Financial markets and products for pensions

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Framework

- Objective: implementation of a top quality pension system.
- Focus on:
  1. Self-funded (Defined Contribution)
  2. Highest returns, lowest costs
  3. Flexibility of investment
  4. Good governance and regulation

Focus on fund management

- By definition, DC systems collect and accumulate funds very quickly from inception.
- How can the funds perform for the contributor?
- New focus: Management of the pension funds.
  - What is the *asset allocation*?
  - Can the *domestic financial markets* support pension investment?
  - *Who* will manage the funds?
  - How is fund performance *monitored and supervised*? (Governance)
- How can the State or policy facilitate good performance?

Part I

Assets for pension fund management

Assets for pensions

- Performance is driven by *asset allocation*.
  90% of the performance comes from asset allocation, 10% from fund managers.
- Possible assets vary by their return-risk features:

Fixed Deposits, Govt. bonds	Low return, low risk
Equity	High return, high risk
Corporate Bonds	In between the above two

- and by their applications:

• Buy-and-hold	FD, Govt. bonds, corporate bonds, equities
• Risk management	Derivatives – equity, interest rates, FX

- Critical post-retirement financial asset: **Annuities** for cash-flow management.

Asset allocation for pension

- Pensions are long term investment – target horizon multiple years.
- Since fund management spans all of the contributor's working life, it is optimal to continuously adjust asset allocation by contributor age – *Life Cycle allocation*.
- Implication: Pension fund managers need access to all these assets.
- Next question: Can domestic markets support fund management requirements?

Availability of assets: Example of South Asia

Asset	Bhutan	Bangladesh	India	Pakistan	Nepal	SriLanka
Equity	Y	Y	Y	Y	Y	Y
Bonds		Y	Y/N			
Index funds			Y	Y		Y
Derivatives –						
Equity:			Y			
Int. rates:						
FX			Y			
OTC contracts			Y	Y		Y

Where does the Maldives stand on long-term assets? (Equity)

Annuities

- All the South Asian countries have at least one state run life insurance company.
- India opened up the insurance sector to private participation in 1999 – this has caused a significant growth in the annuitiy policies sold.
- **What** is the availability of annuities in the Maldives?

Part II

Fund management industry

Fund management: Example of South Asia

- Most of the countries have a dominant banking sector.
- Most have much younger mutual funds companies (from the mid-'90s and after).
  - Bangladesh reports around 15 or more mutual funds, 10 of which are listed on the stock exchange.
  - Sri Lanka has a small set of local fund managers.
  - Pakistan is similar to Sri Lanka.
  - India has around 35 mutual fund managers, who have grown significantly in the last decade.

Mutual fund governance: Regulatory architecture

- The financial sector in Bhutan and Nepal have banks and a public sector insurance firm.
  The regulator is the central bank.
- Sri Lanka has Securities and Exchange Commission (SEC) to regulate the equity market.
  The central bank regulates everything else.
- Pakistan: Central bank for banking, SECP for everything else.
- India has an alphabet soup of regulators: RBI, SEBI, FMC, IRDA, PFRDA, DCA for each asset category.

Analysing the evidence

- India and Pakistan appear to have significant sized equity markets; the market size in Bangladesh could be adequate.
- The growth of the financial sector in India also appears to have reached a level of financial market preparedness to enable pension investment.
- A common weakness in all countries is the evidence of poor governance: in both Pakistan and India, there have been instances of fraud in fund management.
- **Possible solution:** International diversification

Part III

International diversification

Risk and return from purely local equity investment

(Pre-crisis data)

	Weekly returns	
	Average	Volatility
Sri Lanka	0.238	3.02
Pakistan	0.442	4.11
India	0.343	3.51
US	0.071	2.44
UK	0.049	2.29
Japan	-0.028	2.92
Germany	0.085	3.51

Case 1: Purely India equity portfolio

Volatility = 3.51% per week

Diversification within South Asia?

Correlations:

	Colombo	Karachi	Bombay
Colombo	1.0000		
Karachi	0.1348	1.0000	
Bombay	0.0627	0.1677	1.0000

Very low correlations : Opportunities for diversification.

Optimised portfolio across South Asia

- Weights: 32.4% in Sri Lanka, 32.4% in Pakistan, 35.2% in India.
- Volatility = 2.31% per week

Gains from diversification

Pure India	3.51% per week
Diversified in South Asia	2.31% per week

Why stop at South Asia?

Add in US, UK, Japan, Germany:

Pure India	3.51% per week
Diversified in South Asia	2.31% per week
Diversified across major markets	1.63% per week

Main lesson

- There will be complaints about savings leaving the country.
- It will require a modern framework for open economy macroeconomics.
- Local finance companies will lose revenues.
- **But** international diversification is in the best interest of the contributor.

Part IV

Small economy issues

The importance of liquidity

- Since pension funds continually grow, fund management requires asset markets that provide persistent liquidity.
- Liquidity is measured as traded volumes, turnover ratio and costs of transaction.
  Higher traded volumes, higher turnover ratios, lower costs of transaction imply high liquidity.
- What drives liquidity?

Liquidity factor: Size of the economy

- Experience from all over the world is that it is difficult for small markets to develop liquidity.
- *Evidence*: A cross-country analysis shows that larger sized countries have much lower costs of transaction, which in turn translates to higher volumes of trades.

Liquidity factor: Size of the firm

- Part of the illiquidity can be explained by size of firm.
- *Evidence*: even on NASDAQ, smaller firms have much lower liquidity than large firms.

Liquidity factor: Quality of governance

- Part can be explained by the quality of corporate governance and disclosures.
- *Evidence*: Comparison between same sized firms in the U.S. and India.
  - Indian firms with market cap greater than USD 25 million, Indian and U.S. markets are equally liquid.
  - But smaller firms in India (with poorer disclosures and governance) have significantly less liquidity than in the U.S.

Liquidity factor: Market institutions

- Part can be explained by the development of the market institutions.
  Evidence: Large firms in Mauritius and Sri Lanka have lower liquidity than similar sized firms in India.

Analysing the evidence

- Small economies tend to have markets with low liquidity and high transactions costs.
  This could be because they tend to support small firms.
- Small economies suffer from poor economies of scale.
  Cost of setting good market institutions and best practices in governance are fixed and impose a larger per person cost in small economies.
- **Possible solution:** Share technological systems with a larger economy or a group of economies.
  Example: Record keeping systems in the Indian Income Taxes, the New Pension Systems, and securities depository are developed and managed by the same entity.
- Could the same system also be used for all record keeping in the Maldivian economic system?
  (Efficiency by way of much better economies of scale $\rightarrow$ lower cost $\rightarrow$ higher net returns.)

Summary

- Good implementation of pension fund systems require
  - Variety of assets
  - Markets that provide consistent access to these assets.
- Small economies tend to lack access to both.
- Possible solutions are:
  1. *International diversification* – opening up investments into global asset markets.
  2. Leverage on institutions development in global markets to derive the benefits of economies of scale and lower costs of investments.
- The first will improve the quality of asset allocation for Maldivian pension fund performance.
- The second will improve the returns by lowering costs.
- Both will benefit the Maldivian DC pension contributor.

Thank you.