Fund transfer pricing
Roadmap to managing pricing and profitability for NBFCs
Economic growth and expansion are impacted by availability and access to capital. With a large proportion of domestic savings invested in bank deposits and with credit off-take from banks being limited by risk considerations, the role of non-banking finance companies (NBFCs) has become systemically important to support economic growth.

As credit off-take increases, NBFCs are increasingly faced with the same challenges that plague capital market participants — under-developed corporate bond markets, limited direct access to domestic savings and a limited choice of instruments to manage interest rate risk. While the impact of these factors can lead to a rapid shrinkage of net interest margins, overemphasis on these factors when taking pricing decisions can make lending products uncompetitive. In addition, when these factors are not managed appropriately, it can potentially impact either business viability or business sustainability. Therefore, it is important for NBFCs to strike the right balance between profitability and risk considerations.

Walking the tightrope between profitability and risk considerations requires an NBFC to incorporate a robust fund transfer pricing (FTP) mechanism. In order for a successful FTP system to be implemented for a NBFC, the following aspects need to be adequately addressed:

* Profitability management: Centralized control over net interest margins and managing the cost of funds are critical to maintain a stable net interest income (NII)
* Liquidity management: Raising and deploying funds by multiple business units invariably leads to mismatches. The ability to pool funds across business units and fund short-term liquidity mismatches at an optimal cost is imperative.
* Balance sheet management: NBFCs have traditionally borrowed short to lend long. While this strategy provides an arbitrage between near- and long-term interest rates, an inherent assumption of interest rate stability can adversely affect the overall health of an NBFC’s balance sheet. Managing interest rate risk, structural mismatches and redeploying capital based on risk-weighted performance measures can affect an NBFC’s long-term business sustainability.
* Product pricing: FTP will not be complete unless the cost of liquidity, cost of managing risk and profitability considerations are built into the FTP mechanism. Pricing considerations also need to be factored in to market-based pricing benchmarks.

Ernst & Young has compiled this brief overview to help NBFCs understand the importance of a FTP mechanism and its role in achieving the above mentioned objectives. We sincerely hope that you find the document helpful. In case you need further information and insights, please feel free to contact us.

Muzammil Patel
Financial Services Risk Management
Advisory Group
Ernst & Young Pvt. Ltd.
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Abbreviations

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<th>Description</th>
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<tr>
<td>ALM</td>
<td>Asset liability management</td>
</tr>
<tr>
<td>FTP</td>
<td>Fund transfer pricing</td>
</tr>
<tr>
<td>NIM</td>
<td>Net interest margin</td>
</tr>
<tr>
<td>NII</td>
<td>Net interest income</td>
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</table>
Overview of fund transfer pricing methods
Introducing a robust FTP mechanism should enable seamless product pricing and profitability management, while addressing the impact of liquidity and interest rate risk on an NBFC’s balance sheet.
Maturity level 1: cost of funds method

Pricing of funds to business units is computed as the weighted average cost of funds raised.

**How it works**

- Targets are set for business units primarily related to their cost of funds.
  - System support required to determine the weighted average cost of funds.

- Weighted average cost of funds is assessed on a monthly basis.
  - Monitoring framework to continuously evaluate cost of funds and set base rates for business units.

- Base rate for lending is set for all business units.

- Individual business policies drive spreads over the base rate on the basis of risk and market conditions.
  - Robust pricing policies at a business unit level to address risk-return.
  - Profitability monitoring framework at a business unit level.

- Profitability is assessed vis-à-vis the base rate at a lag of one month.
Maturity level 2: net funding method

Business units raise and deploy funds and approach the central treasury only for surplus/deficit funds. The central treasury charges business units a flat rate for surplus/deficit funds.

How it works

- Business units are organized on the basis of geography/other parameters
- Business units mobilize deposits and lend money, determining risk spreads individually
- Surplus from a business unit is transferred to the central treasury at a flat rate based on the prevailing money market rate
- Treasury deploys surplus funds to deficit business units and money market instruments
- Organization-level deficits are funded through money market instruments

- The parameters defining business units need to be water-tight
- Robust systems to assess surplus/deficit on a continuous basis
- Internal and external market information systems to facilitate treasury decision making
- Robust policies to manage maturity mismatches when funding assets
Maturity level 3: pooled funding method

Business units are separated based on whether they raise or deploy funds. Different FTP rates are used for borrowing and lending funds, thereby incentivizing them based on risk-return parameters.

**How it works**

1. **Segregation of business units based on assets and liabilities**
   - Business units are defined based on whether they raise funds or deploy funds

2. **Funds are raised by business units managing liabilities and are transfer priced to the central treasury based on pre-defined parameters**

3. **Central treasury sets transfer pricing rate based on market benchmarks and cost of funds**
   - Market-based transfer pricing mechanism is required at a treasury level
   - Robust systems for continuous pricing based on market benchmarks and assessing actual performance vis-à-vis market performance

4. **Business units managing assets deploy funds based on the cost determined by the central treasury plus spread**
   - Robust pricing policies at a business unit level to address risk-return
   - Profitability monitoring framework at multiple levels

5. **Profitability is assessed at three levels:**
   - Business units raising liabilities vis-à-vis market cost of funds
   - Treasury spreads between borrowing and lending rate
   - Business units deploying assets vis-à-vis treasury transfer pricing rate

Profitability is assessed at three levels:

- Business units raising liabilities vis-à-vis market cost of funds
- Treasury spreads between borrowing and lending rate
- Business units deploying assets vis-à-vis treasury transfer pricing rate
Maturity level 4: matched maturity method

Funds are priced to business units based on maturity considering market rates. Prevailing bid-ask rates for maturities are used to determine the pricing curve.

How it works

- Each balance sheet item, except equity, is linked to a market-based pricing benchmark
- Defining optimal transfer pricing curves is critical. Pricing adjustment for cost of equity and reserve funds is also critical
- Pricing curves based on differential maturity and risk profile are assigned to each item to facilitate continuous re-pricing
- Liability raising units are expected to raise funds at or below market rates. Asset deploying units are expected to deploy at or above market rates
- Spread earned over and above market rates is clearly attributable to either credit risk, interest rate risk or negotiation capability
- Profitability is assessed vis-à-vis market benchmarks for both assets and liabilities
- Continuous relation should be established between profitability and risk factors
- Re-allocation of capital based on risk-return parameters
- Need for robust systems to continuously determine market-based pricing for assets and liabilities based on defined market curves
- Need for robust policies, computation mechanism and system for re-allocating capital and modifying balance sheet structure based on risk-return parameters
Alternative methods and addressing fund transfer pricing objectives
<table>
<thead>
<tr>
<th>S. no.</th>
<th>Method</th>
<th>Profitability management</th>
<th>Liquidity management</th>
<th>Balance sheet management</th>
<th>Product pricing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cost of funds method</td>
<td>Addressed in a simplistic manner</td>
<td>Pre-supposes continuous availability of funding sources and similar rates</td>
<td>Does not address structural mismatches</td>
<td>• Over-simplified product pricing mechanism, which may not always reflect market rates</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• May not be in line with market benchmarks</td>
<td>• Does not fundamentally address maturity mismatches</td>
<td>• Management of overall balance sheet risk is dependent on individual business unit policies</td>
<td>• Potential for inconsistency in the differential risk premium given to individual business unit policies</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Where the NBFC is not a market maker, it may affect its ability to do business</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Net funding method</td>
<td>Profitability management is delegated to individual business units</td>
<td>Liquidity management is delegated to business units</td>
<td>Management of overall balance sheet risk independent of individual business unit policies</td>
<td>• Business units determine individual pricing and risk-return policies</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Potential for differential pricing rate by different business units</td>
<td>• Assumption that deposit base will support liquidity mismatches</td>
<td></td>
<td>• Challenges in re-allocating limited capital between business units</td>
</tr>
<tr>
<td>3</td>
<td>Pooled funding method</td>
<td>Treasury, fund raising and asset deployment units are treated as separate profit centers</td>
<td>The liquidity management function is centralized at the treasury level</td>
<td>Credit and interest rate risk management is delegated to business units</td>
<td>• Business units are expected to appropriately price risk</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Profitability is managed against market benchmarks</td>
<td>• The tendency to borrow short and lend long is not always addressed</td>
<td>• Overall balance sheet health is monitored by an ALM/balance sheet management team. Remedial measures, if any are generally reactive</td>
<td>• Product pricing has to be aligned with market benchmarks</td>
</tr>
<tr>
<td>4</td>
<td>Matched maturity method</td>
<td>Profitability has to be managed against market benchmarks for both assets and liabilities</td>
<td>Liquidity and interest rate risk are addressed centrally by a balance sheet management team</td>
<td>Focus on eliminating balance sheet mismatches (liquidity and interest rate) through a structured hedging program</td>
<td>• Risk-return-based pricing is centrally controlled and monitored</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Treasury plays the role of facilitator for market information disbursement</td>
<td>• ALM policies are integrated with FTP policies</td>
<td>• Transparent basis for re-allocating capital</td>
<td></td>
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## Imperatives under alternatives methods

<table>
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<tr>
<th>Imperatives</th>
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<th>Net funding method</th>
<th>Pooled funding method</th>
<th>Matched maturity method</th>
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<td>Systems to collate asset-liability data</td>
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<td>Market information systems for treasury instruments</td>
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<tr>
<td>Market information systems for benchmark curves</td>
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<tr>
<td>Business unit-wise risk-return policies</td>
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<tr>
<td>Centralized risk-return and profitability management policies</td>
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<td>Reporting framework for profitability computation</td>
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<tr>
<td>Market-based pricing mechanism and profitability framework</td>
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<td></td>
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<tr>
<td>Risk-return-based capital allocation framework</td>
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## Linkages of fund transfer pricing function with other functions

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<th>Matched maturity method</th>
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<td></td>
<td>Asset liability management function</td>
<td>Balance sheet management function</td>
<td>Treasury function</td>
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<tr>
<td></td>
<td>Credit risk function</td>
<td>Market risk function</td>
<td>Economic capital allocation</td>
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<tr>
<td></td>
<td>Planning, product pricing and profitability management</td>
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### Cost of funds method
- Asset liability management function
- Balance sheet management function
- Treasury function
- Credit risk function
- Market risk function
- Economic capital allocation
- Planning, product pricing and profitability management
Approach for implementation of fund transfer pricing mechanism
Key factors to consider

- Illiquid markets may make it difficult to determine transfer pricing curves
- Heavy dependence on deposit accounts for funding may skew mismatch profile and affect pricing
- Logical segregation of business units, products and balance sheet items is critical to optimize the FTP mechanism
- The final mechanism designed to be consistent with expected system capabilities

High-level approach

**Phase I**
Study of existing and anticipated asset-liability profile to determine the appropriate method or mix of methods

**Phase II**
Design transfer pricing mechanism, including processes, system expectations and market information requirements

**Phase III**
Document fund transfer pricing policies that are applicable at a centralized level and a business unit level

**Phase IV**
Define interfaces between FTP and other functions across the organization

**Phase V**
Document final system requirements based on defined policies, interfaces and processes
### Approach for implementation of fund transfer pricing mechanism

#### Phase I
**Asset-liability profile study**
- Asset-liability is a critical feature of the assessment
- Evaluate the applicability of alternative methods
- Determine the impact of the application of the FTP method on output and objectives

#### Phase II
**Transfer pricing mechanism design**
- Determine market benchmark curves
- Assign curves to assets and liabilities
- Construct synthetic curves where required

#### Phase III
**FTP policies**
- Segregate FTP objectives between business units
- Centralize treasury/balance sheet management group policies
- Determine and implement business unit level FTP policies

#### Phase IV
**Interface with other functions**
- Evaluate balance sheet management impact of FTP
- Define interface with risk functions
- Define interface with the overall planning and profitability management function

#### Phase V
**System requirement specification**
- Finalize functional requirements based on policies and processes defined
- Define interface and expectations from other systems within the organization
- Define output formats

### Summary
- Finalization of FTP method or mix of methods
- Critical assessment of each method from a practicality standpoint, considering the market structure, competition and availability of market data
- Finalization of the transfer pricing process
- Assignment of transfer pricing curves
- Design the benchmark or hypothetical curves to set internal benchmarks
- Determine/implement FTP policies at a central level
- Determine/implement FTP policies at a business unit level
- Define risk-return benchmark
- Finalization of functional interface
- Define output to be used by the economic capital allocation model to enable rational risk-return based capital allocation
- Centralize profitability management mechanism
- Determine reporting formats and/or output formats to clarify expectations from the system vendor

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**Fund transfer pricing**
Conceptual aspects to be addressed during implementation

- Treatment of non-performing assets in the overall FTP mechanism
- Cost of equity/capital and its impact on fund transfer pricing
- Impact of foreclosures of loans on the product pricing mechanism and maturity benchmark for selecting a pricing curve
- Impact of delayed payments on cash flows and resultant asset-liability profile
- Extent of application of FTP results on the economic capital allocation model
- Treatment of statutory reserves and resultant cost in the FTP mechanism
- Segregation of interest-based income and fee-based income in the FTP mechanism. Treatment of trading profits in the overall FTP mechanism
- Levels or business units at which profitability is required to be measured
- Treatment of hedge fluctuation reserve or other non-distributable reserves when computing FTP
- Treatment of non-performing assets in the overall FTP mechanism
- Impact of delayed payments on cash flows and resultant asset-liability profile
- Extent of application of FTP results on the economic capital allocation model
- Treatment of statutory reserves and resultant cost in the FTP mechanism
- Segregation of interest-based income and fee-based income in the FTP mechanism. Treatment of trading profits in the overall FTP mechanism
- Levels or business units at which profitability is required to be measured
- Treatment of hedge fluctuation reserve or other non-distributable reserves when computing FTP
Overview of end-state of fund transfer pricing mechanism

Input systems

- Asset-liability management system
- Market information systems
- Treasury system or market risk system
- Economic capital allocation model

Processing of information

- FTP system with defined mechanism for FTP computation
  - Profiling of assets and liabilities and assigning of pricing curves or benchmarks based on defined parameters
  - Pricing of individual assets and liabilities based on pre-defined risk spreads, market benchmarks and pricing policies
  - Actual data on cash flows from asset and liabilities to determine actual profitability vis-à-vis benchmarks
  - Risk-return assessment vis-à-vis benchmarks
  - Re-allocating economic capital based on risk-return benchmarks

Output expected

- FTP system output
  - Pricing mechanism for individual assets and liabilities
  - Benchmark pricing for asset-liability classes and business units
  - Profitability analysis vis-à-vis market and internal benchmarks
  - Risk-weighted performance measurement
  - Re-allocation of economic capital between business units

Expectation from the FTP system
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Contact us

Muzammil Patel
6th Floor Express Towers
Nariman Point
Mumbai: 400002
Tel: +91 22 4035 6446
Tel: +91 9920028365

Dipesh Joshi
6th Floor Express Towers
Nariman Point
Mumbai: 4000021
Tel: +91 22 4035 6345
Tel: +91 9821261799
Our offices

Ahmedabad
2nd floor, Shivalik Ishaan
Near CN Vidhyalaya
Ambawadi
Ahmedabad - 380 015
Tel:  + 91 79 6608 3800
Fax:  + 91 79 6608 3900

Bengaluru
“UB City”, Canberra Block
12th & 13th floor
No.24 Vittal Mallya Road
Bengaluru - 560 001
Tel:  + 91 80 4027 5000
+ 91 80 6727 5000
Fax:  + 91 80 2210 6000 (12th floor)
Fax:  + 91 80 2224 0695 (13th floor)

Chennai
TPL House, 2nd floor
No. 3 Cenotaph Road
Teynampet
Chennai - 600 018
Tel:  + 91 44 6632 8400
Fax:  + 91 44 2431 1450

Gurgaon
Golf View Corporate Tower B
Near DLF Golf Course
Sector 42
Gurgaon - 122002
Tel:  + 91 124 464 4000
Fax:  + 91 124 464 4050

Hyderabad
205, 2nd floor
Ashoka Bhoopal Chambers
Sardar Patel Road
Secunderabad - 500 003
Tel:  + 91 40 6627 4000
Fax:  + 91 40 2789 8851

Oval Office, 18, iLabs Centre
Hitech City, Madhapur
Hyderabad - 500081
Tel:  + 91 40 6736 2000
Fax:  + 91 40 6736 2200

Kolkata
22 Camac Street
Block ‘C’, 3rd floor
Kolkata - 700 016
Tel:  + 91 33 6615 3400
Fax:  + 91 33 2281 7750

Mumbai
6th floor & 18th floor, Express Towers
Nariman Point
Mumbai - 400 021
Tel:  + 91 22 6657 9200 (6th floor)
Fax:  + 91 22 2287 6401
Tel:  + 91 22 6665 5000 (18th floor)
Fax:  + 91 22 2282 6000

Jalan Mill Compound
95 Ganpatrao Kadam Marg
Lower Parel
Mumbai - 400 013
Tel:  + 91 22 4035 6300
Fax:  + 91 22 4035 6400

Block B-2, 5th Floor
Nirlon Knowledge Park
Off, Western Express Highway
Goregaon (E)
Mumbai - 400 063, India
Tel:  + 91 22 6749 8000
Fax:  + 91 22 6749 8200

New Delhi
6th floor, HT House
18-20 Kasturba Gandhi Marg
New Delhi - 110 001
Tel:  + 91 11 4363 3000
Fax:  + 91 11 4363 3200

Pune
C-401, 4th floor
Panchshil Tech Park
Yerwada (Near Don Bosco School)
Pune - 411 006
Tel:  + 91 20 6603 6000
Fax:  + 91 20 6603 5900