Electrical Engineering And The Forward Curve

by Steve Brown

We sat on the plane recently next to a retired engineer from Intel and had an interesting conversation about the history of the internal workings of the devices we now pretty much take for granted. Her love for electrical engineering began when she was in grade school. She and her father would take apart televisions and radios, pulling out the tubes and rewiring things to see what would work and what wouldn't. When she would return early in her career to see her father, she tried to teach him without success about quantum wave function and the basics of how microchips and modern electronics work.

It's hard to teach an old dog new tricks or to change the fundamental way we believe things work. For community bank lenders working to gauge the future of their loan portfolios given the likelihood of higher interest rates, it is a similarly difficult task. There are significant unknowns about changing interest rates: when, how much, will the yield curve be similar or simply flatten with the short end rising?

One of the most important things that lenders should quantify is whether borrowers will be able to withstand higher rates. One important tool to assess this is the forward interest rate curve. While the predictions of the curve may or may not turn out to be correct, the forward curve does at least give an idea of market expectations for future interest rate levels. Understanding the interplay between future interest rates and credit portfolios can help a bank manage both profitability and risk.

Consider a bank that offers a $1mm, 25Y amortizing, 5Y adjustable rate loan to a borrower. The first 5Ys are priced at 3.50% fixed. The rate then adjusts the next 5Ys to the then 5Y constant maturity treasury (CMT) plus 2.00%. What would the forward curve say about the strength of this loan at repricing?

Most banks subject loans to interest rate sensitivity tests to test if there will be sufficient cash flow to service the debt. Banks typically shock cash flows allowing for 100, 200 and 300bps interest rate movement upward and downward, using current interest rates. Given that the most recent charts released by the FOMC indicate more than 50% of its members expect Fed Funds rates to be between 2% and 3% by the end of 2016, is a shock of 300bps from today's rates sufficient to measure the implications for the borrower, the collateral and the credit 5Ys into the future?

In addition to a shock at today's rate, if a loan will refinance in 5Ys at a spread to a benchmark rate, then the loan should be shocked to the forward curve.

Getting back to our example, today's forward curve would indicate that this credit would reprice at an interest rate over 6%. How would the borrower's cash flow look with a 300bp shock from 6%? One would hope that the borrower's cash flow would improve along with an economy that has improved enough to merit higher interest rates. If not, though, risk managers need to consider whether borrower's cash flows will increase proportionally along with interest rates. Otherwise, this structure could represent a future Troubled Debt Restructuring.

The Intel engineer lamented a bit that kids today don't really learn the basics of electricity like she did by taking apart and building appliances with her father. But as with all things, the more complex the

process becomes the more complexity of analysis and understanding is required. Our historical knowledge while interesting, may not really be relevant given where rates are now and where they can go from here. As such, bankers should be sure their analysis of loan structures and implications for customer cash flow is up to the task. Call us if you want help.

BANK NEWS

M&A

Wintrust Financial ($19B, IL) will acquire Community Bank CBD ($206mm, WI) for about $38mm in cash & stock.

Stock Buybacks

The Wall Street Journal reports companies bought back $338B of stock in the 1H of 2014, the most in 7Ys.

FOMC

Bloomberg reports Fed Vice Chair Fischer indicates "considerable time" means anywhere from 2 to 12 months and that he sees the first rate hike occurring in mid-2015.

Rate Hikes

Fed SF President Williams thinks the first FOMC rate hike will occur in mid-2015 and move at a gradual pace.

Cyber Risk

A survey by CDW finds 49% of banks had experienced a cyber security attack in the past year.

Customers

A study by Oliver Wyman finds people who did not open an account online said it was for the following Top 7 reasons: they felt more comfortable talking to a person (61%); they had questions (40%); habit (38%); they thought it would be easier or faster in person (26%); they needed to go to the branch anyway (18%); they didn't know they could do it online (17%) or they were worried about security (16%).

Raises

A Towers Watson survey finds 96% of employers expect to give raises this year for an average of 3%.

Building Trust

Community banks seeking to increase the trust customers have in them should note a banking survey of consumers by EY finds the primary drivers are: financial stability (60%), the way the customer is treated (56%), ability to withdraw money (54%), the bank's security procedures (51%) and how the bank communicates with them (44%).

Succession

An RMA survey finds 63% of banks say they conduct succession planning annually.

No Will

A survey by Rocket Lawyer finds 61% of Americans with children do not have a basic will.

Risky Areas

A survey by CDW finds bank managers say the following are their greatest vulnerabilities: network gateways (31%), mobile banking apps (30%) and employee mobile devices/apps (28%).