Balance Sheet Management
Trends & Strategies

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Summary

- Historically low (and falling) interest rates, poor loan demand and growing cash positions are pressuring margins

- New Basel III capital requirements will be higher, forcing even healthy banks to increase their capitalization levels

- With Tangible Equity becoming more important (even to regulators), mark-to-market risk in the securities portfolio is being scrutinized

- Locking up longer-term liquidity is a priority given potential Basel III requirements and movement towards stress-testing even for community banks

- The current market environment presents a significant opportunity to improve capital, liquidity and/or earnings organically through balance sheet / capital optimization

- Regulators are still focused on rising rate risk despite current rate outlook – fortunately it is quite inexpensive to reduce rising rate risk today and can often be done without reducing current earnings

“IF YOU CHOOSE NOT TO DECIDE, YOU STILL HAVE MADE A CHOICE!”
- Rush, “Freewill”, 1980
The time is NOW to optimize balance sheets/capital
Balance sheet optimization is critical today

• At a time of increased capital requirements, it is highly advisable that banks maximize capital by optimizing their balance sheet to create non-dilutive capital

• Optimizing the balance sheet to improve capital is a complicated endeavor, due to a number of constraints under which many banks operate:
  
  • Investment securities may be pledged, which limits the bank’s ability to sell securities without unwinding secured funding
  
  • In this low rate environment, secured funding may be at well above-market rates due to the low rate environment – recognizing the losses from unwinding this funding could undo any capital benefit from shrinking the balance sheet
  
  • Maintaining high levels of cash liquidity can hamper any attempts to shrink the balance sheet
  
  • Deleveraging may have a negative impact on earnings going forward – if we have significant earnings deterioration we could quickly undo the benefits of shrinking the Balance Sheet
  
• The best scenario can be derived by running a “capital optimization” that will identify the best series of transactions that accomplish the bank’s objectives, subject to pledging, liquidity, earnings impact and other constraints
Comments on balance sheet optimization

• Today’s very low rate environment is IDEAL for optimizing balance sheets:
  • The largest gains on asset sales are on long duration assets
  • The smallest prepayment penalties on funding are on shorter-duration funding
  • As a result, the optimal delevering transaction ALSO reduces the bank’s exposure to rising rates by taking a “longer-asset / shorter liability” position off the balance sheet
  • In many cases, we are able to improve capital without taking losses, without giving up earnings, and with a balance sheet that is less exposed to higher rates

• The ideal candidate for this should have at least two of the following characteristics:
  • Securities or other assets that can be sold at gains or small losses
  • Wholesale funding / brokered CDs that can be unwound at low to moderate losses
  • Brokered and/or retail CD’s maturing in the next 6 months
  • Strong on-balance sheet liquidity

• REMEMBER: You can improve capital ratios even if you take losses (numerator / denominator)

• If you try to do “piecemeal” you are virtually guaranteed a sub-optimal result
How “Capital Optimization” works

• Estimate the unwind and/or securitization price on all liquid assets and liabilities that could be used in a delevering transaction:
  • Cash
  • Investment securities
  • Loans (particularly loans held-for-sale)
  • Brokered Deposits
  • Repurchase agreements
  • FHLB advances

• Enter this data into a model template as assets / liabilities available for unwind

• Enter the bank’s base case financial ratios into the model

• Build constraints into the model around ratios, profitability, liquidity and pledging

• Through linear programming / optimization technology, seek out the solution that maximizes the benefit to capital given the constraints we have established by determining the optimal mix of assets sold and liabilities unwound / prepaid.

• This is accomplished by considering EVERY line item for possible sale / securitization (asset) or unwind (funding), with cash imbalances either reinvested or reborrowed as necessary, subject to all the constraints under which we are operating.

• The model then shows how the resulting transaction impacts all ratios and future earnings
An optimization example: The situation

- A $2.5 billion bank is looking to improve capital and earnings while maintaining adequate levels of liquidity (cash + unpledged securities), and does not wish to take rising rate exposure

- Current capital ratios are roughly 8.25% (Leverage) and 13% (Risk-Based)

- The bank has high levels of brokered deposits and FHLB advances and an investment portfolio that represents a material % of assets

- The bank has a very large cash position due to deposit inflows and low loan growth

- There are gains in the investment portfolio given the low rate environment – however all of their securities are pledged against funding

- We ran four different simulations subject to different constraints, which produced extraordinary results which greatly exceeded the bank’s initial expectations.

- The bank is now executing a delevering transaction which will accomplish the following:
  - $275+ million delevering transaction
  - 1.00%+ improvement in capital ratios
  - $2 million increase in NII, and 50bp+ increase in NIM
  - No one-time charges to earnings
  - Still strong on-balance sheet liquidity
  - Keeps the bank in an asset-sensitive position
First, we delever the balance sheet

### Impact on Capital

<table>
<thead>
<tr>
<th>Impact on Tier 1 Leverage Capital</th>
<th>Strategy Deployed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier 1 Leverage Capital Ratio: Pre-trade</td>
<td>8.27%</td>
</tr>
<tr>
<td>Tier 1 Leverage Capital Ratio: Post-trade</td>
<td>9.30%</td>
</tr>
<tr>
<td>Impact on Tier 1 Leverage Capital</td>
<td>+1.03%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Impact on Tangible Ratio</th>
<th>Strategy Deployed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tangible Ratio: Pre-trade</td>
<td>7.78%</td>
</tr>
<tr>
<td>Tangible Ratio: Post-trade</td>
<td>8.55%</td>
</tr>
<tr>
<td>Impact on Tangible Ratio</td>
<td>+0.76%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Impact on Tier 1 Risk Based Ratio</th>
<th>Strategy Deployed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier 1 Risk Based Ratio: Pre-trade</td>
<td>11.56%</td>
</tr>
<tr>
<td>Tier 1 Risk Based Ratio: Post-trade</td>
<td>11.79%</td>
</tr>
<tr>
<td>Impact on Tier 1 Risk Based Ratio</td>
<td>+0.23%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Impact on Total Risk Based Ratio</th>
<th>Strategy Deployed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Risk Based Ratio: Pre-trade</td>
<td>12.82%</td>
</tr>
<tr>
<td>Total Risk Based Ratio: Post-trade</td>
<td>13.08%</td>
</tr>
<tr>
<td>Impact on Total Risk Based Ratio</td>
<td>+0.26%</td>
</tr>
</tbody>
</table>

### Impact on Earnings

<table>
<thead>
<tr>
<th>Impact on Earnings</th>
<th>Strategy Deployed</th>
</tr>
</thead>
<tbody>
<tr>
<td>One-time Pre-Tax Gain/(Loss)</td>
<td>12 (Gain)</td>
</tr>
<tr>
<td>One-time Post-Tax Gain/(Loss)</td>
<td>7 (Gain)</td>
</tr>
<tr>
<td>Change in Annual Net Interest Income</td>
<td>(1,066) (Decrease)</td>
</tr>
<tr>
<td>Liquidity Ratio (Beginning)</td>
<td>14.42%</td>
</tr>
<tr>
<td>Liquidity Ratio (Ending)</td>
<td>7.20%</td>
</tr>
<tr>
<td>Change</td>
<td>-7.22%</td>
</tr>
</tbody>
</table>

### Impact on Interest Rate Risk

<table>
<thead>
<tr>
<th>Impact on Interest Rate Risk</th>
<th>Strategy Deployed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effective Duration (Assets Sold)</td>
<td>Flat 1.46 Up 300 2.32</td>
</tr>
<tr>
<td>Effective Duration (Funding Unwound)</td>
<td>Flat 0.65 Up 300 0.66</td>
</tr>
<tr>
<td>Duration &quot;Gap&quot; Removed from Balance Sheet</td>
<td>Flat 0.81 Up 300 1.65</td>
</tr>
</tbody>
</table>

### WHAT WERE THE MOVING PARTS?

- **Assets Sold**: 193,864
- **Yield**: 4.12%
- **Funding Unwound**: (272,740)
- **Cost**: 2.56%
- **Cash Used**: 78,876

Note that this step cost us earnings. We have reduced exposure to rising rates.
Next, we take steps to improve earnings without hurting interest rate risk

- Restructure remaining FHLB advances to reduce rate without taking a one-time charge
- Redeploy portion of remaining excess cash into short duration securities yielding 2%
- Purchase interest rate caps to hedge short-duration wholesale funding
- THE RESULTS ARE AN OPTIMIZED BALANCE SHEET:

<table>
<thead>
<tr>
<th></th>
<th>Net Interest Income</th>
<th>Earning Assets</th>
<th>Net Interest Margin</th>
<th>Asset-Based Liquidity Ratio</th>
<th>Tier 1 Leverage Capital</th>
<th>Total Risk-Based Capital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>82,884</td>
<td>2,376,018</td>
<td>3.49%</td>
<td>14.42%</td>
<td>8.27%</td>
<td>12.82%</td>
</tr>
<tr>
<td>Sale / Prepay Strategy</td>
<td>(1,110)</td>
<td>2,103,278</td>
<td>3.89%</td>
<td>7.20%</td>
<td>9.30%</td>
<td>13.08%</td>
</tr>
<tr>
<td>Restructure Borrowings</td>
<td>1,296</td>
<td>2,103,278</td>
<td>3.95%</td>
<td>7.20%</td>
<td>9.30%</td>
<td>13.08%</td>
</tr>
<tr>
<td>Redeploy Cash</td>
<td>1,750</td>
<td>2,103,278</td>
<td>4.03%</td>
<td>7.20%</td>
<td>9.30%</td>
<td>13.08%</td>
</tr>
<tr>
<td>Purchase Caps</td>
<td>(4)</td>
<td>2,101,638</td>
<td>4.04%</td>
<td>7.12%</td>
<td>9.31%</td>
<td>13.08%</td>
</tr>
<tr>
<td>Post-Trade (Pre-Tax)</td>
<td>84,816</td>
<td>2,101,638</td>
<td>4.04%</td>
<td>7.12%</td>
<td>9.31%</td>
<td>13.08%</td>
</tr>
<tr>
<td>Difference</td>
<td>1,932</td>
<td>(274,380)</td>
<td>0.55%</td>
<td>(7.30%)</td>
<td>1.04%</td>
<td>0.26%</td>
</tr>
</tbody>
</table>
The resulting Interest Rate Risk position is still asset-sensitive, a good position to be in.

This is NOT always possible – however, it is typically possible to at least achieve a NEUTRAL interest rate risk position given the current rate environment.
EVERETT, Wash., Oct. 21, 2010 (GLOBE NEWSWIRE) -- Cascade Financial Corporation (Nasdaq:CASB) (the Company), the parent company of Cascade Bank (the Bank), announced today that it has successfully completed a series of balance sheet restructuring transactions which will immediately put the Company and the Bank in an improved financial position including increased capital ratios and increased net interest margin. The transactions included the restructuring of the Company's securities portfolio, prepayment and/or modification of the Company's Federal Home Loan Bank (FHLB) advances, and the purchase of interest rate caps to hedge against rising rates.

"In this persistently low interest rate environment there was a sizeable amount of negative drag on our balance sheet driven in large part by high cost borrowings. Stronger deposit growth and a reduction in the real estate construction loan portfolio over the past few quarters led to increased on-balance sheet liquidity which provided us the opportunity to pursue this deleveraging strategy," stated Carol K. Nelson, President and CEO. "We were able to monetize gains in our securities portfolio to offset the cost of prepaying the FHLB borrowings. The end result will shrink the balance sheet, improve our capital ratios, reduce interest expense, improve our net interest margin and have a minimal impact on shareholders' equity. These restructuring transactions, which commenced late in the third quarter and were completed early in the fourth quarter, are part of the Company's overall business plan to strengthen its financial condition going forward."

In addition to restructuring the securities portfolio to monetize gains, the Company prepaid $80 million in FHLB advances to shrink the balance sheet, restructured $159 million of fixed rate FHLB advances into lower cost floating rate advances to reduce current interest expense, and purchased interest rate caps in a like amount to limit exposure to rising interest rates while preserving the income benefits from this restructuring.

Cascade Financial Completes Series of Successful Balance Sheet Restructuring Transactions

(Press release 10/21/10)
Cascade Financial Completes Series of Successful Balance Sheet Restructuring Transactions (Press release 10/21/10)

Details of the transactions include the following:
* The Company used low-yielding interest-earning deposits at the Federal Reserve Bank to prepay $80 million of FHLB advances at an average rate of 3.75%, incurring approximately $4.8 million in prepayment penalties.
* The Company offset the prepayment penalties with approximately $5.0 million in gains from the sale of investment securities. In total, the Company sold approximately $252 million in securities with a weighted average book yield of 2.0%.
* The Company reinvested substantially all of the proceeds from the securities sale into new securities with a 0% to 20% risk-weight at an average yield of 2.4%.
* The Company restructured $159 million of long-maturity FHLB "option" advances, callable quarterly as rates rise, into floating-rate, option-free borrowings, reducing the current average rate on the advances by 1.38%.
* The Company purchased a series of interest rate caps totaling $159 million in notional amount to manage interest rate risk going forward. These caps were designed to protect both net interest margin and shareholder equity from potential future rising interest rates.

The transactions leave the Company with continued high levels of on-balance sheet liquidity, and bring the Company's interest rate risk position from highly asset-sensitive closer to a neutral position towards interest rates.

Approximately $1.1 million of the securities gains were recognized in the third quarter of 2010 and Cascade expects to recognize approximately $3.9 million in the fourth quarter of 2010 due to the timing of the transactions. All of the approximately $4.8 million in prepayment penalty from the retirement of FHLB borrowings will be recognized in the fourth quarter of 2010.
In addition to the restructuring transactions, the Company is proactively taking steps to improve its net interest margin and capitalization by allowing additional non-core funding to run off, further shrinking the balance sheet and removing negative carry, as well as other potential strategies to further reduce funding costs.

"This remains a highly challenging operating environment for community banks," added Nelson. "This strategy has allowed us to improve our net interest margin and capital position, and reduced our reliance on non-core funding while maintaining a prudent interest rate risk profile, all of which are critical goals for the Company."

As previously announced, under a Consent Order with the FDIC and Washington State DFI, effective July 21, 2010, Cascade Bank's regulators have directed Cascade Bank to increase its overall capital levels and, in particular, are requiring Cascade Bank to increase its Tier 1 leverage capital to 10% of the Bank's total assets and total risk based capital to 12% of the Bank's risk weighted assets by November 18, 2010. The Company's ability to raise additional capital will depend on conditions in the capital markets at that time, which are outside its control, and on the Company's financial performance.

Sandler O'Neil + Partners, L.P. served as advisor to Cascade Financial in developing and implementing the balance sheet restructuring strategies.

About Cascade Financial

Established in 1916, Cascade Bank, the only operating subsidiary of Cascade Financial Corporation, is a state chartered commercial bank headquartered in Everett, Washington. Cascade Bank maintains an "Outstanding" CRA rating and has proudly served the Puget Sound region for over 90 years. Cascade Bank operates 22 full service branches in Everett, Lynnwood, Marysville, Mukilteo, Shoreline, Smokey Point, Issaquah, Clearview, Woodinville, Lake Stevens, Bellevue, Snohomish, North Bend, Burlington and Edmons.
Cascade Financial Completes Series of Successful Balance Sheet Restructuring Transactions (Press release 10/21/10)

Forward-Looking Statements

This press release contains certain “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995 (“PSLRA”).

This statement is included for the express purpose of availing Cascade of the protections of the safe harbor provisions of the PSLRA. Readers should not place undue reliance on forward-looking statements, which reflect management's views only as of the date hereof. The words "should," "anticipate," "expect," "will," "believe," and words of similar meaning are intended, in part, to help identify forward-looking statements. Additional forward-looking statements include statements about the benefits of the balance sheet restructurings to improve the Company's financial condition, reduce its risk profile and improve its shareholder value proposition, as well as statements about the Company taking steps to improve its net interest Margin and capitalization by allowing additional non-core funding to run off, further shrinking the balance sheet and removing negative carry, as well as further reducing funding costs. Future events are difficult to predict, and the expectations described above are subject to risks and uncertainties that may cause actual results to differ materially. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those anticipated, estimated or expected. In addition to discussions about risks and uncertainties set forth from time to time in the Company's filings with the Securities and Exchange Commission, factors that may cause actual results to differ materially from those contemplated in these forward-looking statements include, among others: (1) the Company's ability to raise additional capital to satisfy the consent order on acceptable terms, if at all; (2) the effect of the consent order on the Company's operations and potential future supervisory action against the Company or Cascade Bank; (3) failure to maintain adequate levels of capital and liquidity to support the Company's operations; (4) the extent and duration of continued economic and market disruptions and governmental actions to address these disruptions; (5) the risk of new and changing legislation, regulation and/or regulatory actions; (6) local and national general and economic conditions; (7) changes in interest rates; (8) reductions in loan demand or deposit levels or failure to attract loans and deposits; (9) changes in loan collectability, defaults and charge-off rates; and (10) adequacy of the Company's allowance for loan losses, credit quality and the effect of credit quality on its provision for credit losses and allowance for loan losses.

Cascade undertakes no obligation to publicly revise or update these forward-looking statements to reflect events or circumstances that arise after the date of this release. Readers should carefully review the risk factors described in this and other documents Cascade files from time to time with the Securities and Exchange Commission, including Cascade's 2009 Form 10-K and Cascade's Form 10-Q for the quarter ending June 30, 2010.

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Debra L. Johnson, CFO
Cascade Bank
425.339.5500
www.cascadebank.com
Protecting Tangible Equity from AFS portfolio
Why the focus on Tangible Equity and AFS securities?

• Tangible equity (TE) is important to public companies, as well as banks looking to raise equity, since equity valuations are currently tied to TE.

• In addition, new capital requirements under Basel III would make TE the 4th regulatory ratio to which banks must manage.

• Unrealized gains / losses on AFS are “backed out” of current regulatory capital ratios but NOT out of TE.

• With rates dangerously low, this means banks with securities classified as Available for Sale are carrying unnecessary exposure to TE if the market value of those securities erodes as rates rise.

• This is exacerbated as banks redeploy excess cash into bonds, adding market value exposure to the equity account.

• Reclassifying securities to Held-to-Maturity is a very poor solution since it handcuffs liquidity, a first-order regulatory concern.

• There is one strategy banks are deploying to fix this.
Immunizing Tangible Equity from AFS portfolio changes

- AFS securities are one of the ONLY instruments on bank balance sheets that are marked-to-market through capital (not through earnings)

- The other instruments that are treated this way are interest rate derivatives designated as “cash flow hedges” under ASC/815, codification of guidance originally issued under FAS133*

- The preservation of Tangible Equity is the most-frequently stated goal community banks cite for increasing use of these instruments

- Most common transactions involve paying fixed on swaps, and buying interest rate caps:
  - These are hedges against rising rates, which must be “attached” to an asset or liability for hedge accounting purposes*
  - If effective hedges, they are marked to market through Other Comprehensive Income (OCI), a component of Tangible Equity
  - As rates rise, these instruments increase in value and gains flow into OCI, offsetting losses from the AFS portfolio

- These can be designated as hedges against*:
  - Floating rate funding
  - Short term FHLB advances, repo, and brokered CDs
  - MMDA and other rate-sensitive deposit products

* Sandler O’Neill is NOT a licensed accounting advisor and the following does not represent accounting advice. The bank should consult their external auditors and/or accounting professionals for guidance on accounting treatment and impact of any proposed transactions.
Focus on Liquidity: Stress-testing / Basel III
Pressure is on to lock in more liquidity

- Basel III will force banks to hold more on-balance sheet liquidity and penalize banks whose liquidity sources are not termed out:
  - **Liquidity Coverage Ratio**: "High Quality Liquid Assets" must be available to cover 30 days’ net cash outflows
  - **Net Stable Funding Ratio**: Requires a minimum amount of stable funding over a one-year period, intended to increase long-term funding of bank balance sheet requirements (minimum requirement not yet set)

- In addition, there are increasing calls from regulators, Congress and the financial press to have community banks run the “stress tests” that large banks have run

- In combination, these forces are pushing banks to extend the maturity of their funding sources even at a time when short-term liquidity is growing

- Banks can improve their long-term liquidity in the following ways:
  - Take down new long-term funding via FHLB and brokered CD’s
    - Use floating with swaps to protect Tangible Equity
    - Choose brokered CDs over secured borrowings for better ratios
  - Restructure shorter-term borrowings to extend
  - Retire shorter-term brokered CD’s and issue longer ones
Restructuring existing FHLB advances

- Under existing accounting rules*, you can restructure FHLB advances WITHOUT taking a one-time charge to earnings
- This is true REGARDLESS of each FHLB’s individual policies
- Banks in all 12 FHLB districts have done restructurings this way in the last 12 months
- Most common restructuring goals:
  - Increase duration to protect against rising rates
  - Remove call options from advances
  - Reduce current cost of funds
- In some cases, banks are able to EXTEND duration and REDUCE cost
- In other cases, banks have paid up modestly for extension or elimination of call options
- Some asset sensitive banks have restructured to floating rate, or capped floaters, to reduce cost

*Sandler O’Neill is NOT a licensed accounting advisor and the following does not represent accounting advice. The bank should consult their external auditors and/or accounting professionals for guidance on accounting treatment and impact of any proposed transactions.
Using secondary market for brokered CDs

- Brokered CD liabilities can be transferred from the issuing bank to another bank, subject to regulatory approval.

- For banks that are TOO liquid and/or being criticized for excessive brokered CDs, this is a way to get these liabilities off the balance sheet.

- For banks that are using the brokered CD market to extend funding maturities, secondary (transfer) brokered CD transactions can be done at cheaper pricing than new issues.

- Typically take 90 days from commitment to funding.

- “Transfer” fees can be paid by either the “seller” or the “buyer”.
Strategies for reducing rising rate risk
Sources of rising rate risk and their impact

<table>
<thead>
<tr>
<th>SOURCE OF RISK</th>
<th>IMPACT ON EARNINGS</th>
<th>IMPACT ON EVE</th>
<th>IMPACT ON CAPITAL RATIOS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assets have longer maturities / repricing frequencies than liabilities</td>
<td>- Earnings will compress as liabilities reprice higher more quickly than assets</td>
<td>- EVE will decline since assets will lose more value than liabilities will gain, due to the &quot;duration gap&quot; between them</td>
<td>- Tangible equity will decline as rates rise due to drop in value of AFS securities and loans HFS, with no offsetting liability gains</td>
</tr>
<tr>
<td></td>
<td>- Impact may not be immediate but will eventually be felt</td>
<td></td>
<td>- Other regulatory ratios not impacted since OCI is backed out of denominator</td>
</tr>
</tbody>
</table>
| Increase in Fixed Rate Lending (New Loans / Disintermediation of Floating Rate Loans) | - Earnings will initially increase due to high yields on fixed rate loans (steep yield curve)  
- However, earnings will eventually compress as funding reprices faster than assets | - EVE will decline since assets will lose more value than liabilities will gain | - Minimal, unless new loans are HFS and therefore marked to market |
| "Floors" in floating rate commercial / CRE loans                             | - Earnings will compress when short-term rates begin to rise, as yield on "floored" loans does not increase until rates break through the floors  
- Once this occurs, earnings should level off – however the initial decline in NIM is permanent | - EVE should decline as rates rise since the "value of the embedded floors in the loans declines"  
- However, highly unlikely that most banks accurately reflect this in their EVE calculation | - Minimal |
| Call / put / prepayment options that extend asset duration and shorten funding duration | - Earnings will likely compress as assets extend and liabilities shorten  
- Timing of this could be quite far in the future depending on when options are exercisable  
- Standard 2 year NIM simulations could show little impact if option exercise beyond that time frame | - EVE should decline as assets lose more value than liabilities gain due to the growing "duration gap" between them | - Tangible equity will decline as rates rise due to drop in value of AFS securities and loans HFS, with no offsetting liability gains  
- Other regulatory ratios not impacted since OCI is backed out of denominator |
| Disintermediation of Non-Maturity Deposits (NMD) into short-term time deposits | - Earnings will likely compress immediately since time deposits typically more expensive than MMDA, DDA and savings accounts  
- Earnings will continue to compress going forward due to diminished ability to "lag" the market on time deposits vs non-maturity deposits (higher deposit repricing "betas") | - EVE should decline since short-term deposits do not appreciate as much as NMD in a rising-rate environment  
- This is highly subjective, however, based on how bank measures market value of NMD | - Minimal |
On Balance Sheet Tactics: The Basics

• Banks generally first try to adjust their interest rate risk by changing their customer loan / deposit mix, e.g. more floating rate loans and longer term CDs

• This is difficult, and takes time to implement. (This presentation assumes the bank has exhausted all means of doing so)

• Changing the IRR position is easily done using the capital markets, by changing and/or adding to the securities portfolio, wholesale funding and brokered CD’s.

• Changing existing positions typically requires unwinding (selling) assets or liabilities. This could generate one-time gains / losses that factor into the decision.

• Adding to bond portfolio / wholesale funding depends on the bank’s cash position:
  
  - **Net Borrowed:** Add wholesale funding
  - **Net Long Cash:** Add securities
  - **Neither:** Add leverage (both securities and funding)

• Adding leverage requires that the bank have excess capital, another consideration when making the decision as to what to do
### On-Balance Sheet Tactics for Reducing Rising Rate Risk

<table>
<thead>
<tr>
<th>Strategy</th>
<th>IMPACT ON CURRENT EARNINGS</th>
<th>IMPACT ON EARNINGS AT RISK</th>
<th>IMPACT ON EVE</th>
<th>IMPACT ON CAPITAL RATIOS</th>
<th>ACCOUNTING ISSUES*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Restructure bond portfolio to shorten duration</strong></td>
<td>• More likely to take a one-time gain than loss since selling long-duration bonds in a low yield market environment • Could significantly reduce earnings going forward due to steep yield curve and yield giveup)</td>
<td>• Earnings at risk should decline due to the shorter duration of the new securities</td>
<td>• EVE should be more stable since new securities will lose less value than old securities</td>
<td>• Regulatory ratios will be impacted by the gain / loss • Tangible equity unchanged • RBC ratio impact depends on risk-weights of old/new bonds • Protects tangible equity (lower future unrealized AFS losses</td>
<td>• FAS 115 • HTM &quot;tainting&quot;</td>
</tr>
<tr>
<td><strong>Restructure wholesale funding to extend duration / reduce option risk</strong></td>
<td>• If structured as Extinguishment, will likely generate a one-time loss • If structured as Modification, no one-time charges • Earnings impact going forward depends on cost of old borrowings and Extinguishment vs. Modification</td>
<td>• Earnings at risk should decline due to the longer duration of the new funding</td>
<td>• EVE more stable since new funding gains more value than old funding</td>
<td>• Regulatory capital and tangible equity will be impacted by the G/L • No benefit to tangible equity if rates rise (Funding is not marked-to-market, so no gains to offset unrealized security losses in OCI)</td>
<td>• ASC/470-50, codification of guidance originally issued under EITF 96-19</td>
</tr>
<tr>
<td><strong>&quot;Pre-refinance&quot; maturing borrowings</strong></td>
<td>• Will reduce current earnings due to negative carry from parking cash from new borrowings</td>
<td>• Earnings at risk should decline due to the longer funding</td>
<td>• EVE should be more stable since new funding will gain more value than old funding</td>
<td>• Regulatory capital and tangible equity will decline during the pre-refunded period because the balance sheet is grown temporarily</td>
<td>• None</td>
</tr>
<tr>
<td><strong>Delever by selling longer-duration assets and unwinding / running off shorter-duration funding</strong></td>
<td>• One-time gain / loss depends on market value of instruments unwound, but more likely a net gain in this environment • Most likely has negative impact on earnings going forward unless deleveraging eliminates negative carry (assets sold yielded less than cost of unwind funding) • Generally can achieve one OR the other, more difficult to achieve both</td>
<td>• Earnings at risk should decline since bank unwind longer assets than funding</td>
<td>• EVE should be more stable since the bank took a duration gap off the balance sheet</td>
<td>• Regulatory ratios will be impacted by the net G/L taken on assets and funding • If assets sold are AFS bonds, tangible equity will be impacted only by funding G/L • If assets sold are loans, impact on tangible equity will depend on whether loans were HFS • Tangible equity protected going forward if AFS bonds sold</td>
<td>• FAS 115 • HTM &quot;tainting&quot; • Reserve recapture (loans) • Issues if loans were not HFS</td>
</tr>
<tr>
<td><strong>Add growth / leverage, with short assets funded with longer liabilities</strong></td>
<td>• No one-time gains / losses • Impact on go-forward earnings probably positive, but less so than if funding was shorter than assets since with a steep yield curve • Could be done at zero or negative spread if done as a hedge against rising rates</td>
<td>• EAR should decline since as rates rise, transaction NII rises, offsetting lost earnings</td>
<td>• EVE stable since bank added a negative duration gap (longer liabilities appreciate more than shorter assets depreciate)</td>
<td>• Tangible and leverage capital will decline due to balance sheet growth • Impact on RBC depends on risk-weight of new assets</td>
<td>• None</td>
</tr>
</tbody>
</table>
| **Structured Funding or Investments w/ Embedded Caps** | • Go-forward earnings lower than using generic funding / investments due to cost of embedded caps | • Earnings at risk should decline due to impact of caps | • EVE should be improved due to appreciate in value of embedded caps | • If replacement liability, has no impact • If replacement bond, will improve tangible equity but not regulatory capital • If done in leverage will reduce all capital ratios | • ASC/815, codification of guidance originally issued under FAS133 deals with "embedded derivatives"
Off-Balance Sheet Tactics – The basics

• Hedging rising rate risk off-balance sheet generally involves interest rate swaps and/or caps:
  • **Swaps**: Pay a fixed rate and receive a floating rate; Often used to convert floating rate liabilities to fixed or convert fixed rate loans to floating
  • **Caps**: Pay up-front premium for protection against an index rate rising above a level

• If executed without hedge accounting, these instruments must be marked through earnings, creating potential income/capital volatility and generally only used in this way to offset trading positions. We do not consider this option in this presentation.

• If executed using hedge accounting, mark-to-market stays on-balance sheet and flows through OCI, providing a natural tangible equity hedge versus AFS securities (One of the only ways to protect tangible equity if rates rise)

• If hedge is not perfect, the “ineffectiveness” is marked to market and goes through earnings

• In a normal yield curve environment, swaps and caps impact earnings differently as follows:
  • **Interest rate swaps**: Immediately decrease earnings due to negative carry between fixed rate paid and floating rate received (unless forward-starting)
  • **Interest rate caps**: Premium paid up-front but deferred and amortized in a backloaded fashion, which creates very little cost in early years and higher cost in later years

• Very balance-sheet efficient way to hedge both EAR and VAR if accounting works

• Banks should only use counterparties who will post liquid collateral to cover their counterparty risk
### Using Interest Rate Swaps to reduce rising rate risk

<table>
<thead>
<tr>
<th>WHAT ARE WE HEDGING?</th>
<th>IMPACT ON CURRENT EARNINGS</th>
<th>IMPACT ON EARNINGS AT RISK</th>
<th>IMPACT ON EVE</th>
<th>IMPACT ON CAPITAL RATIOS</th>
<th>ACCOUNTING AND OTHER ISSUES*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Libor-based floating rate Trust Preferreds issued by the bank</td>
<td>▪ Decline, since fixed rate paid on swap higher than initial floating rate received (steep yield curve)</td>
<td>▪ Improved – TruPS are now at a fixed rate</td>
<td>▪ Improved since swap should appreciate in value as rates rise</td>
<td>▪ Improves tangible equity as rates rise since appreciation flows through OCI</td>
<td>▪ Cash Flow hedge under ASC/815 (FAS133)</td>
</tr>
<tr>
<td>Short-term FHLB advances, repo or brokered CD’s</td>
<td>▪ Decline, since fixed rate paid on swap higher than initial floating rate received (steep yield curve)</td>
<td>▪ Improved – advances / repo / CD’s are now at a fixed rate</td>
<td>▪ Improved since swap should appreciate in value as rates rise</td>
<td>▪ Improves tangible equity as rates rise since appreciation flows through OCI</td>
<td>▪ Cash Flow hedge under ASC/815 (FAS133)</td>
</tr>
<tr>
<td>Interest-bearing non-maturity deposits such as MMDA and Savings</td>
<td>▪ Decline, since fixed rate paid on swap higher than initial floating rate received (steep yield curve)</td>
<td>▪ Improved once Libor rises above the strike rate (after factoring in premium amortization)</td>
<td>▪ Improved since cap should appreciate in value as rates rise</td>
<td>▪ Improves tangible equity as rates rise since appreciation flows through OCI</td>
<td>▪ Run regression to see if correlation between bank rate and cap index sufficient to qualify as a hedge</td>
</tr>
<tr>
<td>Term borrowings to be issued in the future (&quot;Rate Locks&quot;)</td>
<td>▪ None</td>
<td>▪ Improved – bank has locked in cost of future funding</td>
<td>▪ Improved since swap should appreciate rates rise</td>
<td>▪ Improves tangible equity as rates rise since appreciation flows through OCI</td>
<td>▪ Deposit do not need to be pegged to index, but need to track them closely going forward</td>
</tr>
<tr>
<td>Swapping Fixed Rate Loans to Floating</td>
<td>▪ Decline (fixed rate paid on swap higher than floating rate)</td>
<td>▪ Improved – loan is now floating rate</td>
<td>▪ Improved since swap should appreciate as rates rise</td>
<td>▪ Improves tangible equity as rates rise since appreciation flows through OCI</td>
<td>▪ Special circumstances if debt is not issued, or issued at different term or date than the hedge</td>
</tr>
</tbody>
</table>

* Cash Flow hedge of "forecasted transaction"
* Swap is "cash settled" at the start date, with gain/loss amortized over life of new debt
* Special circumstances if debt is not issued, or issued at different term or date than the hedge
* Consult Pars 463-467 of FAS133 and DIG G19 and Pars. 463-467 of FAS133
* Advantages of fixed rate term funding in same market:
  - Long-term credit spreads may be wider than short term – this eliminates that
  - Can be unwound at a profit if rates rise

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Sandler O’Neill + Partners
Using Interest Rate Caps to reduce rising rate risk

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<td>Libor-based floating rate Trust Preference issued by the bank</td>
<td>Very little, since cost recognition for premium is “back-ended” meaning little cost in the first year</td>
<td>Improved once Libor rises above the strike rate (after factoring in premium amortization)</td>
<td>Improved since cap should appreciate in value as rates rise</td>
<td>Improves tangible equity as rates rise since appreciation flows through OCI</td>
<td>Cash Flow hedge under ASC/815 (FAS133)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SLIGHTLY reduces regulatory capital ratios since carried on balance sheet at Fair Value (grows the balance sheet)</td>
<td>Must match reset dates and other relevant terms</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Bank will lose hedge designation if they call the TruPS or need to defer dividends</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Consult DIG Issue G29 and Pars. 463-467 of FAS133</td>
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<td>Short-term FHLB advances, repo or brokered CD’s</td>
<td>Very little, since cost recognition for premium is “back-ended” meaning little cost in the first year</td>
<td>Improved once Libor rises above the strike rate (after factoring in premium amortization)</td>
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<td></td>
<td></td>
<td></td>
<td>SLIGHTLY reduces regulatory capital ratios since carried on balance sheet at Fair Value (grows the balance sheet)</td>
<td>Must roll the funding over every quarter, matching reset and settlement dates exactly</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Bank will lose hedge designation if they do not roll the funding</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<td>Consult DIG Issue G19 and Pars. 463-467 of FAS133</td>
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<td>Interest-bearing non-maturity deposits such as MMDA and Savings</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Management assertion about tracking the index is helpful</td>
</tr>
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<td></td>
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<td></td>
<td></td>
<td>Consult DIG Issue G26</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Will almost certainly have some ineffectiveness going through earnings unless deposit rate is “pegged” to the index</td>
</tr>
</tbody>
</table>
Example #1

- A mid-sized bank presented themselves as being exposed to rising interest rates
  - **SYMPTOMS:** Bank showed a 12% decline in NII in an +300 rising rate environment
  - **DIAGNOSIS:** Exposure comes from combination of floors in loans, and fundamentally longer assets than liabilities
  - **VITAL SIGNS:** The bank has small cash position and is well-capitalized, but not excessively so. The bank has a sizeable investment portfolio showing some gains, with book yield just over 4%. The bank has a large amount of FHLB advances maturing in the next 18 months and expects to roll the borrowings over; Bank also has longer-term putable FHLB advances at high costs
  - **ALLERGIES:** Bank can’t take losses but is willing to give up some current earnings. Bank will NOT use derivatives.
  - **THE PRESCRIPTION:** Sandler O’Neill addressed the bank’s interest rate risk issues as follows:
    - Sold longer-term MBS at a profit
    - Prepaid enough longer-term FHLB advances to soak up the gains through prepayment penalties
    - Reinvested the remaining cash proceeds into short-duration CMO’s and floating rate SBA pools.
    - Restructured the shorter FHLB advances through a “Modification” transaction which extended duration

■ The results?
  - *The bank was able to significantly reduce their rising rate risk, both NII and EVE, due to shorter bond portfolio duration and longer funding duration*
  - No one-time gain/loss
  - Reduced yield on reinvested securities by 150bp
  - Eliminated borrowings that were at an average cost of over 4%
  - Reduced cost of restructured borrowings by 40bp
  - **NET EARNINGS RESULT:** Bank reduced current NII modestly, while cutting their NII volatility in half
Example #2

- A small, troubled community bank presented themselves as being exposed to rising interest rates
  - **SYMPTOMS:** Bank showed such significant volatility to rising rates, both on NII and EVE volatility, and is so tight on tangible equity that they were ordered by their regulators to fix the problem
  - **DIAGNOSIS:** Exposure comes from having a traditional thrift-like balance sheet, with mortgage loans and MBS funded with interest-bearing NMD and short-term CD’s
  - **VITAL SIGNS:** The bank has no asset-based liquidity, limited borrowing capacity and is operating under a regulatory order to improve capital; Investment portfolio underwater since bonds are primarily non-agency MBS; The bank has no brokered CD’s or short-term borrowings; The bank has substantial interest-bearing NMD that are NOT pegged but have historically shown correlation to Libor. Bank condition makes it unlikely that they could get credit to do interest rate swaps. The bank has no short-term borrowings.
  - **ALLERGIES:** Bank can't take losses or add leverage due to tight capital; Bank is willing to give up earnings though prefers not to
  - **THE PRESCRIPTION:** This bank’s ONLY option was to purchase interest rate caps. The bank understands they will incur ineffectiveness if they don’t move their deposit rates in lockstep with Libor.

**The results?**

- The bank was able to significantly reduce their rising rate risk, both NII and EVE, without materially impacting current capital or earnings
- The bank added protection against a decline in tangible equity due to AFS portfolio since cap will be marked through OCI
A small regional bank presented themselves as being exposed to rising interest rates

- **SYMPTOMS:** NII, currently at approximately $100 million, is expected to decline by $7 to $8 million if short-term rates rise 300bp; EVE and tangible equity not a concern because bank has ample capital.

- **DIAGNOSIS:** Exposure comes from having large blocks of rate-sensitive NMD as well as FHLB advances and brokered CD’s maturing in the next 18 months, AND having floors in their commercial loans that are a good 200bp in the money.

- **VITAL SIGNS:** The bank currently has $400 million in cash which could be invested and ample capital which could be levered; The bank has $30 million of floating rate Trust Preferreds, $150 million of “pegged” public deposits, and $300+ million in “unpegged” NMD.

- **ALLERGIES:** Bank is not willing to give up current earnings, is not willing to take one-time losses, and wants to pay off borrowings and brokered CD’s since they are so liquid. Bank is not opposed to using derivatives as long as hedge accounting works well.

- **THE PRESCRIPTION:** Sandler O’Neill developed a three-step strategy that will mitigate the bank’s +300 rate exposure while modestly improving current earnings, as follows:
  - Invest $200 million of cash into a structured investment (repo or agency CMO) where the yield will rise twice as fast as rates for the first 200bp or so of Fed tightening.
  - Purchase $130 million of interest rate caps, designated as hedges of the bank’s Trust Preferreds and a portion of their pegged customer repo.
  - Add $94 million of leverage using short MBS and funding with embedded caps (spread on the leverage will widen as rates rise).

### NET INCREMENTAL INCOME / EXPENSE

<table>
<thead>
<tr>
<th>Rate Shock</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flat</td>
<td>372</td>
<td>(289)</td>
<td>(1,714)</td>
</tr>
<tr>
<td>+1%</td>
<td>3,316</td>
<td>2,656</td>
<td>1,230</td>
</tr>
<tr>
<td>+2%</td>
<td>6,261</td>
<td>5,600</td>
<td>4,174</td>
</tr>
<tr>
<td>+3%</td>
<td>8,661</td>
<td>8,000</td>
<td>6,574</td>
</tr>
<tr>
<td>+4%</td>
<td>7,961</td>
<td>7,300</td>
<td>5,874</td>
</tr>
<tr>
<td>+5%</td>
<td>7,261</td>
<td>6,600</td>
<td>5,174</td>
</tr>
</tbody>
</table>

**The results? The bank completely eliminated their +300 rate sensitivity without hurting current earnings:**
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