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A Stifel Company
INTEREST RATE PRODUCTS, LLC

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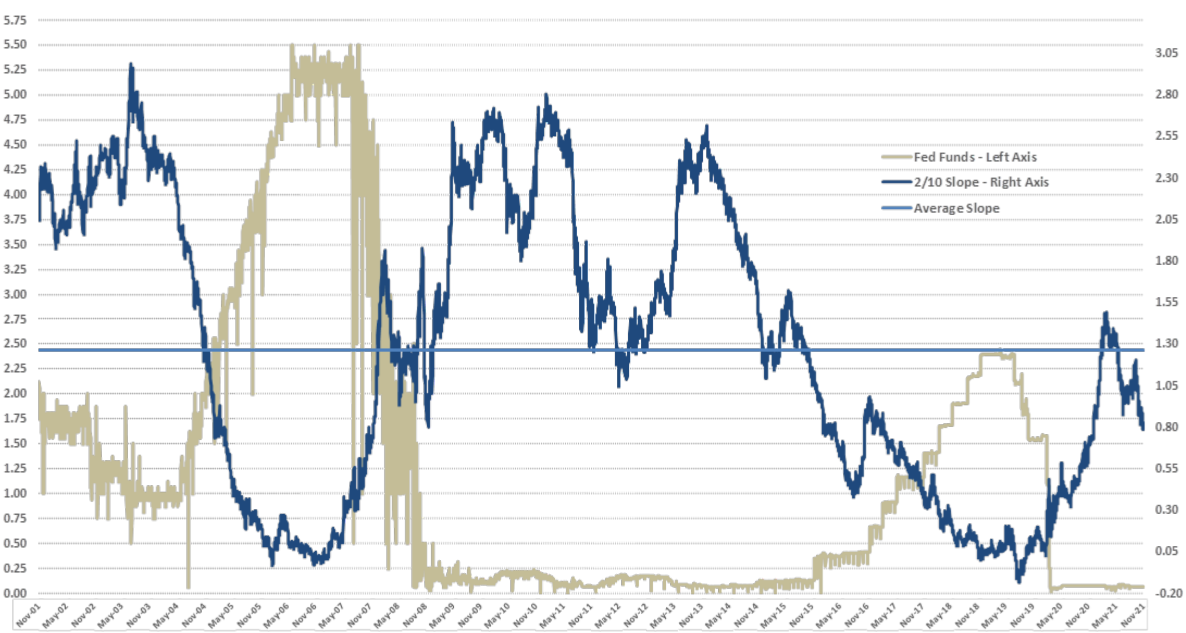
MARGIN COMPRESSION: CAUSES AND SOLUTIONS

The banking industry is dealing with ongoing margin compression unlike anything bankers have experienced in many years. The FDIC recently reported community bank net interest margins increased by 6 basis points (to 3.31%) from the record lows of the second quarter of 2021 but also stated the increase was primarily due to the recognition of fees related to forgiveness of Paycheck Protection Program loans. Earnings were strong owing to stellar credit quality, resulting in very low loan loss provisions, and reduced operating expenses. It is doubtful these results can be maintained in 2022 when many industry experts are forecasting another 10 to 15 basis points of margin compression. We believe it is worthwhile to examine why the industry is facing margin compression, challenge some of the more prevalent assumptions about banks' risk profiles and highlight our best ideas for dealing with the current environment.

THE PAST

It is appropriate to examine the root causes of the margin compression issue. Many bankers point to the current near zero-rate environment as the primary driver of margin compression. The current environment is obviously part of the problem, but placing the blame entirely on low short-term rates leads to an obvious question: Why is the compression so much worse than it was during the 2008-2016 near zero interest rate environment? According to FDIC statistics, community banks' net interest margins bottomed at 3.46% in early 2009 and quickly rebounded to the high 3.60's to 3.70's for many years thereafter.

The following chart helps illustrate why today's market environment is different from that experienced in the last near zero-rate environment.



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The chart shows that prior to the 2008 financial crisis we experienced several years of relatively high short-term rates (indicated by the gold line), creating good profitability despite a relatively flat yield curve (blue line). Remember, bank funding costs are typically tied to the short end of the yield curve. When short-term rates are higher, banks can create a "funding spread" by pricing deposits below a wholesale funding alternative. When short-term rates are near zero, the "funding spread" is often non-existent or negative.

Near zero interest rates began in 2008 but net interest margins remained relatively strong because the yield curve was steeper than usual (higher than the solid blue line indicating the average 2/10 spread over the last 20-years). Since the vast majority of banks mismatch asset and liability durations, this period confirmed the notion that curve steepness is an important driver of net interest margins. This period also saw banks lower their cost of funds to near zero for the first time, creating a one-time boost to margins that can't be replicated without paying negative rates.

In 2016, short-term rates began to rise as the economy lifted out of the financial crisis. The curve flattened dramatically but rather than aggressively raise deposit rates, banks kept their cost of funds low. The combination of relatively low market rates and robust loan growth for the four years preceding the pandemic recession meant bank assets grew but also priced/repriced in a low-rate environment. With funding costs held low and assets coming on in a low-rate environment, the table was set for margin compression if we experienced another low short-term rate environment.

Enter the pandemic. Banks were setup well for higher interest rates. Unfortunately, what we got was a huge monetary policy shift coupled with large amounts of fiscal stimulus. The net result was a rapid decline in short-term rates, an influx of deposits and a decline in loan production.

THE PRESENT

Now that we've had our history lesson, let's look at the current situation. Most banks appear to be prepared for higher rates; in fact, our Risk Manager A/LM system and industry data suggests that banks are generally asset sensitive – meaning that rising rates will improve earnings. But is that really true? Let's consider that information with 2021 rate changes:

Treasuries	***12/13/2020***	***11/22/2021***	***Change***
3-month	.09%	.05%	-.04%
2-year	.12%	.59%	.47%
5-year	.39%	1.32%	.93%
10-year	.92%	1.63%	.71%
2/10 spread	.80%	1.04%	.24%

Importantly, term interest rates increased quickly in 2021 and have been higher for most of the year. The combination of higher rates, a steeper curve, and asset sensitive balance sheets would lead to expectations of joy in the industry as margins should be quickly expanding. Instead, margins have declined since December 2020 and projections indicate more pain ahead. How can this be? Is the industry as asset sensitive as it appears?

We believe there are several considerations, with specific items impacting individual banks differently:

1. A/LM Model assumptions: Most models use a no growth, static balance sheet mix assumption or they use overly optimistic assumptions about loan growth/pricing. In fact, most modeling is done assuming that loan growth will drive overall balance sheet growth with the rest of the balance sheet supporting that growth. These assumptions tend to paint a rosy picture of a bank's interest rate risk exposure. The actual growth that has occurred on bank balance sheets during the last year has been deposit driven. Loan production has been rather weak, so rather than fund loan growth, deposits have been invested in lower yielding liquid assets.

2. Cash flow/refinancing assumptions: Closely aligned to the above item, models generally assume that maturing cash flows are reinvested in the same asset category from which they matured. This year has seen a major shift in earning asset mix that was not anticipated. When we have major shifts in balance sheet mix like what has occurred over the last year, modeling techniques rarely do an adequate job of capturing those shifts.

3. Curve risk: Changes in rates have not been parallel and the basic industry model assumption is a parallel shift. Banks have risks at different points on the yield curve that may not be adequately captured in the underlying assumptions of the model.

TOMORROW

A major part of ALCO's responsibility is to manage the bank's balance sheet to produce consistent, quality earnings in all interest rate environments. In addition, bank management must offer products that meet both borrower and depositor needs but also control interest rate risk. The focus of balance sheet management should be on ways to improve performance in 2022 and beyond. We believe three major questions should be the subject of every ALCO meeting:

- Are we doing everything we can to meet customer demand for products and services?
- Are there any opportunities to squeeze extra income from the current balance sheet?
- Are we doing everything we can to protect income from both expected and unexpected rate/curve changes?

Here are a few ideas we have that may help.

1. **Improve margins now:** This is a great solution for a rates unchanged scenario or for an asset sensitive bank. Using a receive fixed swap to convert a portion of a floating rate loan portfolio to a fixed rate allows the bank to immediately improve yields by 50 to 100 basis points (depending on the maturity of the swap). This transaction improves earnings immediately and will continue providing positive earnings until the short end of the curve rises above the fixed rate on the swap. This strategy allows an asset sensitive bank to monetize some of their asset sensitivity in current earnings.

2. **Invest cash now but with a catch:** The cost of maintaining excess cash is high. You should be fully invested…even in the current environment. However, having too much in longer duration bonds can create excessive price volatility and capital at risk (CAR). Many banks recognized this risk when rates began to rise earlier this year.

   Buying longer dated securities (especially municipal securities) typically provides a better yield but comes with greater price risk. Hedging those bonds with a pay fixed interest rate swap creates a floating rate transaction with minimal price risk and a yield that generally beats that of any natural floating rate instruments. A bonus is that the hedge gives you the flexibility to manage the portfolio (i.e., sell bonds) without incurring large losses in the future.

3. **Meet customer demand:** Meeting customer demand by offering products they desire is required for growth and success. In this environment, commercial borrowers are concerned about inflation and rising rates and are seeking long term fixed rate financing. This demand leaves the bank with 3 choices: (1) ignore customer desire and offer a shorter loan, (2) make a 10-year fixed rate loan and disregard interest rate risk, or (3) meet customer demand and protect against rate risk. Using our commercial loan hedging process (including our proprietary ***SMART*** loan) allows the borrower to have a fixed rate loan without signing an ISDA, meeting Dodd Frank swap participant requirements, or making multiple payments to different entities. Your borrower deals only with their community bank while we serve as the bank's counterparty to convert the loan to a floating rate.

4. **Lock them in now:** An underutilized option provides a win/win for your commercial construction borrowers who are concerned about the interest rate and cash flow needs when construction is completed. You can provide your borrower an offer that no competitor can offer: a fixed rate term loan based on today's low rates that begins when construction is complete. A forward start swap allows you to meet the customer's desire for future rate assurance while allowing the bank to assure (1) no competitor steals your loan upon completion, (2) you have a floating rate asset at a known spread, and (3) your credit risk does not increase if interest rates are higher at the time of construction completion. This same concept of offering a forward fixed rate can also be used for borrowers who have upcoming balloons and are concerned about rates six months to a year from now.

5. **Prepare for future funding needs:** Banking tends to be cyclical, and we should expect the days of excess liquidity and funding will not continue forever. Forward looking banks are planning for that potential by using interest rate swaps to lock in the cost of long-term funding now, while interest rates remain near historic lows. Using a forward start swap allows you to lock in the cost of long-term funding now. For example, the bank can fix the rate now of 5-year wholesale funding (you choose the funding source) two years from now. In two years, the bank either borrows short term funds to rollover during the swap term or, if funds are not needed, closes the swap at market value.

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SUMMARY

The industry is struggling with declining interest margins with more declines expected before better days return. Interest rates have increased, and the yield curve has steepened in 2021 yet many banks are not benefitting from improved margins as their A/LM modeling would have suggested. Vining Sparks Interest Rate Products can help community banks deal with this difficult environment by offering solutions that can help you offer the products customers demand, improve current earnings, and protect against interest rate changes. Contact your relationship manager or call us directly to discuss options to provide the tools needed.

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