OFFSETTING RISK -CROSS-CORRELATIONS

by Steve Brown

While we talk a lot about diversification the question often comes up - what is the best way for a bank to diversify? Concentration risk is risky, so the question is an important one to answer. As we all know, from 2004 thru 2007, many community banks took on a significant amount of construction exposure. Unfortunately, this was also a sector whose credit spreads had a 96% correlation (100% being perfect) to the general economy. When the economy turned, construction followed - almost instantaneously.

What may be new information is the manner in which many banks exacerbated this problem. In addition to construction, banks became heavily exposed to development loans, lodging, retail, other banks (think trust preferreds), leveraged mortgage plays (think FNMA preferreds) and multifamily housing. All these sectors have not only high credit spread correlations to the general economy, but also high correlations to each other in something called "cross-correlations." For example, having exposure to a loan to finance raw land that is guaranteed by a developer and then making a loan on a shopping center has a cross-correlation of almost 90%. In other words, there is little benefit in being diversified between the two. These high cross-correlations were further exacerbated, as banks ran down their investment portfolios and moved into a net borrowed funding position. Not having Treasury bonds or Fed Funds sold balances resulted in greater leverage to the wrong assets at exactly the wrong time and further destroyed bank capital in many cases.

How could this look differently? The answer lies in proactively setting allocations for each asset class and managing accordingly. If a bank wants to hold construction exposure in excess of 8% of its loan portfolio, then an obvious choice is to offset that exposure with higher capital and liquidity. For example, the cross-correlation between Fed Funds balances and construction loans is 5%, or very low. Of course, if you could find asset classes with negative correlations, that would be even better. Similar to how ripples in a body of water offset each other, a negative correlation would mean that when the value of a construction loans goes down, the value of this asset would move in the opposite direction. Luckily, there are plenty of assets that fit the bill.

Treasury notes, for example, have an approximate -3% correlation to floating rate construction loans. As the economy runs into trouble, interest rates drop and credit spreads increase. These two factors end up increasing the value of fixed rate Treasury Notes at a time when construction loan values are decreasing. Thus, Treasury Notes are one of the cheapest and most efficient (highest liquidity) credit hedges available to community banks. Unfortunately, this is often overlooked. While Treasuries are a great hedge, they don't earn much, so they are very often ignored. Can community banks to do even better?

Certain industries are either non-cyclical or counter-cyclical. Banks that have construction loans and fixed rate loans to software companies, exhibit a -7% cross-correlation. In fact, banks can find up to a -30% cross-correlation in the normal course of business (to get higher negative cross-correlations banks would either need to take on either greater leveraged exposure or exposure to foreign entities or commodities). This would mean that for every $1 of construction exposure, if a bank made a C&I loan to a chemical manufacturer of $0.75, then the two risks would be theoretically risk neutral. In addition to chemicals, electronics, software, healthcare and utilities, banks can find a host of other industries that provide potential negative correlations to construction loans.

If you are coming to our Executive Management Conference May 2 thru 5th (sold out) or one of our upcoming Tactical Workshops (more information to follow), we will provide greater supporting data and discuss how to practically incorporate the above. Until then, by thinking about cross-correlations, bankers can get a better handle on their risk position in an attempt to ensure that 1 + 1 equals less than 2.

BANK NEWS

Closed (42 YTD):

The FDIC shuttered Beach First National Bank ($585mm, SC) and sold it to Bank of North Carolina ($1.6B, NC). Bank of North Carolina purchased all deposits for no premium and nearly all assets under a loss share.

On Facebook

The ICBA announced its new "My Community, My Bank" Facebook page in an effort to educate policymakers and the public about the dangers of too-big-to-fail. The page provides followers with the latest information on ending too-big-to-fail and offers fans a venue to discuss the issue. Community bankers can encourage their friends, neighbors and customers to join the fan page and get involved in this issue.

Not Yet

The National Bureau of Economic Research, which officially calls the beginning and end of recessions, said while some improvement was seen in the economy, it would be "premature" to say the recession had officially ended based on economic data reviewed so far.

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