



Weekly Post: Core Deposit Account - Beta and Decay

Dear Clients:

It's no longer a matter of if, but when according to the pundits. As the Federal Reserve Bank is expected to raise the short term rate this year, regulators are concerned with the resulting increase in funding costs, in particular, the rising offer rate (Beta) and the withdrawal rate (Decay) of deposit accounts. While the Core Deposit Account Study provides some guidance as to what the projected offer rates would be, you will still need to determine whether your model assumptions reflect and are consistent with your offer rate strategy.

Challenge

- How to explain your offer rate strategy to ALCO and to regulators? What does it say now?
- How to simulate changes in Beta and Decay and view the impact on profitability and risk?
- How to formulate, model and adjust your offer rate strategies as competitors begin to raise their offer rates?
- What impact does a 50 basis point hike over 12 months have on your profitability and risk?

Solution:

Your Earnings-at-Risk (Excel) report provides a 24 month projection of your deposit accounts under all the regulatory interest rate shocks. To illustrate, Table1 below presents a 100 basis point shock up in interest rates for a Passbook Account of a hypothetical bank. This example assumes “flat growth” whereby any withdrawal is replenished by new accounts, and therefore the balance stays constant at \$2,989,000.

The total interest cost and the non-interest cost are \$2,000 and \$4,000 per month respectively. The non-interest cost is incorporated in the economic value of the deposit, but is not used explicitly for the income projections, avoiding double counting operating expenses.

The implied rate is defined as the annualized Interest on Balance. The ratio of Withdrawal to Balance is the decay rate (or withdrawal) per month. Notice, in this example, the New Account numbers are equal to the Withdrawal numbers because of the flat growth assumption that regulators require for the report. You may recall how you can adjust and model your specific growth plans in a previous bulletin.

Example:

- Project the offer rates of deposit accounts under interest rate scenarios and estimate the deposit withdrawals, and derive the summary of the beta and decays in reporting.

Table 1 passbook accounts	15-Apr	15-May	15-Jun	15-Jul	15-Aug	15-Sep	15-Oct	15-Nov	15-Dec	16-Jan	16-Feb	16-Mar
Balance	2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989
Interest	2	2	2	2	2	2	2	2	2	2	2	2
Non-Interest Cost	4	4	4	4	4	4	4	4	4	4	4	4
Implied Rate(%)	0.69	0.69	0.69	0.69	0.7	0.7	0.7	0.7	0.71	0.71	0.71	0.71
Withdrawal	48	49	50	51	52	53	54	55	56	55	54	52
Perf. Bal	2,941	2,940	2,939	2,938	2,937	2,936	2,935	2,934	2,933	2,934	2,935	2,937
New Account	48	49	50	51	52	53	54	55	56	55	54	52
Offer Rate of New Acct	0.69	0.69	0.69	0.7	0.7	0.7	0.7	0.71	0.71	0.71	0.71	0.71



Regulators require reporting of beta and decay, which are explained in this section. Beta and decay numbers are listed in the following reports:

- Dashboard Report
- Assumptions Report
- Core Deposit Account Study Report
- ALM Performance Report

Table 2	100bpt Shock Up (BPT)	-100bpt Shock Down(BPT)	Annual Decay Rate
Non-Interest			
Trans.	8	5	27%
MMDA	12	36	27%
Passbook	41	30	19%

For example, Table 2 shows that the Passbook account beta is 41 bpt under 100 bpt shock-up. Beta is derived by noting that the implied rates are 0.71% and 0.30% by the end of 12 months under the 100 bpt shock up and base case respectively. Therefore, the offer rate is up 41 bpt (=0.71% - 0.30%) when the market rate is shocked up 100 bpt. The decay rate of 19% is the average annualized withdrawal rate over the 12 months. Note that the ratio of the total withdrawals over 12 month to the balance is approximately 20% and thus providing an intuitive explanation of how the decay rate is derived.

Conclusions

You may use your EaR (excel) report to evaluate your offer rate strategy and/or the Sensitivity Calculator to simulate and model alternative strategies which would then allow you to:

- Create your strategy for raising your deposit rates by category
- Understand and explain the impact on the balance sheet
- Adjust your strategy over time in response to competition and funding needs

Please do not hesitate to contact us if you have any questions on determining your offer rates.

Regards,

Tom Ho

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