



Hot Financial and Risk Management Topics

**Brief survey on
the most interesting
issues regarding
ALM, FTP and RM**

KPMG d.o.o. Beograd

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Foreword



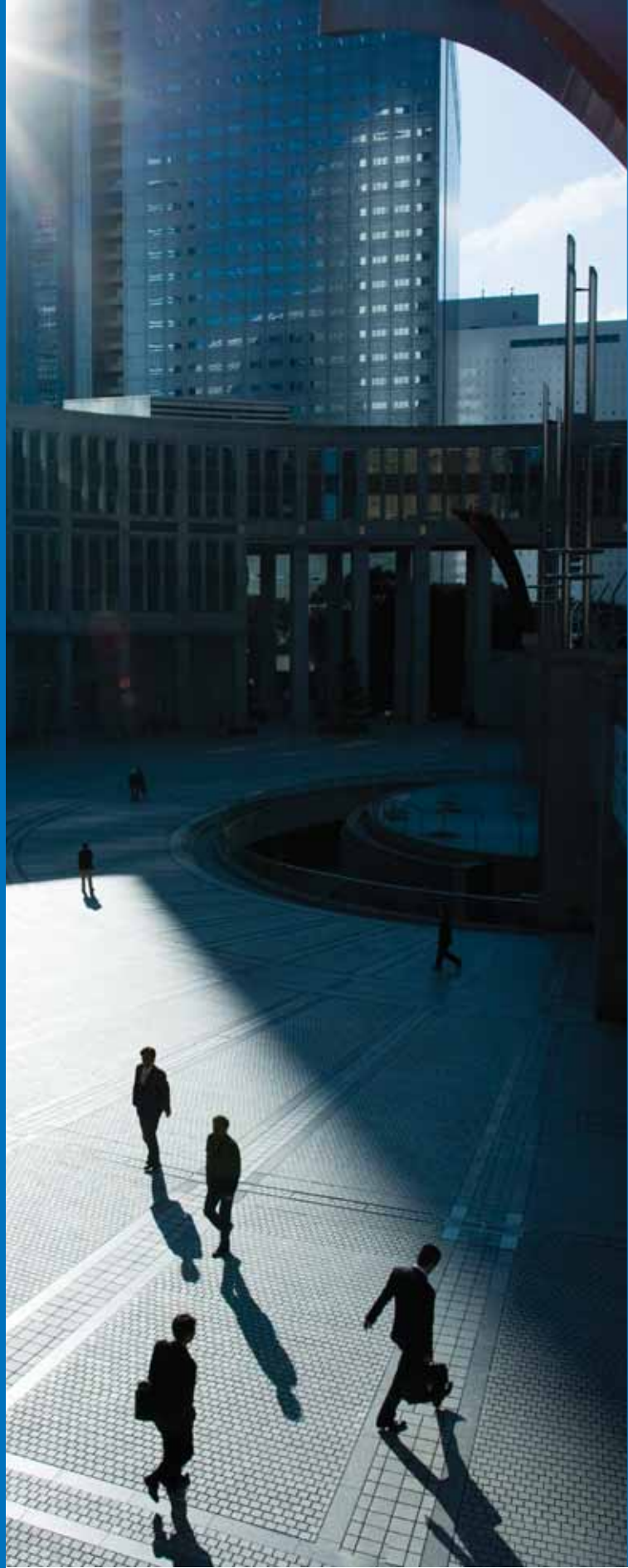
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"Shareholders of financial institutions expect more from their CFOs and CROs"

We believe that the role and importance of the CFO and CRO will increase significantly in the following years. Financial and Risk Management will need to make extra effort in the future in order to be perceived as reliable business partner to commercial business units of banks.

CFOs and CROs have to really understand challenges CEOs are faced with. At the same time, CFOs and CROs are facing "their own issues" – low interest rates environment, deterioration of operating result, volatility of risk drivers, regulatory constraints etc. They are struggling in seeking new sources of revenues, OpEx management and risk-reward decision making.

On the following pages we emphasize hot topics, which are in the limelight when it comes to FRM.



Optionality pricing in FTP

Options integrated into the contracts with customers are likely to modify the cash-flow, duration or type of rates and thus should also be taken into account in the ALM center.

However, **treatment of embedded options in FTP methodology** depends on type of options integrated. As we know, two types of embedded options are distinguished:

- *Explicit options*, such as cap, floor and collar on interest rate for loans and deposits. The main characteristic of explicit options is their automatic exercise on the basis of market conditions, i.e. independent of client's will and behaviour.
- *Implicit (behavioural)* options arising from contract clauses that give certain rights to clients regarding their receivables or obligations (e.g. possibility of loan prepayment or early withdrawal of deposit). Opposite to explicit options, implicit options are exercised by the will of the holder, i.e. not on the basis of market conditions, but client's behaviour.

In case of **explicit options**, the Bank either provides (i.e. sells) certain rights to the customer (e.g. cap on interest rate on loan, or floor on rate on deposit) or receives (i.e. buys) certain rights (e.g. floor on rate on loan, or cap on rate on deposits). Let us consider an example where the Bank granted a loan to customer having embedded floor on interest rate. On this occasion, the Business Unit possesses certain right that must be recognized and somehow rewarded by ALM via lower FTP cost of funds. Economic rationale behind a lower FTP standpoint is as follows: in order to perfectly micro-hedge such loan ALM has to obtain funding with identical floor on a rate that is to be paid by depositor as option premium. That premium shall

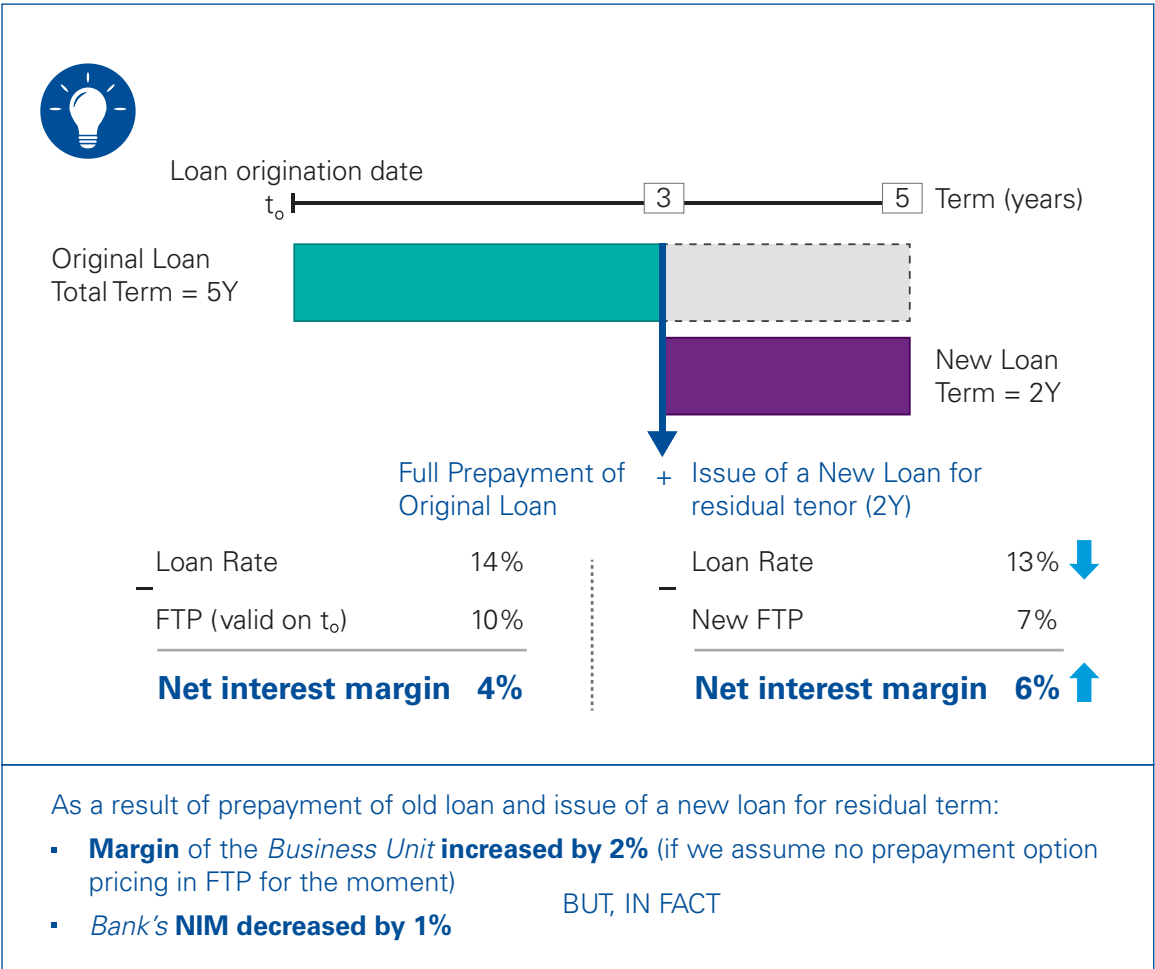
be transferred to BUs in the form of lower FTP CoF. To draw a conclusion – all products that the Bank agreed with embedded explicit options, which provide certain rights to the Bank, have to bear more favourable FTP Ec (i.e. lower FTP CoF, and higher remuneration FTP rate for deposits) in comparison to standard ones, and vice versa for products providing certain rights to customers.

On the other hand, **behavioural options** give rise to uncertainties in terms of outstanding amounts and duration of transactions. Inclusion of these options changes the cash flow profile of the transaction and must be anticipated in the economic FTP determination process. Therefore, their management involves modelling customer behaviour which may, if the bank so decides, be reflected in the economic FTP: by considering probable (modelled) repayment profiles rather than contractual profiles, a better approach to the characteristics of the transaction is obtained.

We find **prepayment option** (i.e. the right to early repay a loan) embedded into retail and corporate loans the most important and challenging issue.



Let us take a look at the **following example**:



Yet, prepayment option treatment **differs** depending whether it involves a **retail or corporate loan** – individual vs. macro-level approach.

“ **Due to their high significance and stake, OPEX should be allocated to cost objects (products) and thus managed like direct and variable costs, and not like indirect (overhead) and fixed costs** ”

If you want to read more on this topic, to discover methods and models for options integration in FTP and options value calculation please contact:
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OPEX management

According to *NBS Q3 2016 Report on Banking Sector in Serbia* **Operating Expenses (OPEX)** represent almost **40% of total costs** of Serbian banks. Taking into account such structure of overall banking expenses, OPEX management particularly **OPEX allocation** on banking products (costing) in order to capture total product cost is crucial for modern financial management. Indeed, information on **total product cost is needed for:**

- product pricing decision making;
- calculation a real profitability of products, customers, segments etc. and their contribution to ROE/RAROC of the Bank;
- making a decision on launching/cancelling some products;
- fair “performance-reward” decision making.

Having an FTP system implemented, the Bank simulates direct financial cost needed for loans production – i.e. FTP rates assigned to loan products represent direct Cost of Funds to be incurred in order to launch the loan.

However, observing just Net Interest Income (NII = client loan rate – FTP rate) when launching a new loan product or disbursing existing ones is not granular enough to reveal a real profitability of specific product/client. It is **inevitable** to drill more down, i.e. include other costs apart from “financial costs”.

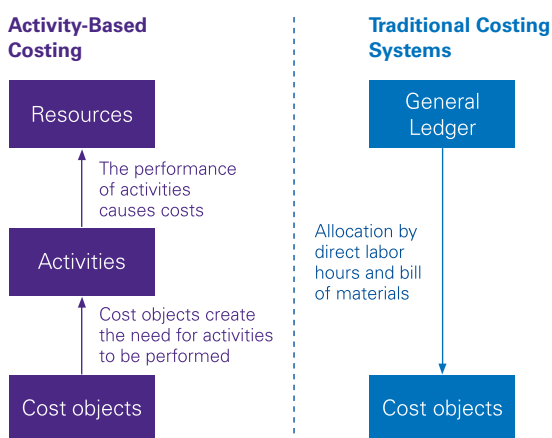
OPEX can deteriorate total profitability of the specific products/customers, moving positive NII down to negative net result. That is why tracing the OPEX is a necessity. However, most Banks manage their OPEX at the level of Cost to Income ratio (C/I) and as if they were fixed and indirect cost, so called overhead – needless to say, that is not optimal.

Banks usually rely on a **Traditional Costing System**, which means allocation of OPEX

from GL to Business Lines (e.g. branches, MID Corporate and Large Corporate) on the basis of some “keys” that may not be completely reasonable, fair and transparent.

Banks with **more developed methodologies** usually base them on one of the *following concepts*:

- Activity Based Costing (ABC approach)
- Time-driven Activity Based Costing (TDABC)
- Explicit cost dynamics (alternative to ABC models)



What is the best approach?



All approaches have their “pros&cons”, thus we cannot say that one approach is ultimately better than others. In our view it is not the question which one is best, but which is the appropriate one for the specific needs of the Bank.

If you want to read more on this topic, to discover methods and models for ABC, TDABC and OPEX allocation to cost objects, please contact:
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Interest rate risk in the banking book

Interest rate risk in the banking book (IRRBB) is believed to be increasing significantly in the Serbian banking system these days.

Most CROs and other executives in Serbian banks are convinced that *IRRBB exposures are rising*. However, it seems many of them still *turn a blind eye to this*, leaving IRRBB issues *on the back burner*. Basel III regulation has left IRRBB under Pillar II, which might mislead many CROs/CFOs that IRRBB is a inferior type of risk – but it's not!

“ **IRRBB really does matter. Banks monitor IRRBB under Pillar II within integrated risk management framework through ICAAP for assessing additional capital requirements** ”

Surprising Basel Committee proposal

A possible new capital charge for IRRBB – it would be set to challenge banks' business model with this costly proposal, which ignores the fundamental difference between banks' trading and banking books. Currently, supervisors under Pillar II may require banks to hold capital for their IRRBB. Work is now under way, and a task force on interest rate risk has been set up to examine options for a Pillar I charge.

Which IRRBB drivers in Serbia we recognize

First, basis risk. Namely, banks are usually focused on repricing risk as a major type of interest rate risk. Thus banks typically manage repricing gaps properly, having narrow repricing mismatches. Yet, banks neglect basis risk, i.e. probability of imperfect correlation in adjustment of rates earned/paid on different on and off-balance sheet items that otherwise have similar repricing/maturity characteristics. For instance, EUR-denominated floating rates loans having 6 months repricing are hedged via short-term retail deposits that mature (thus reprice) in 6 months as well. In this case the bank is protected against repricing but not basis risk. **Second, optionality risk.** Options embedded in financial instruments sold to clients can significantly modify contractual cash-flows and expose the bank to IRRBB. Recall that when interest rates fall the value of prepayment option rises (because it is, in fact, a call option).

Tools and models

In order to be able to measure, monitor and manage basis and optionality IRRBB the bank must have reliable methodologies, tools and models which enable various scenario analyses...

To read more about this subject matter, please contact Ivan: icirkovic@kpmg.com

Strategic ALM rather than Reporting ALM



ALM is a practice developed by banks to meet their financial, risk management and strategic needs. This discipline consists of analyzing the bank's balance sheet structure and risks arising from it, as well as its likely evolution over a given time horizon based on variables whose future movements can be reasonably forecasted: interest rates, liquidity and funding costs, exchange rates, and other macroeconomic indicators (variables).

What is Strategic ALM?

Strategic ALM aims to optimize the **profitability** of the bank while maintaining acceptable level of interest rate, liquidity and foreign exchange risk, i.e. in line with a bank's **risk appetite**. In other words, **ALM primary goal** is to secure and maintain the result of the bank over the long-term horizon despite adverse movements in macroeconomic risk drivers. The ALM function comprises identification, measurement, reporting, monitoring and hedging (mitigation) of risks – however, many banks are stuck with first three phases, particularly the reporting phase, having no resources for final step that is **hedging**.

Prevailing practice within Serbian banks is that ALM experts spend so much time on measuring risks, calculating various metrics, preparing complex reports and satisfying regulatory requirements, while on the other hand they miss the essence – **to seek for hedging solutions in order to optimize on and off- balance sheet structure**. All phases prior to hedging and optimization are inevitable but not a goal themselves. They have to result in a clear message for top management in order to be able to define and implement effective hedging instruments (decision making optimization).

We are witnesses that banks in Serbia rely mostly on so called natural hedging, while **usage of derivatives** is modest. We shall not examine reasons for that now, but there is obviously a lot of room for improvements.

Fair value calculation, hedge accounting and other issues linked to derivatives, especially IRS, cross-currency swaps and FX swaps are not such big constraints...

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