CAFRAL
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Funds transfer Pricing Framework

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Agenda

- Emerging trends
- Objectives of funds transfer pricing
- Funds transfer pricing methodologies

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Emerging trends

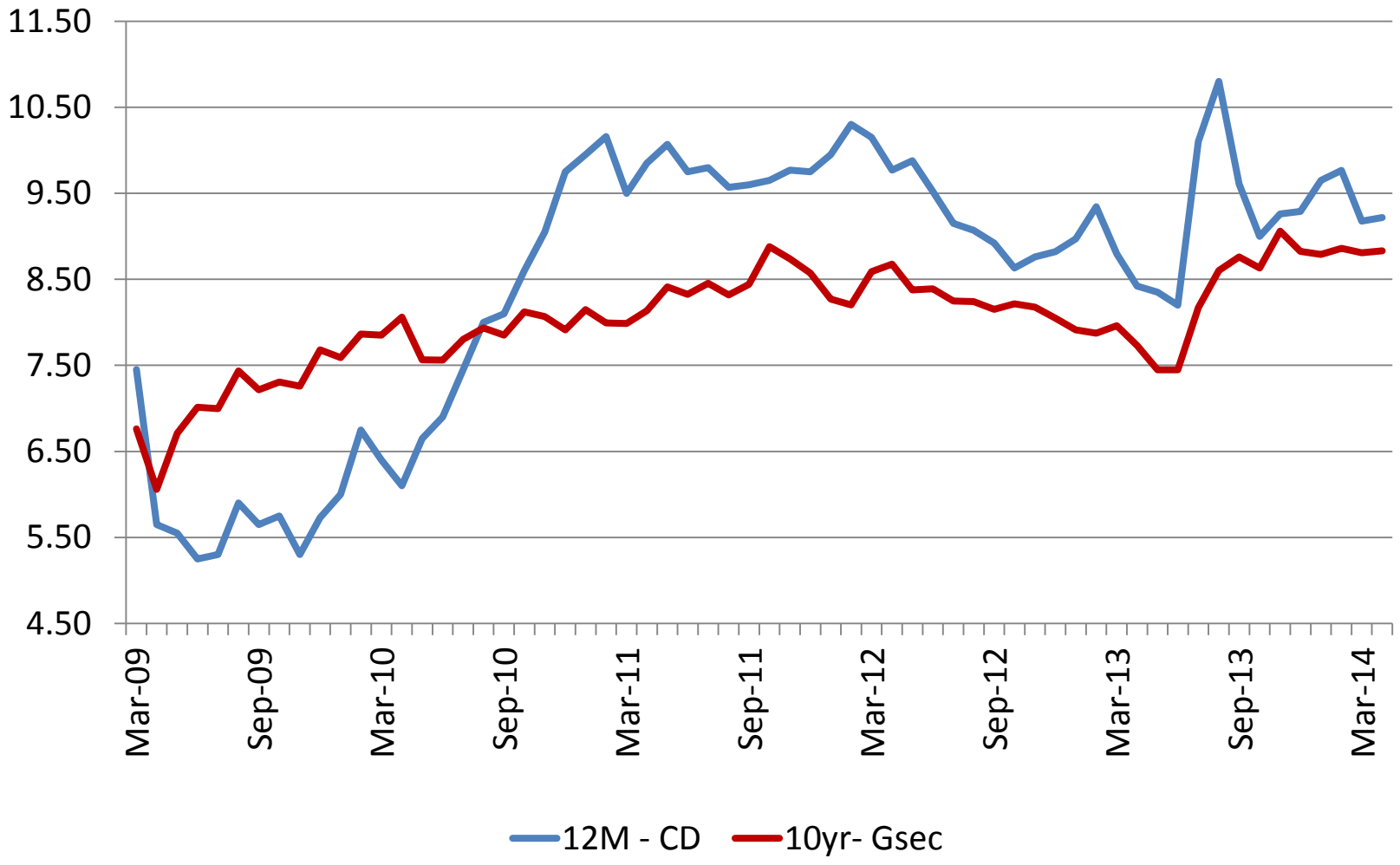
Objectives of funds transfer pricing

Funds transfer pricing methodologies

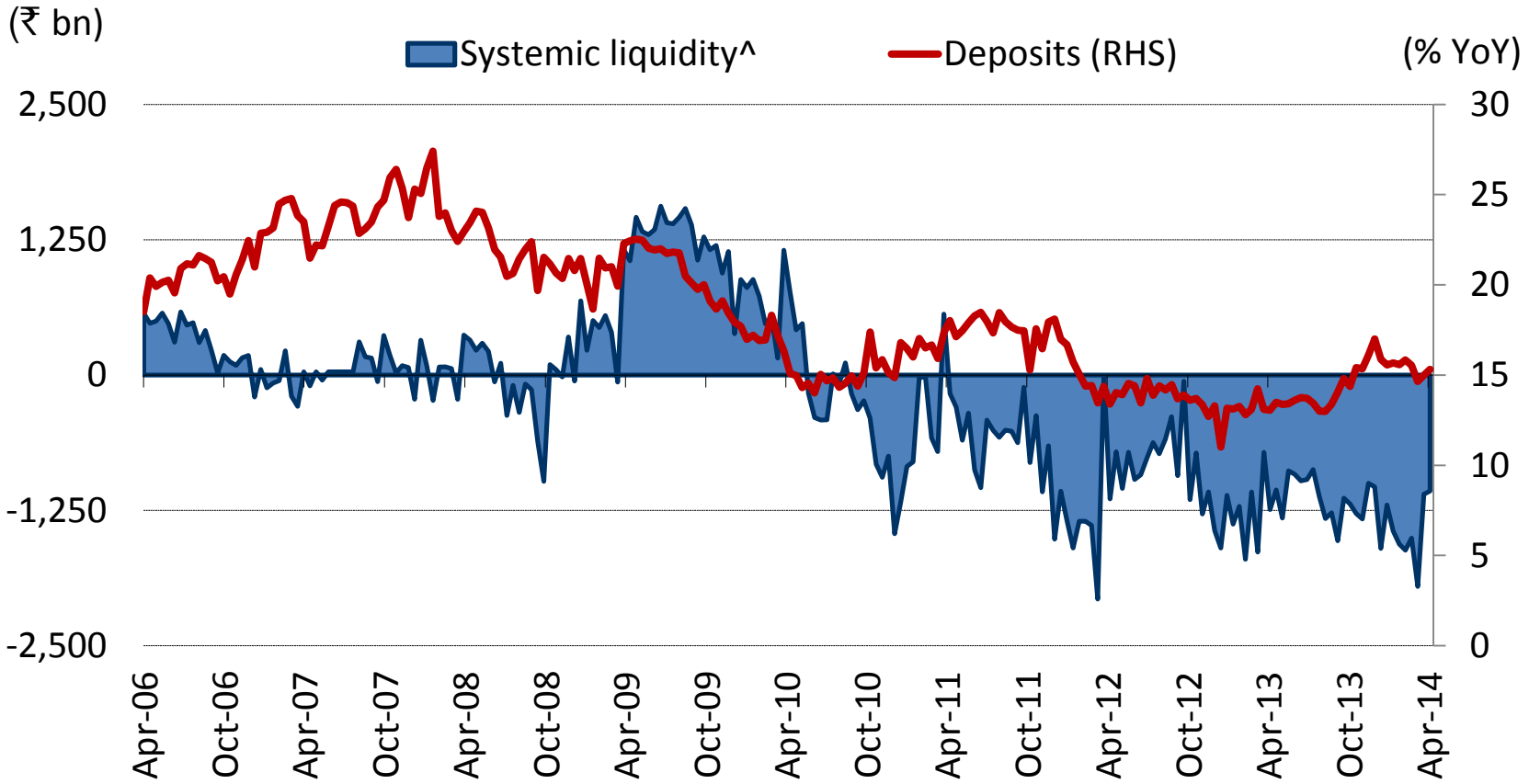
Need for a systematic approach

- Volatile interest rate environment
- Fluctuating systemic liquidity
- Increasing divergence between profile of assets and liabilities
- Multiple asset products with differing liquidity and interest rate characteristics
- Increasing complexity of typical lending decision

Volatile interest rate environment



Fluctuating systemic liquidity



^sum of overnight LAF, term repo, MSF and standing liquidity facility

Increasing divergence between assets and liabilities

- Sharp reduction in granular term deposits
  - Term deposits of individuals reduced from 59.28% at March 2005 to 44.30% at March 2012
  - Term deposits of value >= INR 10.0 million increased from 35.80% at March 2005 to 48.30% at March 2012
- Gradual reduction in term deposits of original maturity of >= 3 years
  - Share in o/s term deposits reduced from 27.83% at March 2004 to 19.15% at March 2012
- Increase in long term wholesale loans
  - Outstanding infrastructure lending increased from 9.23% at November 2008 to 14.99% at March 2013

Growing need for product specific focus

Asset products	Liquidity profile	Interest rate profile	Remarks
CC/OD	Non-maturity	Short-term	Volatility in utilization
Demand loans	Short-term	Fixed/floating	
Corporate term loans	Medium term	Floating/reset (short term)	
Project/infra loans	Long term	Floating/reset (short term)	
Mortgage loans	Long term	Floating/limited fixed	Prepayments are high
Other retail loans	Medium term	Floating/fixed	Prepayments are high
Treasury assets	Short term	Fixed	High turnover

Banking system moving from single product (CC/WCDL) to multi product offering with increasing significance for each product

Increasing complexity of typical lending decision

- Base funding cost (say one year cost)
- Cost of liquidity
  - May arise from liquidity commitments with long validity periods
  - May arise from significantly longer tenure lending
- Tenure premium
  - If the rate is fixed for a longer tenure
- Embedded option cost
- Product specific operations cost
- Credit related costs
  - Expected losses
  - Capital charge

Key requirements to manage in this environment

- Structured mechanism to evaluate risks and drivers involved in a decision
- A common framework for:
  - Pricing decisions across different products
  - Risk adjusted product/business unit evaluation
  - Risk attribution and return evaluation
- Transfer of risks from line units to central unit best equipped to manage ALM risks
  - Specialized risk management of ALM

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Emerging trends

Objectives of funds transfer pricing

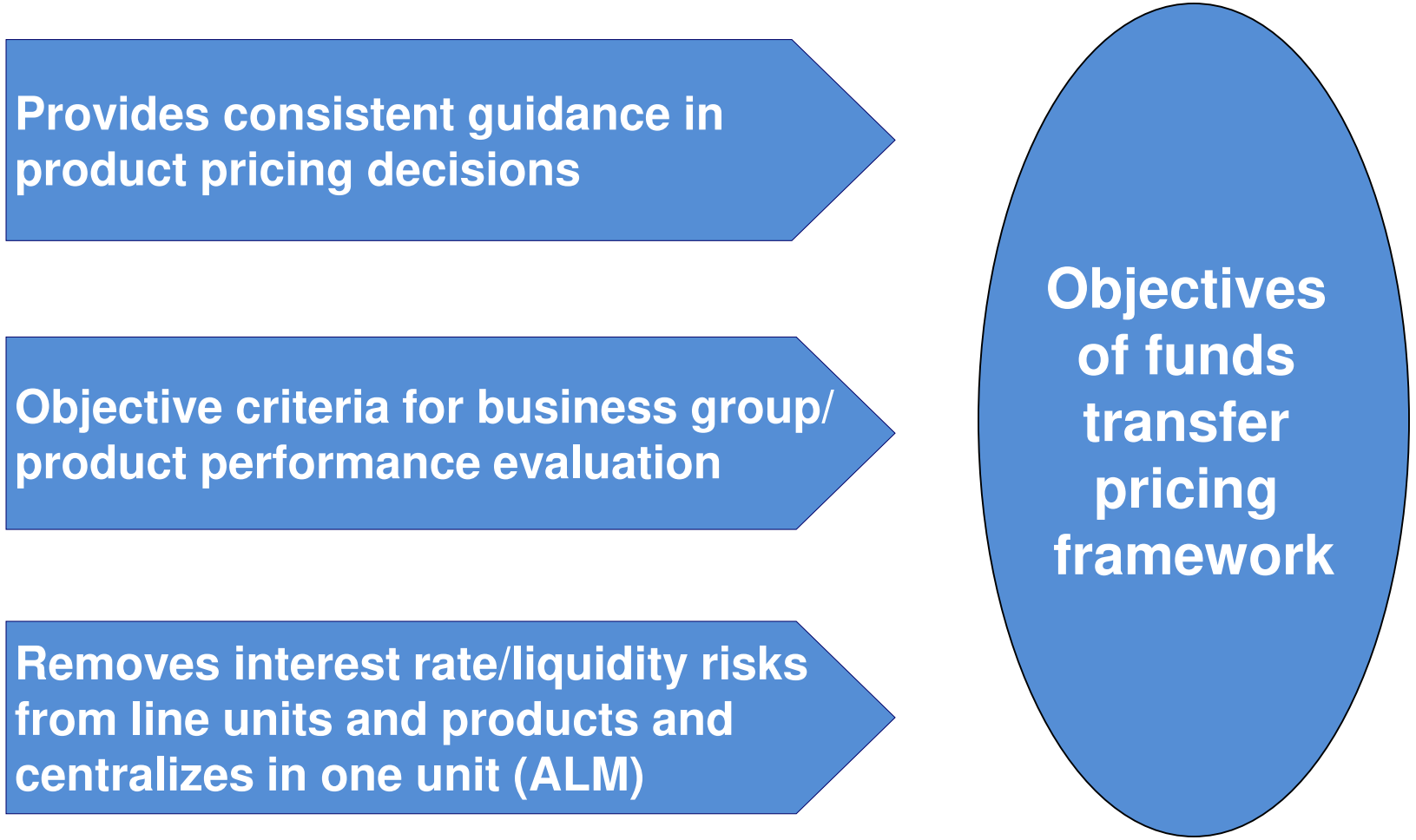
Funds transfer pricing methodologies

Funds transfer pricing framework

- Integral to asset liability management
- To consider the strategic choices of the bank
  - Achieve the desired maturity profile of assets and liabilities
  - Achieve the desired mix of the asset and liabilities
- Aligns the risk-taking incentives of individual business lines with the liquidity and interest rate risk exposures taken by individual business lines

Funds transfer pricing is specific to individual entities designed to achieve their objectives

Objectives of funds transfer pricing



How to get funds transfer pricing right ?

- Senior management buy-in
  - Commitment for transparency around true economics
  - Explicit incentives should be used to support key businesses
- To be used along with other management levers (volume targets, subsidies)
- Implementation at the point of origination – transaction level
- Feed through product/business performance management, customer pricing, strategic planning and ALCO optimization decisions

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Alternate approaches for FTP

- Average cost based FTP
- Matched FTP
  - Marginal FTP (MFTP)
  - Market benchmark based FTP
  - Marginal Blended Funds transfer pricing (MBFTP)
- Banks within bank (net transfer of funds)

Average cost FTP

- Based on average cost of outstanding liabilities adjusted for liability operations cost
- Ease of implementation
- Does not take into consideration the current & expected market scenario
  - Incentivizes asset creation in rising interest rate scenario
- Does not take into consideration the term structure of interest rates and liquidity characteristics
  - Incentivizes the long term and risky assets
- May result in suboptimal decision making

Marginal FTP

- Based on high cost deposits/borrowings expected to be mobilized incrementally
- Best indicator of current market rates & market scenario
- Expectations of market rates could be built into the TP rates
- Considers costs for each of the liquidity/market risks embedded in the transaction
  - Incentivizes banks to eliminate costliest marginal funds so that threshold for lending rate reduces
- Considers other related costs attributable to the marginal decision making
- Requires clear establishment of liquidity and interest rate characteristics of all assets and liabilities
  - Non-maturity liabilities (CASA) and assets (CC/OD)
  - Retail loans with standard prepayment rates

Marginal FTP

- Ensures that profits are maximized
  - Establishes threshold for each decision to make it profit making on an incremental basis
- May lead to uncompetitive product pricing if competition does not follow similar methodology
  - May become uncompetitive during increasing rates environment
- Business/profit planning becomes difficult since decision making is more market linked

Market benchmark based FTP

- Variant of MFTP
- Based on market benchmarks for funding
  - Appropriate spread is added to reflect average divergence between benchmark and bank's marginal funding rates
- Need liquid markets for wholesale funds
  - Availability of wholesale funds linked to market benchmark key to pricing
  - Developed swap markets needed for proper risk management
- Need stable/predictable relationship between benchmark and internal funding rates
- Ideal if lending decisions are linked to the same benchmark

Market benchmark based FTP

- Transparent for internal business groups
  - Could become independent of funding structure of the bank
  - Bank specific funding inefficiencies do not impact asset groups' competitiveness and profitability
- Low correlation between benchmark and banks' actual funding and lending rates results in
  - FTP not being used in decision making for product pricing
  - Volatility in business group profits vs. budgets
  - Uneconomical decisions if the benchmark movements are idiosyncratic
- Difficult in Indian market on account of lending linked to Base Rates of banks while liabilities are predominantly short/medium tenure fixed deposits

Marginal Blended FTP

- Mix of average cost & MFTP
- Based on blended cost of marginal term deposits and CASA deposits
  - Significant funding advantage in CASA deposits
  - Transfers part of liability income to asset groups
  - Lower threshold for lending decisions
- Reflects current market rates & market scenario
- May become uncompetitive during volatile markets
- May result in sub-optimal lending due to CASA blending

Comparative costs under various approaches

Particulars	Share	Avg Cost	MFTP	MBFTP
Average cost of term deposits	65%	9.00%	-	-
Incremental cost of term deposits		-	10.00%	10.00%
Current Account*	5%	0.00%	-	0.00%
Savings Account*	30%	4.00%	-	4.00%
Blended cost of deposits - (A)		**7.75%**	**10.00%**	**8.40%**
SLR Carry (Yield assumed @ 8.00%) – (B)		0.00%	0.63%	0.13%
CRR Carry – (C)		0.42%	0.55%	0.46%
Cost to business groups - (D=A+B+C)		**8.17%**	**11.18%**	**8.99%**

*** CASA operations cost is considered at 2.00%**

Banks within bank (net transfer of funds)

- Each unit borrows/lends net funds from/to central group
  - Each unit then follows average/marginal FTP
  - Net funds transfer between units and central group follows average/marginal FTP
- Each unit is expected to manage the business volume, profitability and to decide the pricing

Banks within bank (net transfer of funds)

- 'Appears' to be fair and less problematic
- Results in divergent policies followed within the bank
- May lead to sub-optimal decision making as individual units take decisions in isolation
  - Surplus liquidity at unit and wholesale TD at higher cost by another unit
- Clients may arbitrage within the bank
  - Competition across units could lead to lower overall profitability
- High incentive to run liquidity risks to increase profitability results in unsustainable balance sheets
- Centralized profit planning may be difficult

Banks within bank (net transfer of funds)

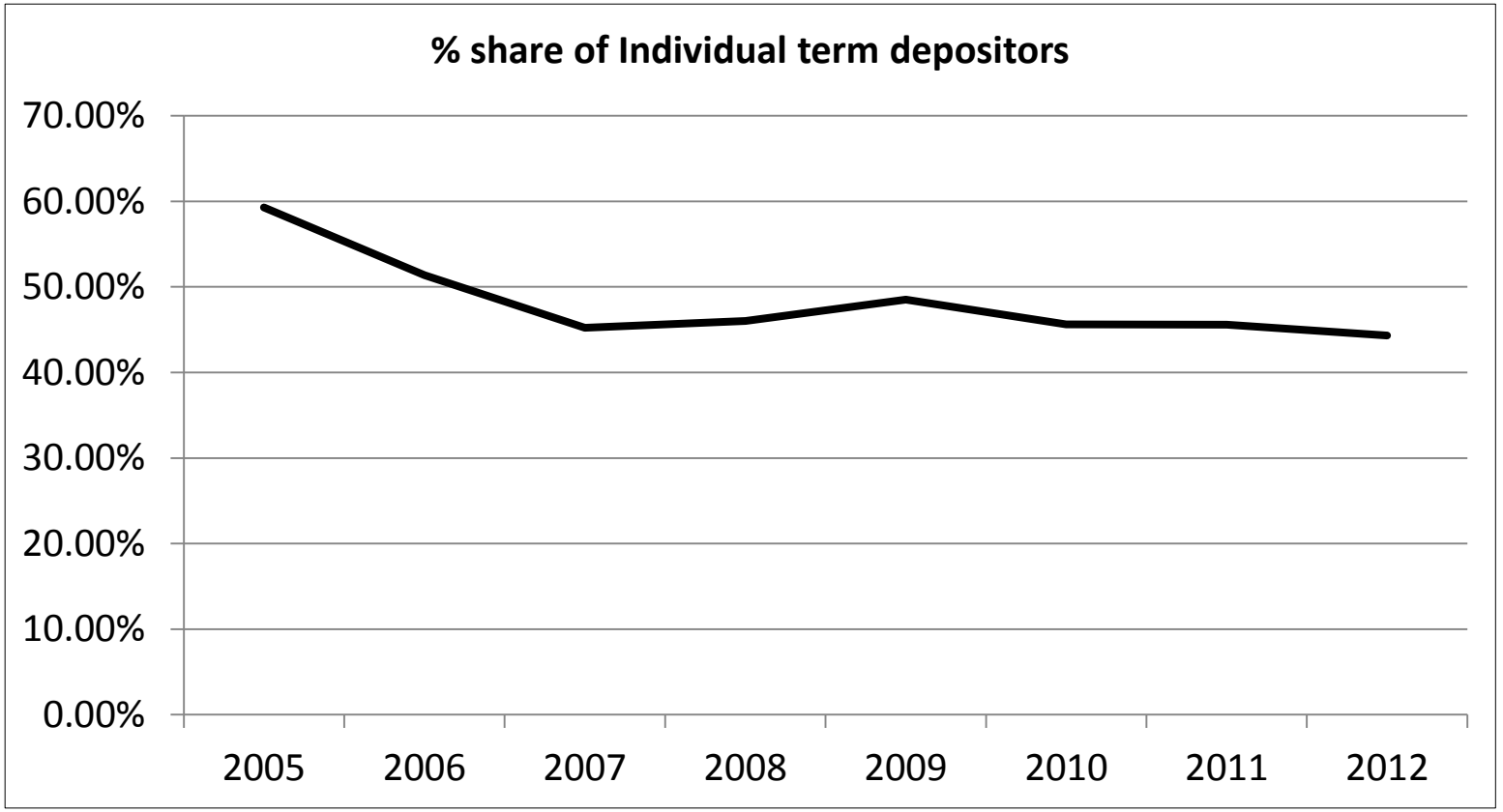
- Need for strict norms for unit-wise liquidity and interest rate gaps
  - No scientific way of computing penalty for breach of limits
  - Individual units could be within limits but overall bank may not be
- Need for agreed pricing norms for lending and borrowing of net funds between units and treasury
- Need for strict and uniform norms for pricing of products

Conclusion

- Structured mechanism required to evaluate risks and drivers in a changing environment
- Funds transfer pricing mechanism is useful for:
  - Pricing across different products in a consistent manner
  - Risk adjusted product/business unit evaluation
  - Centralizing the ALM risks in a specialized group
- Multiple approaches for FTP in a bank
- Each bank to decide the specific approach based on their balance sheet structure and strategic objectives

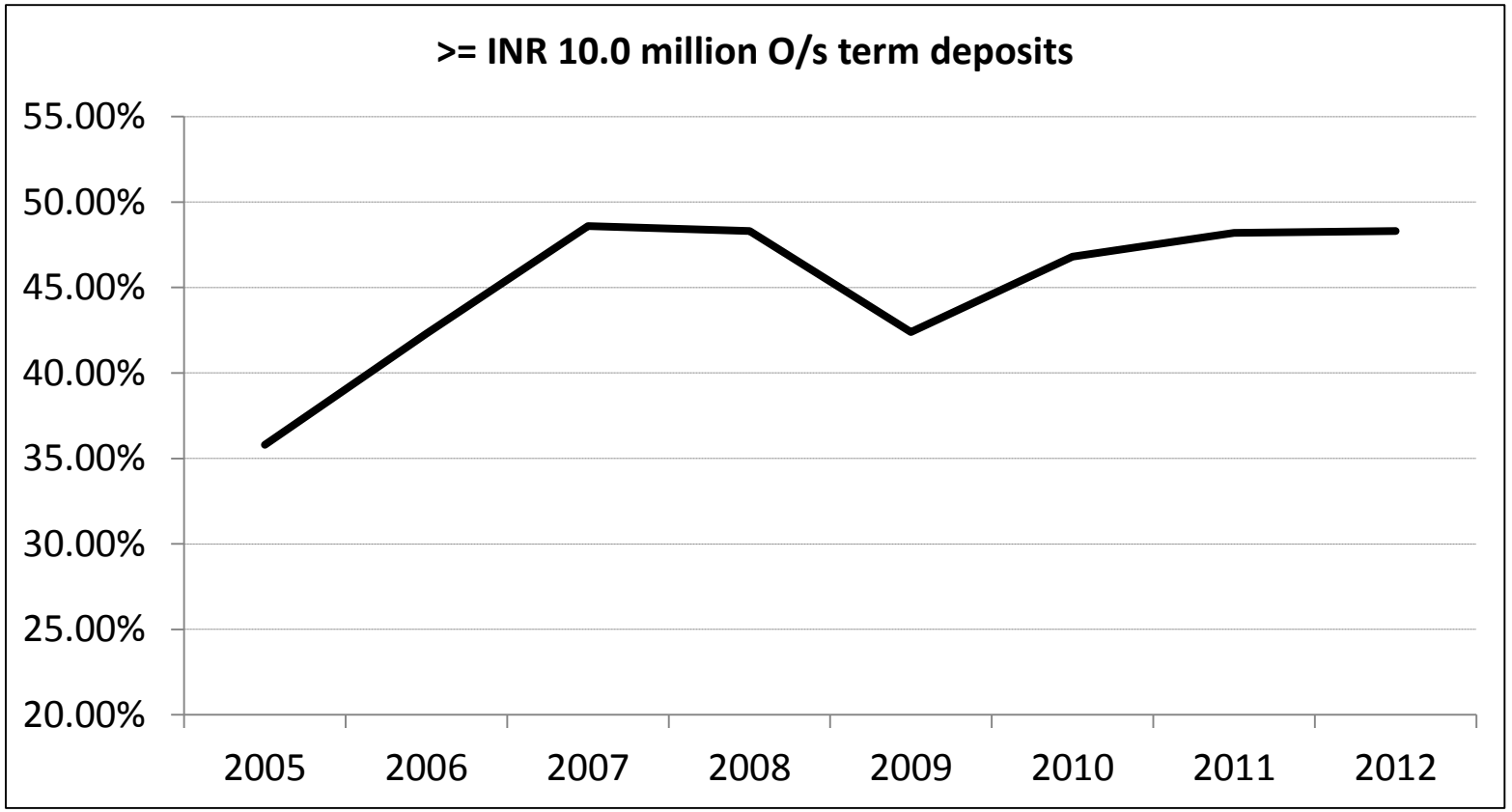
Thank you

Share of term deposits from individuals



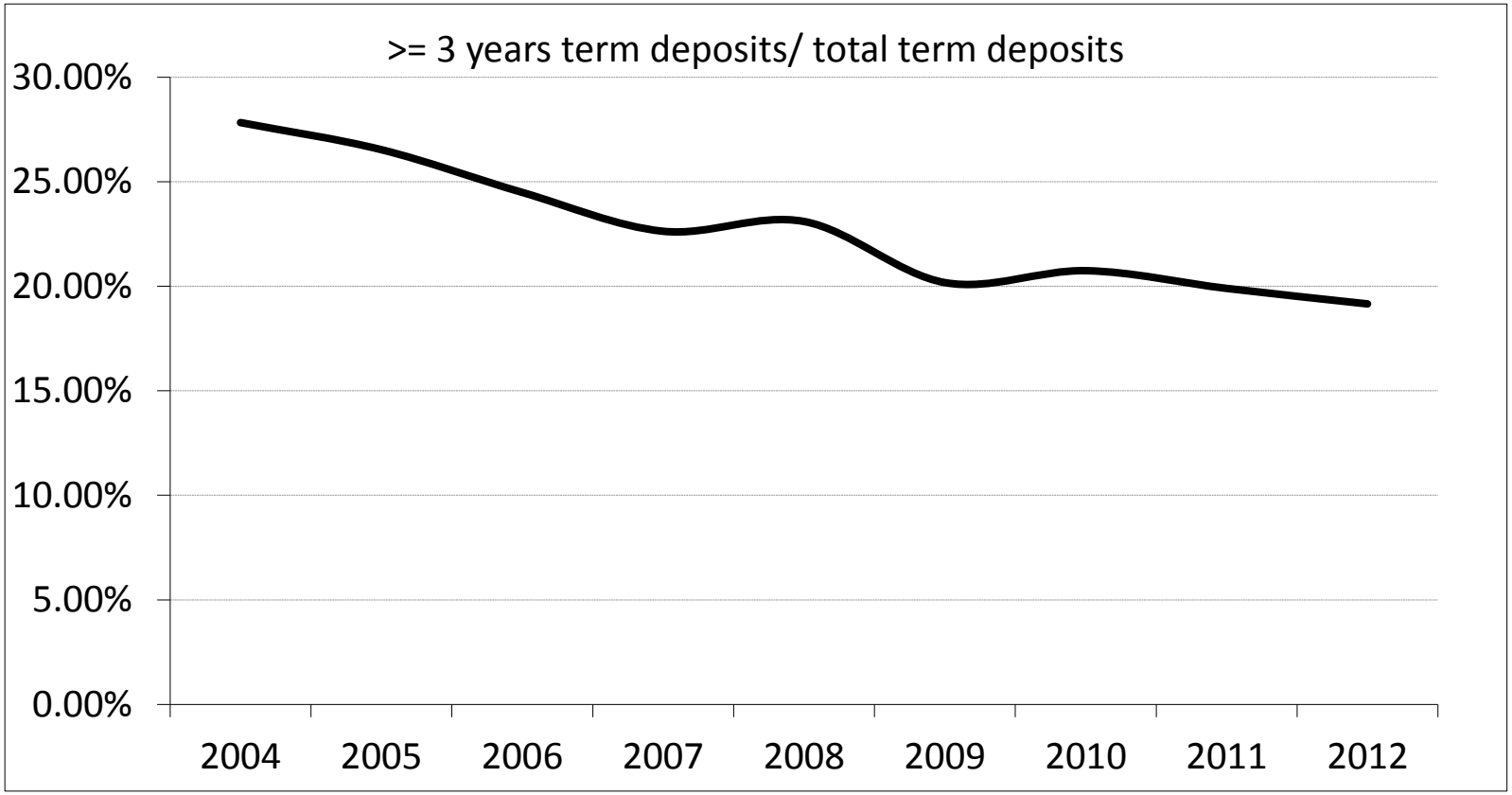
Source: RBI, Basic Statistical Returns of SCB's in India

>= ₹ 10.0 million term deposits



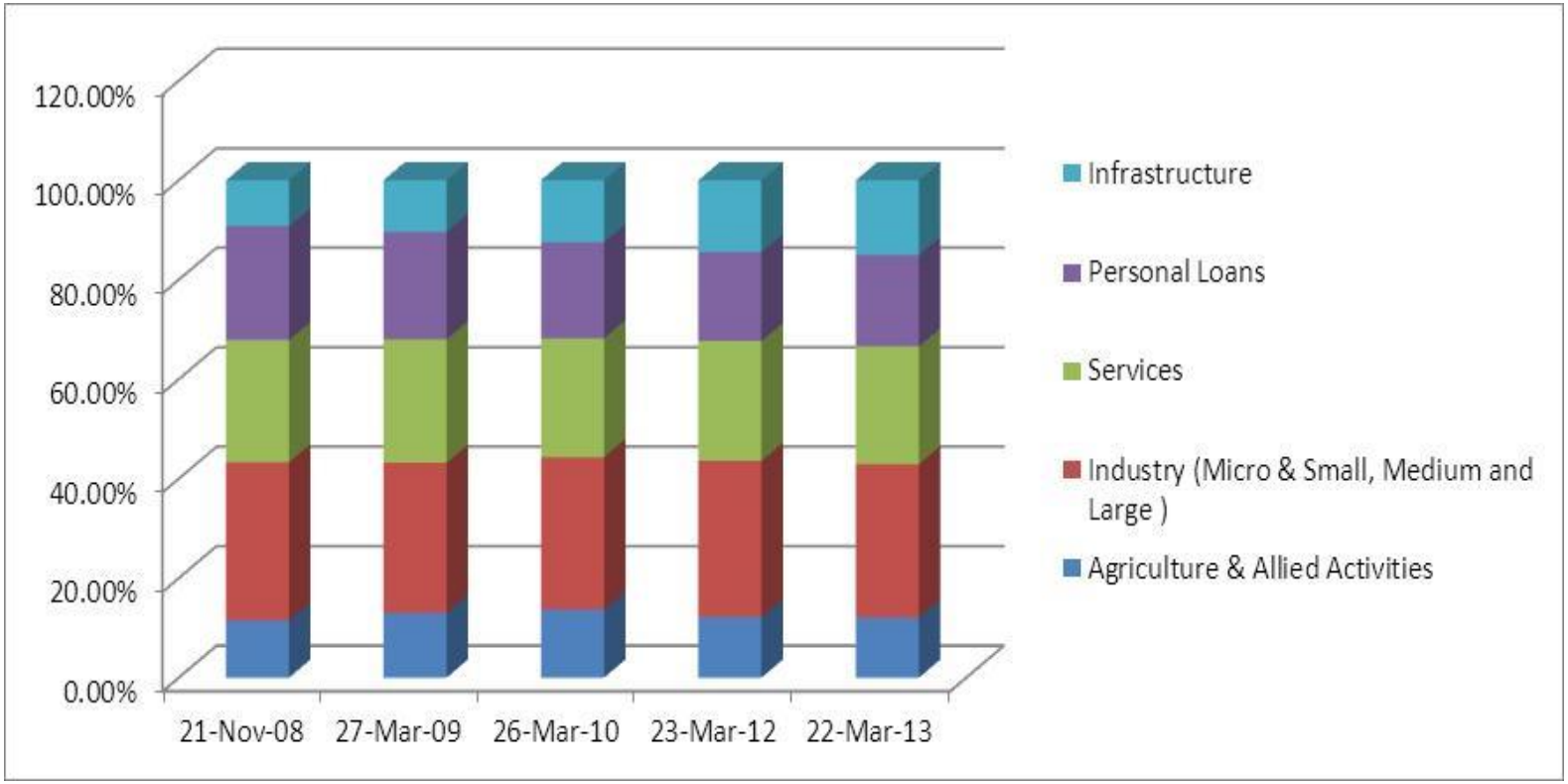
Source: RBI, Basic Statistical Returns of SCB's in India

>= 3 year term deposits



Source: RBI, Basic Statistical Returns of SCB's in India

Increasing share of infra/medium/large industries



Source: RBI, Basic Statistical Returns of SCB's in India

Average cost – illustration

Liabilities	INR cr	Average cost %	Assets	INR cr	Yield %	Profit
CA	100	0.00%	Asset 1			
TD	100	10.00%	Asset 2			
Total	200	5.00%	Total	200	7.00%	4.00

Average cost – illustration

Liabilities	INR cr	Average cost %	Assets	INR cr	Yield %	Profit
CA	100	0.00%	Asset 1			
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Total	200	5.00%	Total	200	7.00%	4.00

Marginal profitability

Liabilities	INR cr	Average cost %	Assets	INR cr	Yield %	Profit
CA	100	0.00%	Asset 1	100	7.00%	7.00
TD	100	10.00%	Asset 2	100	7.00%	(-) 3.00
Total	200	5.00%	Total	200	7.00%	4.00

Average cost – illustration

Asset	Tenure	Rating	Yield
Asset 1	1 year	AAA	7.00%
Asset 2	5 years	AAA	7.25%
Asset 3	10 years	AAA	8.00%

Which incremental asset should be created ?

Average cost at 5.00%

Average cost – illustration

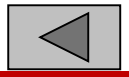
Period	O/s amount	Average cost %	Incremental asset yield %	Average asset yield %	Profit
Year 1	100	5.00%	7.00%	7.00%	2.00
Year 2	200	6.00%	7.50%	7.25%	2.50
Year 3	300	7.00%	8.00%	7.50%	1.50

Average cost – illustration

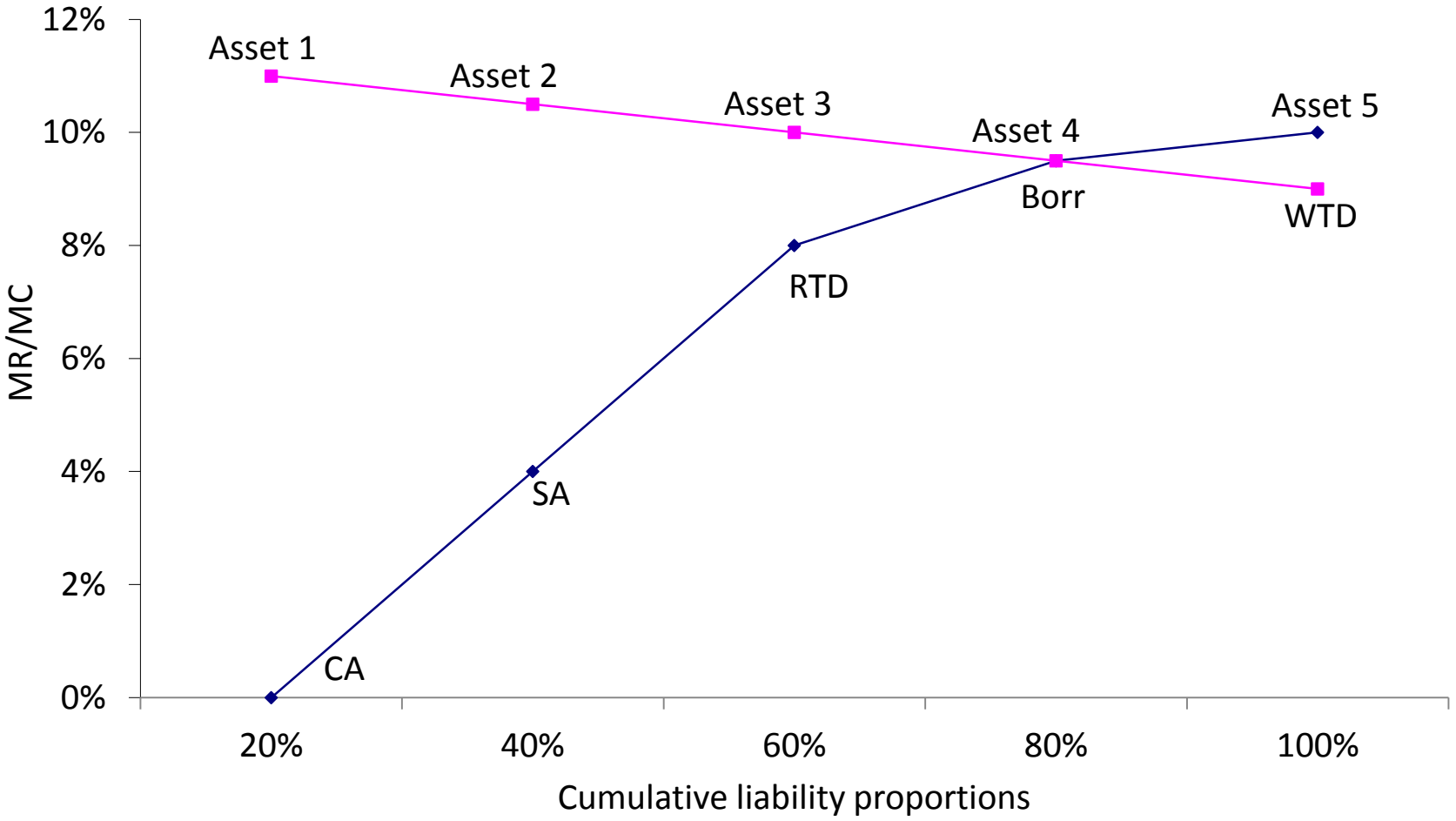
Period	O/s amount	Average cost %	Incremental asset yield %	Average asset yield %	Profit
Year 1	100	5.00%	7.00%	7.00%	2.00
Year 2	200	6.00%	7.50%	7.25%	2.50
Year 3	300	7.00%	8.00%	7.50%	1.50

Marginal profitability

Period	O/s amount	Incremental amount	Incremental cost %	Incremental asset yield %	Incremental profit
Year 1	100	100	5.00%	7.00%	2.00
Year 2	200	100	7.00%	7.50%	0.50
Year 3	300	100	9.00%	8.00%	(-1.00)



Marginal cost



Sources of liquidity risk

- Long term loans requiring multiple rollovers of liabilities
- Volatile nature of demand deposits/working capital facilities
- Volatility due to
  - Undrawn committed facilities
  - Devolvement of LC/BG
  - Margin calls on derivatives
- Stress/contingency scenarios