for more gender-sensitive policies that consider the unique challenges women face in the workforce. This includes acknowledging caregiving roles, recognizing part-time work, and promoting pension schemes that help women achieve more equal pension outcomes.

Governance and Administration of Pension Systems

A significant problem identified in the paper is the weak governance of pension systems in many countries across Asia and the Pacific. These governance issues manifest in lack of transparency, poor fund management, inefficient administration, and lack of accountability. Pension funds are often mismanaged, and administrative inefficiencies such as poor data collection, contribution tracking, and fund allocation hinder the effectiveness of pension systems.

In addition, weak regulatory frameworks and poor investment management contribute to the underperformance of pension systems, particularly in countries that rely heavily on public pension schemes. The lack of effective oversight and control also raises concerns about the sustainability of pension funds.

Sustainability Concerns

The paper stresses that financial sustainability is one of the most pressing issues facing pension systems in Asia and the Pacific. Many systems rely heavily on public financing, and with populations aging rapidly, these systems face mounting financial pressures. Public pension funds are often insufficient to cover increasing pension obligations, and reforms to make pension systems more sustainable are necessary.

In some countries, the retirement age has already been increased, but these adjustments may not be enough in the face of longer life expectancies and shrinking workforces. Additionally, pension systems in the region often struggle with low contribution rates and poor compliance, further hindering their long-term viability.

Policy Insights and Priorities

To address these challenges, the working paper presents several key policy insights and priorities:

1. Expand and Improve Social Pensions

Social pensions, which provide non-contributory benefits to elderly individuals without access to formal pension systems, are essential for reducing poverty in old age. The paper recommends that governments expand these social safety nets, ensuring they are universally accessible to all elderly people, particularly those in the informal sector, women, and vulnerable populations. Social pensions should be designed to be adequate and targeted, so they effectively address the needs of the poorest elderly citizens.

2. Reform Contributory Pension Schemes

Governments must reform contributory pension schemes to ensure broader coverage and more adequate benefits. These reforms should consider the diverse labor market, where informal sector employment is prevalent and many workers are in part-time or precarious employment. This could involve implementing portable pension systems that follow workers from job to job, facilitating easier access for people working in multiple short-term or informal roles.

The paper also calls for the modernization of existing pension systems to make them more flexible, especially in countries with large informal sectors.

3. Address Gender Inequalities

The working paper emphasizes the importance of creating gender-sensitive pension systems. Addressing the barriers that women face in accumulating pension benefits is crucial for ensuring equity in old age. This can be achieved by offering benefits that account for childcare and caregiving duties, improving career continuity for women, and providing financial education programs targeted at women. Policies should also aim to reduce gender wage gaps and promote equal participation in the formal labor force.

4. Encourage Private and Voluntary Pension Savings

Given the constraints of public pension systems, the paper advocates for encouraging private savings and voluntary pension schemes. Governments should create favorable conditions for private pension savings by providing tax incentives or subsidies to make participation in private pension plans more attractive. These systems can provide an important supplement to public pensions and reduce reliance on government funding.

5. Leverage Technology for Pension System Efficiency

The paper highlights the potential of digital technologies to enhance pension system efficiency. Technological solutions can streamline administration, increase transparency, and reduce corruption. Digital platforms can also help in tracking contributions, managing funds, and disbursing pensions efficiently. The use of blockchain technology, for example, could help in improving the security and accountability of pension systems.

6. Strengthen Governance and Oversight

The paper calls for stronger governance frameworks and better regulatory oversight of pension systems. Governments must improve transparency in pension fund management, ensure independent auditing, and establish clear accountability mechanisms. Improving governance is essential to enhancing the efficiency and sustainability of pension systems.

7. Sustainability and Financial Reforms

In response to the sustainability challenges, the paper stresses the importance of financial reforms to ensure pension systems remain financially viable in the long run. This includes exploring new revenue sources, increasing contribution rates, and adjusting retirement ages in line with increasing life expectancy. Governments should also adopt pension system reforms that balance the need for adequate benefits with the necessity of maintaining financial stability.

In conclusion, the ADB working paper emphasizes that pension systems in Asia and the Pacific must undergo significant reforms to address the challenges posed by aging populations. Expanding coverage, improving adequacy, and addressing gender disparities are critical to ensuring that pension systems meet the needs of the elderly. Moreover, strengthening governance, leveraging technology, and fostering private pension savings will be key to ensuring that pension systems are both sustainable and equitable in the coming decades. Policymakers across the region must act swiftly to design flexible, inclusive, and efficient pension systems to meet the needs of their aging populations.

Glimpse of Union Budget 2025 – Relevant to Pension Sector

1. Deduction under Section 80CCD for Contributions to NPS Vatsalya

- Tax benefits under Section 80CCD(1B) (which allows additional deduction of ₹50,000 for NPS contributions) will now be extended to contributions made to NPS Vatsalya accounts.

- This ensures parity in tax treatment between standard NPS accounts and NPS Vatsalya.

2. Establishment of a Regulatory Forum for Pension Products

- A dedicated forum will be set up to coordinate regulatory efforts and support the development of pension products.

- This is expected to foster innovation and streamline regulations in the pension sector.

3. **Increase in FDI to 100% in Insurance Sector**

The FDI limit for the insurance sector will be raised from 74 to 100 per cent. This enhanced limit will be available for those companies which invest the entire premium in India. The current guardrails and conditionalities associated with foreign investment will be reviewed and simplified

4. Social Security Scheme for Online Platform Workers

- Recognizing the contribution of gig workers in the digital economy, the government will provide them with identity cards and registration on the e-Shram portal.

- They will also receive healthcare benefits under the PM Jan Arogya Yojana, benefiting nearly 1 crore gig workers.

- This initiative aims to enhance social security coverage for platform-based workers.

5. KYC Simplification

To implement the earlier announcement on simplifying the KYC process, the revamped Central KYC Registry will be rolled out in 2025. We will also implement a streamlined system for periodic updating.

Section 6/ खंड 6

Circulars/Regulations/Guidelines

परिपत्र/विनियम/दिशानिर्देश

Circular No: PFRDA/2025/01/CPGRAMS/01	
24 February 2025	**Regarding Timely and Quality Resolution of Grievances received under Centralized Public Grievance Redress and Monitoring System (CPGRAMS) Portal**

Centralized Public Grievance Redress and Monitoring System (CPGRAMS) is a platform for lodging grievances related to public service delivery which is monitored at the highest level in the Government of India.

PFRDA is registered in CPGRAMS and is responsible for ensuring the redressal of grievances related to the National Pension System (NPS) and Atal Pension Yojana (APY) received through the CPGRAMS portal.

The timelines for resolution of grievances on the CPGRAMS Portal is maximum 21 days.

The status of the grievance filed in CPGRAMS can be tracked with the unique registration ID provided at the time of registration by the complainant.

CPGRAMS also provides appeal facility to the citizens if they are not satisfied with the resolution by the Grievance Officer.

After closure of grievance, the complainant has the option to provide feedback. If the complainant is not satisfied with the resolution and has given the 'Poor' rating as feedback, then the option to file an appeal is enabled.

Following category of complaints do not fall under the ambit of CPGRAM as they are covered under separate protocols. The illustrative list of such complaints is as below:

a. RTI Matters

b. Court related / Sub-judice matters

c. Religious Matters

d. Grievances of Government employees concerning service matters

e. Suggestions

f. Anything that impacts upon territorial integrity of the country or friendly relations with other countries.

The Grievance Handling Process" of DARPG OM dated 23.08.2024 is also attached with the circular.

Notification	
19th March 2025	**Pension Fund Regulatory And Development Authority (Operationalisation of Unified Pension Scheme under National Pension System) Regulations, 2025**

The regulations called the Pension Fund Regulatory and Development Authority (Operationalisation of Unified Pension Scheme under National Pension System) Regulations, 2025 were notified on 19th March 2025.

The objective of these regulations is to lay down the framework to operationalise the UPS notified by the Central Government in the Ministry of Finance vide notification number F. No. FX-1/3/2024-PR, dated the 24th January 2025, and to define the obligations, roles and responsibilities of intermediaries and such Central Government offices as are involved with implementation thereof, and for matters connected therewith or incidental thereto.

The regulations shall come into effect from 1st April, 2025.

These Regulations enable enrolment of three categories of central government employees: (i) an existing central government employee in service as on 1st April 2025, who is covered under NPS ;(ii) new recruit in the central government services, who joins service on or after the 1st day of April 2025 ; and (iii) a central government employee who was covered under NPS and who has superannuated or voluntarily retired or has retired under Fundamental Rules 56(j) on or before 31st March 2025 and is eligible for UPS or the legally wedded spouse in case of a subscriber who has superannuated or retired and has demised prior to exercising the option for UPS.

The enrolment and claim forms for all these categories of central government employees will be available online from 1st April, 2025 on website of Protean CRA - https://npscra.nsdl.co.in. The employees also have the option to submit the forms physically.

Section 7/ खंड 7

NPS/ APY Statistics

एनपीएस/एपीवाई आँकड़े

I. Sector Wise Growth / क्षेत्रवार वृद्धि

The total number of subscribers, contributions, and assets under management for the NPS and APY as on 28th Feb 2025, are as under. The below data is a compilation of data from the three CRAs registered with PFRDA.

i.No. of Subscribers: The number of subscribers in various schemes under the NPS and APY rose to 826.50 Lakh by the end of February 2025 from 724.09 Lakh in February 2024 showing a year-on-year (Y-o-Y) growth of 14.14%.

Table 1: NPS & APY growth in Subscribers base as on 28th Feb 2025/ 28 फरवरी 2025 तक एनपीएस और एपीवाई के अभिदाताओं की संख्या में वृद्धि

S.N. / क्रम संख्या	Sector / क्षेत्र	No. of Subscribers (in lakh) / अभिदाताओं की संख्या (लाख में)			YoY (%) / वार्षिक वृद्धि (%)	Share (%) / हिस्सेदारी (%)
		29-Feb-24	31-Mar-24	28-Feb-25		
i	CG	25.83	26.07	27.14	5.07	3.28
ii	SG	65.17	65.96	69.94	7.32	8.46
	Sub Total	91.01	92.03	97.09	6.68	11.75
iii	Corporate	19.23	19.48	22.53	17.13	2.73
iv	All Citizen	34.40	35.64	41.83	21.61	5.06
v	Vatsalya			1.00		0.12
	Sub Total	53.63	55.12	65.36	21.87	7.91
vi	NPS Lite	33.26	33.28	33.50	0.72	4.05
vii	APY	546.19	555.12	630.55	15.45	76.29
viii	**Grand Total**	**724.09**	**735.56**	**826.50**	**14.14**	**100.00**

Source: CRAs

ii. Contribution: As on 28th Feb 2025, total contribution for both NPS and APY stood at Rs. 10,16,906 crores showing a Y-o-Y growth of 22.28%.

iii. Assets under Management: As of 28th Feb 2025, the combined pension assets under management for both the NPS and the APY stood at Rs 13,83,025 crores showing a year-on-year growth of 20.91%.

Table 2: NPS & APY growth in Contribution as on 28th Feb 2025/ 28 फरवरी 2025 तक एनपीएस और एपीवाई के कॉन्ट्रिब्यूशन में वृद्धि

S.N. / क्रम संख्या	Sector / क्षेत्र	Contribution (Rs. in crore) / योगदान (रु. करोड़ में)			YoY (%) / वार्षिक वृद्धि (%)	Share (%) / हिस्सेदारी (%)
		29-Feb-24	31-Mar-24	28-Feb-25		
(i)	CG	2,16,232	2,19,498	2,57,762	19.21	25.35
(ii)	SG	4,10,367	4,20,085	4,96,007	20.87	48.78
	Sub Total	**6,26,599**	**6,39,583**	**7,53,769**	20.30	74.12
(iii)	Corporate	1,12,556	1,16,097	1,47,328	30.89	14.49
(iv)	All Citizen	50,779	52,950	64,406	26.84	6.33
(v)	Vatsalya			81		0.01
(vi)	Tier-II	7,908	8,069	9,916	25.39	0.98
(vii)	TTS	15	16	19	26.67	0.00
	Sub Total	**1,71,258**	**1,77,132**	**2,21,750**	29.48	21.81
(viii)	NPS Lite	3,340	3,359	3,529	5.66	0.35
(ix)	APY*	30,455	31,098	37,858	24.31	3.72
	Grand Total	**8,31,652**	**8,51,172**	**10,16,906**	**22.28**	**100.00**

** Fig does not include APY Fund Scheme*
Source: CRAs

Table 3: NPS & APY growth in AUM as 28th Feb 2025/ 28 फरवरी 2025 तक एनपीएस और एपीवाई के एयूएम में वृद्धि

S.N. / क्रम संख्या	Sector / क्षेत्र	AUM (Rs. in crore) / एयूएम (रु. करोड़ में)			YoY (%) / वार्षिक वृद्धि (%)	Share (%) / हिस्सेदारी (%)
		29-Feb-24	31-Mar-24	28-Feb-25		
(i)	CG	3,16,847	3,22,215	3,70,351	16.89	26.78
(ii)	SG	5,67,963	5,82,673	6,88,813	21.28	49.80
	Sub Total	**8,84,810**	**9,04,888**	**10,59,164**	19.71	76.58
(iii)	Corporate	1,61,419	1,66,729	2,06,155	27.71	14.91
(iv)	All Citizen	52,100	54,396	62,147	19.28	4.49
(v)	Vatsalya			74		0.01
(vi)	Tier-II	5,498	5,413	6,529	18.75	0.47
(vii)	TTS	17	18	19	11.76	0.00
	Sub Total	**2,19,034**	**2,26,556**	**2,74,924**	25.52	19.88

(viii)	NPS Lite	5,254	5,560	5,919	12.66	0.43
(ix)	APY*	34,781	35,647	43,018	23.68	3.11
	Grand Total	**11,43,879**	**11,72,651**	**13,83,025**	**20.91**	**100.00**

** Fig does not include APY Fund Scheme*

Source: CRAs

II. PFM-wise Assets under NPS schemes / पीएफएम के अनुसार एनपीएस योजनाओं के अंतर्गत संपत्तियाँ

Table 4: Pension Fund-wise Assets under Management (in crore) as on 28th Feb 2025/ 28 फरवरी 2025 को पेंशन अनसार एयएम (करोड में)

Pension Fund	AUM (Rs. In Crore)			YoY (%)	% share
	29-Feb-24	31-Mar-24	28-Feb-25		
SBI PF	4,23,444.32	4,33,086.70	4,93,893.28	16.64	35.71
LIC PF	3,15,119.82	3,21,850.60	3,68,401.86	16.91	26.64
UTI PF	2,96,319.35	3,02,401.61	3,46,137.80	16.81	25.03
ICICI PF	26,625.49	28,419.13	42,068.44	58.00	3.04
Kotak PF	4,498.66	4,705.99	6,006.56	33.52	0.43
HDFC PF	73,410.34	76,954.78	1,07,753.89	46.78	7.79
Aditya Birla PF	1,428.10	1,508.72	3,647.11	155.38	0.26
Tata PF	625.06	834.71	4,122.96	559.61	0.30
Max Life PF	509.35	576.37	1,528.42	200.07	0.11
Axis PF	1,834.17	2,197.45	7,821.32	326.42	0.57
DSP PF	66.71	115.66	1,645.70	2366.95	0.12
Total	**11,43,881.37**	**11,72,651.72**	**13,83,027.35**	**20.91**	**100.00**

Source: NPS Trust

III. Scheme Wise AUM under NPS / एनपीएस के अंतर्गत योजनावार एयूएम

Table 5: Scheme-wise Assets under Management (in Crores) as of 28th Feb 2025/ 28 फरवरी 2025 को योजनावार एयूएम संपत्तियाँ (करोड़ में)

Scheme		AUM (Rs. In Crore)			Growth (%)		% share
		29-Feb-24	31-Mar-24	28-Feb-25	YOY	Over Mar 24	
CG		2,99,815.34	3,03,144.53	3,28,436.84	9.55	8.34	23.75
SG		5,59,688.77	5,73,527.22	6,64,639.32	18.75	15.89	48.06
Corporate CG		75,088.71	77,174.94	92,147.96	22.72	19.40	6.66
TIER I	A	391.91	411.38	608.38	55.24	47.89	0.04
	E	73,164.58	76,999.16	99,156.83	35.53	28.78	7.17
	C	32,276.44	34,012.02	52,448.94	62.50	54.21	3.79
	G	57,910.75	60,750.99	90,102.91	55.59	48.32	6.51
NPS Lite		5,497.95	5,559.67	5,919.01	7.66	6.46	0.43
TIER II	E	2,484.17	2,573.34	2,995.07	20.57	16.39	0.22
	C	1,013.86	1,035.34	1,273.22	25.58	22.98	0.09
	G	1,750.45	1,797.97	2,258.74	29.04	25.63	0.16
	TTS	16.76	17.51	19.34	15.36	10.42	0.00
APY		34,781.63	35,647.67	43,018.47	23.68	20.68	3.11
Tier II Composite		-	-	2.28	-	-	-
Total Asset		**11,43,881.33**	**11,72,651.75**	**13,83,027.32**	**20.91**	**17.94**	**100.00**

Source: NPS Trust

Minor difference in AUM provided in Table 3 is due to difference in the methodology of calculation of PFs and CRA.

IV. PFM-wise Return on NPS Schemes / पीएफएम के अनुसार एनपीएस योजनाओं पर लाभ

Table 6: Returns since inception (in %) as 28th Feb 2025/ 28 फरवरी 2025 तक आरंभ से लाभ (% में)

Pension Funds		SBI PF	LIC PF	UTI PF	ICICI PF	KOTAK PF	HDFC PF	Aditya Birla PF	TATA PF	Max Life PF	Axis PF	DSP PF
CG		9.47%	9.36%	9.32%								
SG		9.19%	9.31%	9.28%								
Corporate-CG		9.18%	9.31%									
TIER I	A	8.90%	7.46%	6.57%	7.28%	7.04%	8.50%	6.55%	7.80%	0.57%	6.88%	6.65%
	E	10.54%	12.52%	12.36%	12.42%	11.91%	14.27%	12.42%	13.48%	9.26%	11.02%	14.12%
	C	9.51%	8.94%	8.67%	9.49%	9.20%	9.22%	8.30%	7.30%	7.40%	7.79%	8.07%
	G	9.02%	9.72%	8.28%	8.49%	8.45%	8.99%	8.00%	8.30%	8.59%	8.52%	10.05%
TIER II	E	10.60%	10.81%	11.16%	11.18%	11.43%	12.85%	12.54%	13.34%	11.39%	11.78%	12.58%
	C	9.09%	8.49%	8.68%	9.33%	8.56%	8.58%	7.80%	7.61%	7.96%	7.10%	9.39%
	G	9.01%	9.94%	8.77%	8.56%	8.23%	9.13%	7.45%	8.56%	7.46%	8.07%	9.45%
	TTS	5.91%	7.63%	6.61%	7.30%	7.67%	6.73%	7.87%	7.74%	6.16%	6.43%	6.31%
NPS Swavalamban		9.54%	9.62%	9.58%		9.47%						
APY		8.68%	9.02%	8.98%								
Tier II Composite		2.77%	3.47%	4.12%								

Source: NPS Trust

Atal Pension Yojana	nps national pension system #Zaruri Hai	nps Vatsalya