



Funds Transfer Pricing in Banks

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In a bank, the common resource - funds or liquidity is shared by all the business units. Therefore the most important function of Funds Transfer Pricing (FTP) is to provide a basis for the exchange of funds between different business units of a bank. FTP is an internal allocation and measurement mechanism for determining the pricing of incremental loans/investments/deposits and for determining the profit contribution of various lending and borrowing units of a bank. It is critical component of the profitability measurement process, as it allocates the major component of profitability in a bank, Net Interest Margin (NIM). It's a management decision tool and is useful means to identify the areas of strength and weaknesses within the bank.

Need to have a FTP framework

1. The assets and liabilities profile of the banks is becoming more complex with differing maturities, fixed and floating rate interest and embedded options.
2. The interest rates are very volatile and changes in interest rates affect both the current earnings as also the net worth of the bank.
3. In a bank there are simultaneously thousands of suppliers of funds and equally so thousands of buyers of funds. There is no one-to-one match between the liabilities and assets of a bank.
4. Banks are exposed to several major risks in the course of their business – credit risk, interest rate risk, foreign exchange risk, liquidity risk, operations risk, etc. Net interest margin $(\text{Interest income} - \text{interest expense}) / (\text{Earning assets})$ of a bank is a function of the interest rate sensitivity, volume and mix of its earning assets and liabilities. The inherent interest rate risk and liquidity risk being assumed by the bank need to be taken into account when evaluating the performance and profitability of a bank.
5. The phased deregulation of interest rates and the operational flexibility given to banks in pricing most of the assets and liabilities requires every bank to have a basis to arrive at risk based pricing for its products. It's also important for the banks to be able to price their products in a dynamic environment of changing interest rates and liquidity situation.

6. Interest, the largest component of bank's profits, is received on loans & investments; and paid on deposits. Without FTP it would seem that all deposits generate only costs, whereas they're the source of funding necessary for giving loans. As a consequence, customers and business units that only raise deposit funds without giving loans would be deemed unprofitable. It's important for the bank to measure the contribution of every unit, product and business to facilitate future strategy and performance evaluation. FTP sets an internal price that allows estimating the cost of financing a bank and assigning it to users of funds.

Imperatives of a robust Funds Transfer Pricing policy

- The FTP methodology deployed in a bank should be consistent and transparent.
- FTP should be applied at an individual transaction level and should apply to all assets and liabilities including trading assets.
- FTP should be dynamic and available at the time of origination of the transaction, so that it is used in decision making. This requires the need to have a robust system for calculation and also dissemination across all business units. There must be a mechanism for the branches and all business units to know on a periodic basis how they are faring, on the basis of the defined FTP framework vis-à-vis the budgeted targets.
- FTP should be an integral part of the budgeting and planning exercise. It's important to ensure that the budgets and the performance evaluation are based not just on volume target but also include profit targets at an aggregate as well as at business line, product or branch level. In the absence of an integrated planning exercise, it's possible that individual units may achieve their respective volume targets, but the bank as a whole may be worse off as there was no co-ordination between desired assets and liabilities profile and their impact on risk and profits. E.g. asset group may achieve their target and do significant home loan business at fixed rate, and on the other hand the liabilities profile may continue to be predominantly short term FDs, savings and wholesale borrowings of less than six months. This would result in a significant interest rate risk

and liquidity risk for the bank, which may not be adequately priced-in in the absence of a FTP framework and integrated planning exercise.

- There must be a clear linkage between the FTP outcomes and performance evaluation of businesses.
- There must be a strong central funding unit which drives the FTP policy throughout the bank. Its role would be to keep track of the overall priorities and objectives of the bank, deriving the FTP rates curve, updating and dissemination, liquidity risk management, maintain statutory reserves, satisfactorily respond to queries from all business groups, deal with IT vendors, keep evaluating market development and review changes required and put it to ALCO. It's important to ensure that the central funding unit is staffed by appropriately trained staff to carry out the above functions efficiently. The central funding unit must be distinct from Treasury, which functions as a business unit. The central funding unit should be seen to be neutral by all business units.
- For an FTP framework to be successful, the most critical thing is to have senior management buy-in. It's like a mirror and the management can make it as honest as they want it to be, based on the commitment to look at true economics across business lines. The senior management must play the crucial role of inculcating the culture across the organization whereby FTP becomes an integral part of the decision making process.
- The sum total of the profits of all the business units and the central funding unit would be the accounting profit of the bank. There should not be unusually high profit or loss at the central funding unit. If the central funding unit is running a large deficit, then it means the profit of individual business units/verticals would be unrealistically inflated. The profit or loss of the central funding unit should only be as a result of the mis-match risk that its carrying.

Objectives of Funds Transfer Pricing

1. Aggregation of interest rate risk and liquidity risk in a central unit.

If a branch gives a fixed rate loan of 3 years and funds it with a 1 year deposit of the same amount, the profitability of the branch over the next three years would be determined not just by the credit risk assumed on the loan, but also based on the movement of the interest rates over this period. Using the matched fund transfer pricing method, the three year asset of the branch would be funded by the central funding unit by a three year notional liability and the one year deposit of the branch would be matched with a notional one year asset at the relevant transfer price for that maturity. This way the spread for the branch on its loan and its deposit would be locked-in and not get impacted by the interest rate and liquidity risk. The central funding unit would on an aggregate basis manage the entire interest rate risk and the liquidity risk and the branch would be insulated from it.

2. Drive behavior of branches/business units to meet the overall objectives of the bank

Depending upon the existing profile of the assets and liabilities of the bank and the future business strategy of the bank, the FTP should be so structured so as to align the individual goals with the organization goals. For example, if a bank asset book is pre-dominantly mortgage loans of long maturities, and now the business strategy is to enter and build a portfolio of auto loans with three years maturity. Hence, the liability structure also needs to undergo a change and the FTP should reflect the maturity preference of the bank so that there is sufficient incentive for the branches to raise liabilities of the desired maturity. A skillfully designed transfer pricing method will allow each entity/segment to focus on goals assigned by the top management

3. Highlight peculiar aspects of certain assets and liabilities and align the incentives of the business units to them

A bank has an obligation to lend a certain percentage of its assets to priority sectors and there is a cost to be borne by the bank if it fails to do so. This additional cost may be reflected in the

FTP by either offering a lower rate for priority assets or offering a higher rate for non-priority assets. This would then correctly align the goals of each unit with the overall goals of the bank. Similarly, current accounts have no interest cost but have a significantly high transaction cost. Bulk deposits on the other hand have high interest cost but low transaction cost. In order to ensure that the liability cost are comparable, transaction cost component may also be factored in while arriving at the FTP for current and savings account.

4. Provide guidance for risk based pricing of products at a transaction level

The pricing of the product should reflect the cost of funding (in case of assets), the operations cost, cost of credit risk (in case of assets), cost of embedded options (e.g. prepayment option), cost of managing liquidity, cost of maintaining statutory reserves and interest rate risk. A robust transfer pricing framework provides a consistent basis to arrive at this price at a transaction level. The price so arrived at serves as guidance to the business units, which they may suitably and consciously modify, if required, to take care of competition and customer relationship. In the absence of a well-implemented FTP policy, product pricing may be devoid of the true cost to the bank and would solely get determined by external factors and hurt the bank in the long run. While competitive factors are indeed very important and the bank may not always be able to set the price for the customer, the FTP methodology would at least highlight which products make more money for the bank and which make less money for the bank, so that it may decide where the volume focus should be.

5. Provide objective criteria for business unit/product performance evaluation

Volume based evaluation of business performance is faulty simply because there is no direct correlation between volume of business done and profit earned. It is possible for a bank to increase its net profits even while there is shrinkage of its balance sheet size. If the balance sheet of the bank has increased but the profit has not, it could be because of multiple factors such as that incremental business was being done at a negative margin or there may be higher than expected credit losses from existing assets or operational costs may have increased. There are multiple drivers of the bank's profitability and the extent of risk assumed by a bank impacts

the current and future profits of a bank. FTP framework provides a basis for risk attribution and return evaluation. FTP can be used as an effective tool to focus the businesses on organization goals of consistent growth of profits.

Methodology for Funds Transfer Pricing

There are different approaches for FTP which is prevalent like:

- Pooled/average cost method – Based on average cost of all outstanding liabilities a single transfer price rate is arrived at and used for all assets and liabilities.
- Net transfer of funds method – Based on net transfer of funds (difference between assets and liabilities) between business units and funding unit.
- Market benchmark linked method – Based on prevailing market benchmark rates for different maturities such as MIBOR, T-bill rate, G-sec rate, transfer pricing curve is determined.
- Matched Maturity Marginal method – Based on incremental cost of raising funds for different maturities. Under this approach rates charged for the use of funds and rates credited for providing funds are based on matching the maturity of the asset and liability instruments to the FTP rate that corresponds to that maturity and thus there is segregation of the interest rate risk and liquidity risk from the business unit profitability.

The average cost method is easy to implement but does not take into account the current costs and the term structure of interest rates. The net transfer of funds method (Amount of total assets and liabilities are netted out, without considering the respective maturities) minimizes the complexity in the use of transfer pricing, but under this the cost of interest rate and liquidity risk would continue to impact the profits of the branch. Another reason why using the net transfer of funds method is not appropriate is that the potential for assets and liabilities may not be uniform for all business units and therefore the practice to net off would not be fair and consistent for all the business units/branches. The market benchmark linked method provides an objective basis to set the rates but would work if the markets are liquid and

competitive. In the absence of borrowings of banks being linked to the same benchmarks, the movement in the market rates and cost of borrowings of the bank may not be synchronized.

Though each of the methods has their own advantages and disadvantages, matched maturity marginal method has some distinct advantages over other methods. First, it recognises that the costs and inherent liquidity risks are related to the maturities of assets and liabilities, and therefore allows different rates to be assigned to products with different maturities. Second, it recognizes the importance of having changes in market conditions quickly and efficiently incorporated into the rate used to charge and credit users and providers of funds, and therefore relies on the marginal cost of funds. Third, it incentivizes the bank to eliminate costliest marginal funds so that threshold for lending rate reduces. Fourth, it establishes threshold for each decision to be profitable on an incremental basis.

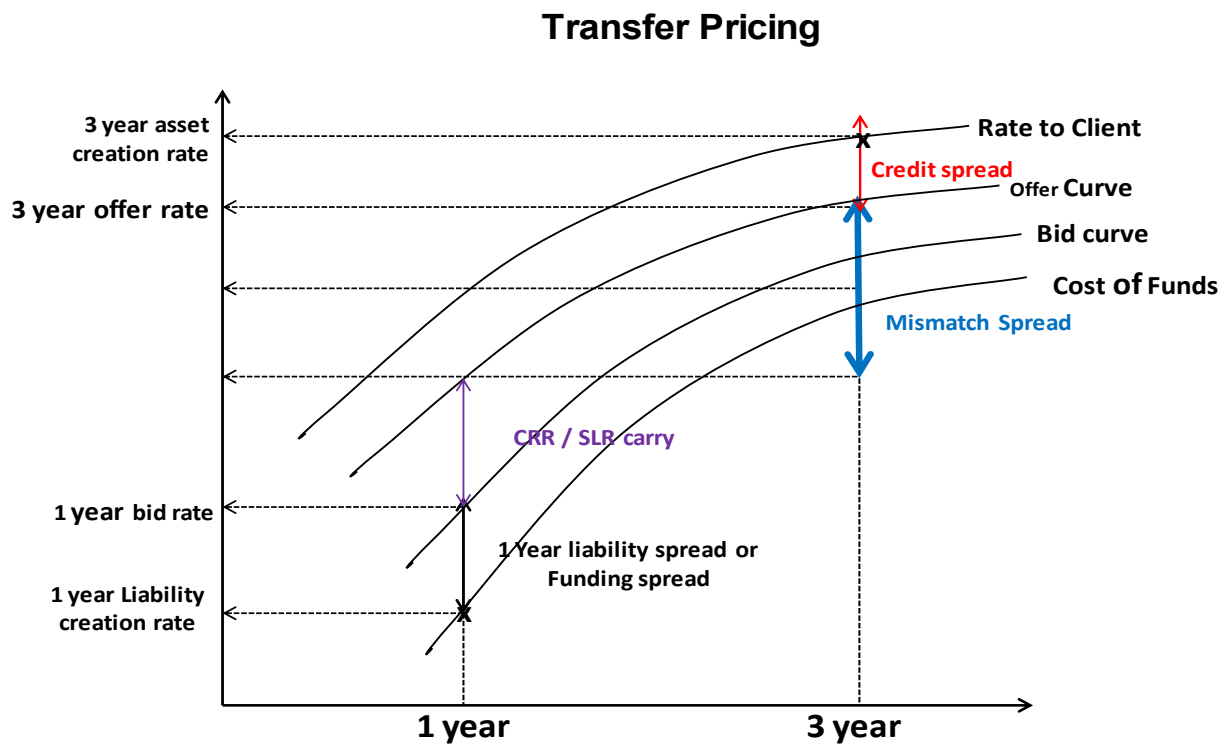
The central funding unit would determine the transfer price curve for various maturities from time to time based on the policy approved by the ALCO. The bid curve (i.e. the transfer pricing curve used for liabilities of the bank) would be based on the marginal cost of borrowing and servicing cost for different maturities. While arriving at this, liabilities such as current account/savings account with non-determinate maturity may be categorized based on statistical behaviour model. Offer curve (i.e. the transfer pricing curve used for assets of the bank) is calculated as bid rate adjusted for the following:

- CRR and SLR negative carry – Benefit of CRR may be given for inter-bank liabilities.
- Liquidity charge for maintenance of liquid assets - The extent of liquidity cushion to be maintained by the bank may be determined through the use of statistical behavioural model, stress-testing and scenario analyses. The cost of maintaining such liquidity buffer would be added to arrive at the offer rate. Also, business activities creating the need for the bank to carry additional liquidity such as undrawn facility may be charged based on their expected usage of contingent liquidity.

- Term premia depending upon slope of deposit rate curve and other market rates.

Every liability raised by the business unit would be “transfer priced” using the prevailing bid rate for the matching maturity. Similarly, every asset at the time of origination would be “transfer priced” using the prevailing offer rate for the relevant maturity. For amortising assets, each cashflow may be treated as an individual bullet loan for that maturity and priced accordingly to arrive at a composite rate for that asset. The difference between the rate charged to the customer and the transfer price on that asset would be the net interest margin on that transaction attributable to the business unit.

The final rate to the customer may thus be broken down into its various components under the FTP framework as follows:



Systems support for implementing FTP framework

The FTP system should be robust and parameterized so that based on the specific inputs provided by the bank of its FTP policy, it should be able to compute the transfer pricing curves in a seamless and dynamic manner.

There must be an online pricing calculator available to all the business units to ex-ante estimate the contribution of that product based on the prevailing transfer price, so that it would provide them guidance on pricing.

There must be periodic dissemination of MIS to business units of the contribution of the business generated by them based on the FTP policy.

Conclusion

It's important for every bank to have a robust and well laid out Funds Transfer Pricing framework which is conducive to the complexity and the nature of business of that bank.

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