



## ***Determining Your "True" Interest Rate Risk Exposure***

By Jeremy Taylor

January's regulatory guidance on Interest Rate Risk (IRR) emphasized the pronounced impact that swings in interest rates can have on bank earnings. But risk is two-sided, and most small banks stand to benefit from cyclical upturns in rates. Their assets (like floating-rate loans, Fed Funds sold, shorter-term securities) will typically re-price more quickly on average than liabilities (like CDs and "sticky" non-maturity deposits). That's asset-sensitivity at work. So why worry?

For starters, are the IRR results reported by your ALM model (or by your outsourced vendor) providing a realistic depiction of your balance sheet exposure? This isn't so much a question of the model's reliability (its structure, its algorithms) as the data you're putting in. That's partly the controls on your financial data input process. But more importantly, it's the assumptions being made.

When it comes to NII-at-Risk measurement, our experience shows that the key driver is the deposit repricing assumptions. By how much might rates on each deposit type change for a given change in market rates? That responsiveness – sometimes called the beta – needs regular review against the bank's actual data, experience, and market circumstances. Some banks take extreme assumptions (like zero or 100% responsiveness), others take the vendor's default assumptions – then just forget about them.

We've seen where adjustment of beta assumptions can wipe out reported asset-sensitivity [1\[1\]](#). It's not to say a bank's betas are wrong, only that the assumptions require scrutiny to determine if they're correct for that bank. Expressed differently: When rates start to rise, can they restrain the increase in deposit rates as much as their modeling assumes? Other key assumptions include prepayment rates, replacement of run-off assets and liabilities, and decay rates on non-maturity deposits (a key driver for EVE-at-Risk). Run scenarios under alternative assumptions to understand how sensitive are the results.

Banks are expected to do NII back-testing. But think of more intuitive ways to assess your exposure. If you truly were asset-sensitive during the Fed's easing from September 2007 through December 2008, then look at your NII and net interest margin (NIM). They should have fallen with rates. Of course, NII could have been overwhelmed by volume effects, had the balance sheet been growing strongly. NIM is a purer measure. But even there, be careful. Most banks have incorporated floors into their floating-rate loans, which cushioned the (negative) earnings effect then – but which will restrain the NII recovery when rates head back up. For loans without floors, watch for compression effects on the downside. Deposit rates may not have room to fall much further, but those loan rates still can.

Another reason not to be complacent about an asset-sensitive balance sheet is the innate volatility evident in financial markets. Yes, the Fed will tighten, and yes, your NIM and NII may climb with it. But as rates bounce around, as the yield curve twists (with short and long rates out of step), as credit spreads widen and narrow – all these things will translate into more NII volatility and uncertainty, the higher your balance sheet's IRR exposure. That's not a good thing. You may have nicely-measured asset-sensitivity in the face of your successive 100 bp parallel shocks, but the world doesn't always work like that. It's why

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the January Guidance delves into the need for non-parallel shocks. More yield curve steepening can be expected in coming months; how will that affect your bottom line?

And what then? Start by watching your limits. They reflect your risk appetite. What's the most you'd be prepared to lose in the event of a pronounced yet plausible rate change? If simulation results are hitting or nearing those limits, ALCO's role is to respond. Maybe you risk-accept. Maybe there are reasons to believe that either the rate shock or the balance sheet vulnerability is only temporary. Or maybe you take action. Derivative hedges are one alternative. But if bank management has no experience there, other approaches may make more sense. If it's liability-sensitivity you're facing, look for ways to lengthen your liabilities, most obviously by adjusting your pricing to be more competitive for long-dated CDs, and for savings and IOC accounts. Replace (typically short-dated) wholesale borrowings. Shorten your assets by emphasizing floating-rate loans and replacing run-off securities with shorter maturities. These won't have the kick that an interest rate swap would, but they're useful tactics for smoothing your rate-sensitivity... and for less worry about trying to read Ben's mind.

<sup>1</sup>[1] Suppose you've got \$200 million in MMA balances and you've got them set up in your ALM model with a 50% beta. In our experience, CDs are generally quite rate-responsive, and many banks set the beta at 100%. Does it matter? Yes: A +100 basis point (bp) shock will push up your MMA interest expense by \$1 million ( $= \$200 \text{ million} * 0.01 * 0.50$ ) with a 50% beta, but by \$2 million with a 100% beta. That's \$1 million less NII.

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