Do Funds Transfer Pricing methodologies still work with excess deposits?

Summary

» Funds Transfer Pricing (FTP) methodologies are based on the recognition that both lending and deposit activities should be economically viable for banks.

» New challenges have arisen recently on the liability side, which have resulted in a glut of deposits on bank balance sheets.

» Example: the UK household savings ratio increased from 9.6% in Q1 2020 to 29.1% in Q2 2020; a record high since the series began in 1987. This same movement is observed across all European Union and other developed economies.

» All of this has had an impact on fund transfer pricing (FTP) methodologies. How should the Treasury function in banks respond?

Chart 1: Household savings ratio
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Introduction

Funds Transfer Pricing (FTP) methodologies are based on the recognition that both lending and deposit activities should be economically viable for banks. The FTP objective is to calculate a single, or multiple rates, that charges users of liquidity (asset business units) and credits the liquidity providers (liability business units).

Historically, liquidity was seen as a “scarce commodity.” In the 2008 global financial crisis, liquidity was a constraint and rapid spikes in funding costs impacted the whole banking industry. However, since the beginning of the COVID-19 pandemic, this situation has changed. Banks are facing a scenario with reduced consumption aligned with quantitative easing measures by governments that has driven deposit balances in banks to an historical high.

This raises an interesting question regarding how the Treasury function within banks can derive a suitable rate for liquidity provider units when faced with an excess of liquidity well above the business requirements.

Correct internal pricing becomes even more important when you consider that the net interest margin of banks has been squeezed in recent years (see chart 2). This is a function of reduced inflationary pressure and economic growth causing central banks in multiple jurisdictions to reduce interest rates to zero or even move them into negative territory.

![Chart 2: Net Interest Margin](source: Barclays UK, HSBC, Standard Chartered quarterly financial reporting)

Funds Transfer Pricing basics

FTP is a mechanism that bank Treasuries use to transfer costs (liquidity, funding, operational…) to the business lines. Essentially, Treasury departments work as a bank within the bank, obtaining funding from liability business units and lending these funds to asset business units.

In a well-designed FTP system, the Treasury department will buy funds from the liability business unit and then sell those funds to the asset business unit at a rate that balances both the deposit and lending activity areas. This rate should also ensure that the bank is economically viable. In other words, business units receive a credit for raising new deposits that is higher than the rate the bank repays clients and a charge for new lending that is below the rate they charge clients.
FTP is a powerful tool that allows a bank’s management team to make informed decisions on product pricing, profitability analysis, and comparison of business lines. A robust FTP methodology should be based on a rational approach to avoid the possibility of arbitrage by business units. Governance procedures should ensure changes in the methodology are required to be documented and approved usually during asset-liability committee (ALCO) meetings. Although the basic concept of FTP is fairly simple, the implementation, interpretation, and management of the framework, especially under unusual scenarios like the current deposit glut situation, can be complex.

How an excess of deposits impact FTP

To understand how excess deposits would impact FTP, we first need to understand how FTP is usually calculated.

A robust FTP system is made up of various components and practices. So there isn’t a “one-size fits all” solution when it comes to FTP. However, for simplicity we will look at the main FTP components:

- **Market risk (basis or swap rate):** Market risk is the risk a change in market conditions will impact the profitability of the bank operation.
- **Term Liquidity Premium (TLP):** TLP is the additional spread paid by the bank to compensate for the liquidity and additional credit risk incur by committing funds for a longer term.
- **Contingent Liquidity risk (Liquidity Asset Buffer):** Liquidity risk is the risk that the bank’s depositors withdraw their money before the debtors pay back.

Using a simple example to understand the current scenario, let’s assume the below balance sheet with a 5-year loan that is financed by 5-year liabilities (mix of retail and wholesale).

### Balance Sheet Case A

<table>
<thead>
<tr>
<th>ASSET</th>
<th>VOLUME (£M)</th>
<th>RATE (%)</th>
<th>INTEREST (£M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loan</td>
<td>1,000</td>
<td>4.00%</td>
<td>40.00</td>
</tr>
<tr>
<td>Liquidity Asset Buffer (LAB)</td>
<td>100</td>
<td>0.02%</td>
<td>0.02</td>
</tr>
<tr>
<td>Cash</td>
<td>100</td>
<td>0.00%</td>
<td>0.00</td>
</tr>
<tr>
<td>Net interest</td>
<td></td>
<td></td>
<td>40.02</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LIABILITIES</th>
<th>VOLUME (£M)</th>
<th>RATE (%)</th>
<th>INTEREST (£M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retail Deposits</td>
<td>-1,000</td>
<td>1.00%</td>
<td>-10.00</td>
</tr>
<tr>
<td>Wholesale Deposits</td>
<td>-200</td>
<td>3.00%</td>
<td>-6.00</td>
</tr>
<tr>
<td>Net interest</td>
<td></td>
<td></td>
<td>-16.00</td>
</tr>
<tr>
<td>Nil</td>
<td></td>
<td></td>
<td>24.02</td>
</tr>
</tbody>
</table>

In the above example, if we assume an FTP rate of 1.8%, it’s easy to see that lending business units would borrow funds at the FTP rate to lend at 4% and the retail deposits team would receive 1.8% from Treasury and repay 1% to customers.

Both teams would be economically viable and structurally incentivized to do more business. With regular market conditions, normal deposits levels aligned with positive interest rates and a positive yield curve, Treasury would be able to rebalance any small excess of cash by investing in high-quality liquid assets (HQLAs) or reducing wholesale funding. The usual FTP methodologies would effectively work in transferring costs and risks associated with funding and liquidity and serve as a balancing factor incentivizing business lines to increase or decrease the product offer to the market.

Now let’s assume an increase of 40% in the deposits volumes:
At first glance, we can look at an excess of deposits being an alternative to replace some of the more expensive wholesale funding, reducing the TLP and consequently FTP. However, replacing all wholesale funding would be difficult due to commercial, contractual, and liquidity risk reasons.

It should be noted that even when customers are not being remunerated for their deposits, there are operational costs associated with them. In other words, there is always a marginal cost associated with deposits, even if it’s not from paying interest coupons.

Assuming the deposit increase cannot be deployed in loans, it will sit in cash reserves earning zero interest. Therefore, even if we assume the bank replaces some of the more expensive wholesale funding with cheap deposits, we can observe a reduction in the NII. This simple example shows the impact of excess deposits and how it can impact the NII1 of banks.

In more complex scenarios, there can be several other factors impacting the interest income. When it comes to excess deposits, regulatory requirements (liquidity coverage ratio (LCR) and net stable funding ratio (NSFR)) could also weigh on liquidity costs. These require longer and more stable deposits that are more expensive for banks, particularly in markets where the risk free rate zero or even negative (assuming a normal yield curve): it may be that excess deposits cannot be invested without adding more risk in the balance sheet.

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1 Net interest income corresponds to the gross interest income from assets minus gross interest expenses from liabilities
What alternatives does FTP provide?
Obviously, the solution for the problem depends on the idiosyncrasies of each bank. However, we will raise some alternatives to deal with excess deposits.

» Do nothing.
Depending on the level of deposit jump and the real impact in net interest margin, it can be argued that making changes to the FTP methodology would cause confusion around signals to the business that may outweigh any benefit.

If, for example, the bank expects the current situation to be reversed sooner rather than later and can accommodate the excess deposits – particularly in cases where operational marginal cost for deposits is small – taking a minor hit now might be a viable option.

Small shifts to balance sheet composition may alleviate this hit somewhat without changing the FTP methodology, such as replacing wholesale funding and other expensive liabilities, perhaps via buybacks. Attention should be paid to the fact that early redemptions may have a commercial impact or reputational issues with the counterparty if options such as this are considered.

» Impose FTP rate tiering for deposits.
An alternative to the above is to add a liquidity drag cost in the FTP calculation either in a curve format or simply a threshold that would represent the maximum amount above which Treasury would not remunerate deposits. This way, the business area won’t have an incentive to keep increasing deposit volumes. A deposit should be rewarded the price of the risk-adjusted funding value that it provides through FTP. However by adding this threshold, values above the limit will receive no incentive.

Obviously, if the area still raises the deposits the impact on NIM would still occur, however the Deposits business would incur the cost transparently in their own business unit. There are two possible approaches to the tiering of deposits:

Referring back to Balance Sheet Case B above:
If we assume a Transfer Pricing of 1.8%, on the £1,400m the net return to Deposits team would be:

\[(1.8\% - 1\%) \times 1,400m = 11.20m\]

Now, if FTP methodology is amended to:
Pay FTP rate up until £1,000m raised and 0% for all amounts above, we would have:

\[(1.8\% - 1\%) \times 1,000m = 8m\]
\[(0\% - 1\%) \times 400m = -4m\]
Remuneration for Deposits = 4m

It should be noted that, unless internal FTP pricing is replicated by the bank in pricing to clients, the bank’s NIM will remain unimpacted, but internal remuneration will be rebalanced shifting the cost from Treasury to the Deposits team.
2. Graduated Thresholds Approach.

Tiers of FTP can be implemented as a binary, like the one above, or in several tiers creating from FTP to zero based on threshold amounts. Using the same example as above, let’s now assume a decreasing FTP that will follow the below rule:

Treasury will pay FTP rate of 1.8% up until £800m is raised and constantly decreasing the amount for an increased deposit volume. For every new £100m, the rate will have a 0.3% cut as shown below:

<table>
<thead>
<tr>
<th>TOTAL VOLUME (M)</th>
<th>ADDITIONAL VOLUME (M)</th>
<th>FTP (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>800</td>
<td>800</td>
<td>1.80%</td>
</tr>
<tr>
<td>900</td>
<td>100</td>
<td>1.5%</td>
</tr>
<tr>
<td>1,000</td>
<td>100</td>
<td>1.2%</td>
</tr>
<tr>
<td>1,100</td>
<td>100</td>
<td>0.9%</td>
</tr>
<tr>
<td>1,200</td>
<td>100</td>
<td>0.6%</td>
</tr>
<tr>
<td>1,300</td>
<td>100</td>
<td>0.3%</td>
</tr>
<tr>
<td>1,400</td>
<td>100</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

As the Deposits team has a 1% cost for deposits, once the FTP rate is below 1% the team won’t have any incentive to raise more funds. Once the FTP reaches 0%, all cost associated with new volumes would be fully allocated to the Deposits team.

The net return (FTP - interest paid) on the Deposits team would be:

<table>
<thead>
<tr>
<th>TOTAL VOLUME (M)</th>
<th>ADDITIONAL VOLUME (M)</th>
<th>NET RETURN(%)</th>
<th>NET RETURN (£M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>800</td>
<td>800</td>
<td>0.80%</td>
<td>6.4</td>
</tr>
<tr>
<td>900</td>
<td>100</td>
<td>0.50%</td>
<td>0.5</td>
</tr>
<tr>
<td>1,000</td>
<td>100</td>
<td>0.20%</td>
<td>0.2</td>
</tr>
<tr>
<td>1,100</td>
<td>100</td>
<td>-0.10%</td>
<td>-0.1</td>
</tr>
<tr>
<td>1,200</td>
<td>100</td>
<td>-0.40%</td>
<td>-0.4</td>
</tr>
<tr>
<td>1,300</td>
<td>100</td>
<td>-0.70%</td>
<td>-0.7</td>
</tr>
<tr>
<td>1,400</td>
<td>100</td>
<td>-1.00%</td>
<td>-1.0</td>
</tr>
</tbody>
</table>

This strategy can be used to share both the profits of reaching the optimum deposit level and the loss in case the volume is above optimum giving both Treasury and Deposits teams the incentive aim for the targeted amount.

In negative rates markets, a variation to the above can be applied in which we could replicate the example, but with FTP deposit remuneration set to zero up to a certain volume and negative thereafter.

**Incentivize maturity transformation for deposits.**

If the bank believes it will be able to deploy the excess into lending in the medium term, Treasury can suggest steepening the FTP curve to create an incentive for the Deposits team similar to a premium for longer maturities. This would be particularly effective if combined with a campaign to offer better prices for fixed-term deposits for current clients. This should not be aimed at new customers because would bring new deposits adding more.

This option may seem counterintuitive, as the solution puts more pressure on NII these term deposits add more interest expense. However, creating an alternative to shift non-maturing into longer-term deposits may provide several positive impacts. These could include (1) allowing Treasury to now invest in longer-term HQLAs without maturity mismatch, (2) reducing LCR and NSFR ratios and associated costs (3) providing comfort that funding is locked in and term lending can be executed without risk of deposit levels subsiding again.

This option is more complex and will require more analysis, as it will impact the balance sheet structure and indicators, such as liquidity gaps, hedging, IRRBB, and FTP among others. But if done successfully, it could result in higher NIM for the bank.

Illustrating the situation:
Treasury would shift the FTP curve as shown below, giving the Deposit team an extra incentive for converting non-maturing deposits into 5 years + fixed.

The additional 30 bps shift in the FTP curve means that the Deposits team now can increase external pricing by around 30 bps and still receive the same incentive as before.

![FTP Curve](image)

*Source: hypothetical data for illustration purpose only*

**Chart 3: A simulation of the FTP curve shift.**

Now let’s also assume the below scenario in which the Deposit team manages to convert £300m into 5 yrs. deposit at 1.5%.

<table>
<thead>
<tr>
<th>LIABILITIES</th>
<th>VOLUME (M)</th>
<th>RATE (%)</th>
<th>INTEREST (M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Maturing Deposits (NMD)</td>
<td>1,000.00</td>
<td>1.00%</td>
<td>-10.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LIABILITIES – ADJUSTED</th>
<th>VOLUME (M)</th>
<th>RATE (%)</th>
<th>INTEREST (M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Maturing Deposits (NMD)</td>
<td>700.00</td>
<td>1.00%</td>
<td>-7.00</td>
</tr>
<tr>
<td>5yrs fixed</td>
<td>300.00</td>
<td>1.50%</td>
<td>-4.50</td>
</tr>
</tbody>
</table>

As expected, interest expense wise, the cost increased by £1.5m, but if Treasury or the lending business deploy the same £300m to invest for 5 years, as long as it creates at least an additional 0.5%, the return would be positive.
Conclusion

As with any tool that banks have in their control, FTP methodologies should not be seen as immutable. Banks need to adapt FTP for the scenarios they are facing can be used by banks excess deposits, however some adjustments be necessary to provide the right incentives for the correct teams depending on the bank’s use of FTP, its risk appetite, and policies.

For banks that simply use FTP as a tool to allocate the liquidity cost, the best solution may be not to act as long as the bank’s areas are still economically viable. Neither Treasury nor the Deposit teams will have the incentive. But if the bank keep tracking and allocating the negative impact of the excess of deposits in Treasury or in a specific cost center designated for this a change in methodology is unnecessary. Keep in mind that this will cause an increase in interest expense, and NIM reduction.

For banks that use FTP to calculate the internal funding rate and let different areas act upon it for their equilibrium, different tiers in FTP provide a great solution during period of excessive liquidity. Treasury would define the thresholds and the Deposits team would be incentivized to reach the optimum return on their PnL.

Lastly, if a bank uses FTP to subsidize a particular project, maturity transformation: introducing subsidies for products that could rebalance the current structure and either reduce hedging cost or increase the rentability of Treasury assets.

This paper offers a broad analysis. It should serve as a general guide for treasuries and management teams to consider alternatives to current scenarios and is not intended as pricing strategy.
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