## BankDirector. ACQUIRER ACQUIRED

# Capital Planning for Community Banks February 2, 2016 

## Presented by: <br> Rick Maroney

Managing Director \& Principal

Craig Mancinotti
Managing Director \& Principal

## CAPITAL PLANNING DEFINED

From OCC Guidance on Capital Planning - OCC 2012-16

- "Capital planning is a dynamic and ongoing process that, in order to be effective, is forward-looking in incorporating changes in a bank's strategic focus, risk tolerance levels, business plans, operating environment, or other factors that materially affect capital adequacy."
- The most effective capital planning considers both short- and longer-term capital needs and is coordinated with a bank's overall strategy and planning cycles, usually with a forecast horizon of at least two years.


## CAPITAL PLANNING

## Additional Regulatory Guidance

- OCC 2012-16: Guidance for Evaluating Capital Planning and Adequacy (July 2012)
- Every bank must have effective process to: (1) assess capital adequacy in relation to overall risks; and (ii) plan for maintaining appropriate capital levels
- OCC 2012-33: Community Bank Stress Testing
- To identify and quantify risk in the loan portfolio and help establish effective strategic and capital planning process


## CAPITAL PLANNING

## Elements from OCC 2012-16

1. Identifying and Evaluating All Material Risks
2. Setting and Assessing Capital Adequacy Goals that Relate to Risk
3. Maintaining a Strategy to Ensure Capital Adequacy and Contingency Planning
4. Ensuring Integrity in the Internal Capital Planning Process and Capital Adequacy Assessments

Supervisory Review - included in assessment of Capital and $\underline{M}$ anagement component ratings

## CAPITAL PLAN - ELEMENT \#1

Identify and Evaluate All Material Risks

| Risk Factor | Inherent <br> Risk | Risk <br> Management | Composite <br> Risk Level | Trend |
| :--- | :---: | :---: | :---: | :---: |
| Credit |  |  |  |  |
| Operational |  |  |  |  |
| Liquidity |  |  |  |  |
| Market |  |  |  |  |
| Reputational |  |  |  |  |
| Strategic |  |  |  |  |
| Legal |  |  |  |  |

- Start with regulatory risk assessment
- Customize based on bank-specific issues


## CAPITAL PLAN - ELEMENT \#2

Set and Assess Capital Adequacy Goals that Relate to Risk

- Determine capital needs in relations to risks and strategic direction
- Short-term and long-term
- Higher risk + Growth plans + Acquisitions = Higher Capital Goals
- Concentration levels and limits
- Quality of risk management, internal controls and audit processes
- Quality, sustainability and level of earnings
- Pro forma modeling (at least 2 years)


## CAPITAL PLAN - ELEMENT \#3

Determine a Strategy to Ensure Capital Adequacy and Contingency Planning

- Internal and external sources of capital
- Earnings
- Infusion of capital
- Contingency Planning
- Deleverage
- Asset Mix change
- Asset Sale
- Raise Capital
- Sell


## CAPITAL PLAN - ELEMENT \#4

Ensure Integrity in the Internal Capital Planning Process

- Capital planning must be documented
- Roles/Responsibilities of Board, Management and Audit
- Process for monitoring risk tolerance levels, capital adequacy, including board reporting and contingency plans
- Key planning assumptions and methods must be documented
- Risk exposures and concentrations
- Measures to take in response to changes in conditions
- Stress testing


## "A CRISIS IS A TERRIBLE THING TO WASTE"

Quote from noted economist Paul Romer, November 2004, referring to rapidly rising education levels in other countries compared to the U.S.

- Stress testing is an outgrowth of the "Financial Crisis"
- SCAP - Supervisory Capital Assessment Program - April 2009
- CCAR - Comprehensive Capital Analysis and Review - 2011
- DFAST - Dodd-Frank Act Stress Testing - 2013
- Initially, the largest 19 U.S. banking organizations
- "Stress Testing" has quickly "trickled down" to smaller banks
- Regulators demand strong credit risk management practices
- Stress Testing is considered a strong credit risk management practice


## CAPITAL STRESS TEST

## A Necessary Regulatory Process

- No specific method is mandated; wide range of possible acceptable methods
- For most community banks, a "simple, stressed loss-rate analysis based on call report categories may provide an acceptable foundation"
- historical loss experience during previous stressful periods
- historical market experience
- Calculate impact to earnings, ALLL and Capital ratios
- Mitigation Strategies: modify loan growth, revise risk tolerances, adjust loan mix, strengthen underwriting criteria


## STRESS TEST CASE STUDY

Quantifying the effect of stressed loss rates on reserves, revenue and capital

- Establish internal capital targets to measure against projections
$\checkmark$ Tier 1 leverage, Tier 1 RBC, Total RBC and CET1 Ratio
- Stress Test Scenarios
$\checkmark$ Budget
$\checkmark$ Moderate
$\checkmark$ More Adverse
$\checkmark$ Acute Stress - reverse engineered scenario to estimate level of credit losses necessary to breach internal capital targets
- Determination of estimated loss rates
$\checkmark$ Start with the bank's "budget"
$\checkmark$ Historical bank, peer group and state-specific loss rates
$\checkmark$ Historical loss rates based on trailing 4, 8 and 12 quarters
$\checkmark$ Don't forget loss rates during the crisis!
- Baseline (or Budget) core operating earnings
$\checkmark$ Pre-tax, pre-provision ("PTPP") income
$\checkmark$ Impact to PTPP income in "stressed" scenarios


## STEP 1: ESTIMATING LOSS RATES

|  |  | Net Charge-Offs as a \% of Average Loans |  |  |  |  |  |  |  |  |  | Avg. Highest <br> 2 Periods |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 2006Y | 2007Y | 2008Y | 2009Y | 2010Y | 2011Y | 2012Y | 2013Y | 2014Y | 2015Y |  |
| Nation | Aggregate | 0.39\% | 0.58\% | 1.30\% | 2.47\% | 2.54\% | 1.53\% | 1.08\% | 0.69\% | 0.49\% | 0.43\% | 2.50\% |
| Ohio | Aggregate | 0.36\% | 0.52\% | 1.06\% | 2.42\% | 2.07\% | 1.17\% | 0.83\% | 0.47\% | 0.39\% | 0.29\% | 2.25\% |
|  | 25th Pct. | 0.06\% | 0.07\% | 0.10\% | 0.15\% | 0.18\% | 0.20\% | 0.16\% | 0.10\% | 0.11\% | 0.07\% | 0.19\% |
|  | Median | 0.12\% | 0.19\% | 0.23\% | 0.40\% | 0.33\% | 0.39\% | 0.33\% | 0.22\% | 0.19\% | 0.15\% | 0.37\% |
|  | 75th Pct. | 0.26\% | 0.35\% | 0.58\% | 0.82\% | 0.89\% | 0.86\% | 0.78\% | 0.46\% | 0.36\% | 0.31\% | 0.87\% |
| Peer | Aggregate | 0.25\% | 0.30\% | 0.60\% | 1.20\% | 1.10\% | 0.75\% | 0.60\% | 0.35\% | 0.20\% | 0.15\% | 1.15\% |
|  | 25th Pct. | 0.10\% | 0.15\% | 0.20\% | 0.35\% | 0.45\% | 0.40\% | 0.25\% | 0.05\% | 0.10\% | 0.05\% | 0.43\% |
|  | Median | 0.15\% | 0.25\% | 0.35\% | 0.75\% | 0.80\% | 0.55\% | 0.40\% | 0.20\% | 0.15\% | 0.10\% | 0.78\% |
|  | 75th Pct. | 0.35\% | 0.40\% | 0.65\% | 1.50\% | 1.35\% | 1.00\% | 0.75\% | 0.40\% | 0.30\% | 0.25\% | 1.43\% |
| Subject | Bank | 0.05\% | 0.10\% | 0.40\% | 0.55\% | 0.75\% | 0.90\% | 0.65\% | 0.30\% | 0.10\% | 0.05\% | 0.83\% |

Highest two consecutive NCO rates between 2006Y-2015Y
Note: Peer statistics include all banks in the peer group.
State statistics include only those banks reporting net-charge offs for each reporting period.
Due to changes in reporting, certain data may not be available for all banks for all periods. Statistics calculated based on information as available and may be based on a limited number of banks for certain periods.

## THE "ART" OF ESTIMATING LOSS RATES

- Loan portfolio categories
$\checkmark$ Stratify portfolio into categories with similar loss characteristics
$\checkmark$ Call Report categories and sub-categories works for nearly all community banks (Schedule RC-C)
$\checkmark$ Internal reporting categories and sub-categories
$\checkmark$ Need for sufficient sample size
- Historical time periods
$\checkmark$ 4-quarter, 8-quarter versus 12-quarter
$\checkmark$ Loss rates during the financial crisis to estimate "worst case"
- Loan level stress testing
$\checkmark$ High risk or "at risk" portfolios - Construction, CRE, etc.
$\checkmark$ Stress loans based on LTV, DSC, etc. (system reporting limitations)
$\checkmark$ Select sample
$\checkmark$ Extrapolate over portfolio
- Subjective adjustments nearly always appropriate and necessary


## CASE STUDY: BUDGETED/STRESSED LOSS RATES

|  | Budget |  | Moderate |  | More Adverse |  | Acute Stress |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Aggregate 2-Yr. Losses per Mngt. |  | Peer 25th Percentile |  | Peer Median |  | Peer 75th Percentile x 1.25 |  |
|  | Average Annual Est. Loss | Annual Loss Rates | Average Annual Est. Loss | Annual Loss Rates | Average Annual Est. Loss | Annual Loss Rates | Average Annual Est. Loss | Annual Loss Rates |
| 1-4 Construction Loans | \$25 | 0.25\% | \$258 | 2.65\% | \$474 | 4.98\% | \$1,100 | 12.36\% |
| Other Construction Loans | \$50 | 0.10\% | \$705 | 1.43\% | \$1,725 | 3.57\% | \$5,017 | 11.15\% |
| Construction \& Land Development | \$75 | 0.13\% | \$963 | 1.63\% | \$2,199 | 3.80\% | \$6,117 | 11.35\% |
| Loans Secured by Farmland | \$0 | 0.00\% | \$125 | 0.31\% | \$452 | 1.14\% | \$1,195 | 3.08\% |
| Revolving 1-4 Family (HE Lines) | \$75 | 0.15\% | \$125 | 0.25\% | \$315 | 0.63\% | \$740 | 1.50\% |
| Closed End First Lien 1-4 Family | \$100 | 0.10\% | \$155 | 0.16\% | \$360 | 0.36\% | \$940 | 0.95\% |
| Closed End Junior Lien 1-4 Family | \$38 | 0.38\% | \$61 | 0.61\% | \$144 | 1.46\% | \$367 | 3.81\% |
| Total 1-4 Family | \$213 | 0.13\% | \$341 | 0.21\% | \$819 | 0.51\% | \$2,047 | 1.30\% |
| Multifamily | \$13 | 0.02\% | \$505 | 0.68\% | \$1,100 | 1.49\% | \$2,785 | 3.86\% |
| Secured by Owner-Occupied CRE | \$25 | 0.02\% | \$360 | 0.24\% | \$990 | 0.66\% | \$2,585 | 1.75\% |
| Secured by Other CRE Properties | \$25 | 0.02\% | \$690 | 0.54\% | \$1,470 | 1.17\% | \$5,125 | 4.19\% |
| Nonfarm/Nonresidential Loans | \$0 | 0.00\% | \$1,050 | 0.38\% | \$2,460 | 0.89\% | \$7,710 | 2.86\% |
| Total Real Estate Loans | \$300 | 0.05\% | \$2,984 | 0.49\% | \$7,030 | 1.16\% | \$19,854 | 3.35\% |
| Commercial \& Industrial | \$135 | 0.08\% | \$625 | 0.36\% | \$1,900 | 1.10\% | \$6,150 | 3.64\% |
| Credit Card Loans | \$0 | 0.00\% | \$41 | 1.65\% | \$70 | 2.86\% | \$163 | 6.99\% |
| Other Consumer Loans | \$10 | 0.14\% | \$29 | 0.42\% | \$56 | 0.81\% | \$129 | 1.87\% |
| Total Consumer Loans | \$10 | 0.11\% | \$70 | 0.74\% | \$126 | 1.34\% | \$292 | 3.17\% |
| Total Other Loans | \$5 | 0.17\% | \$47 | 1.59\% | \$207 | 7.42\% | \$762 | 34.03\% |
| Total Loans | \$500 | 0.06\% | \$3,726 | 0.47\% | \$9,263 | 1.17\% | \$27,057 | 3.50\% |
| Total Estimated 2-Year Losses | \$1,000 | 0.13\% | \$7,451 | 0.94\% | \$18,526 | 2.34\% | \$54,115 | 7.00\% |

## STEP 2: KEY MODEL INPUTS

Quantifying the effect of stressed loss rates on reserves, revenue and capital

- Estimated credit losses based on preceding analysis
- PTPP Income
$\checkmark$ Budget scenario is the "baseline" plus 3 stressed scenarios
$\checkmark$ Adjust PTPP income for reduction in interest income due to NCO's, increase in loan collection costs and balance sheet deleveraging
- ALLL Level
$\checkmark$ Beginning ALLL is the same in all scenarios
$\checkmark$ Projected ALLL increases in stressed scenarios
- Balance Sheet reduction in stressed scenarios
$\checkmark$ Projected loan balances
$\checkmark$ Historical practice during financial crisis
$\checkmark$ Need to consider NCOs and liquidity needs
- Dividends - present level and projected level in stressed scenarios


## CASE STUDY: KEY MODEL INPUTS

|  | Budget | Moderate | More Adverse | Acute Stress |
| :---: | :---: | :---: | :---: | :---: |
|  | Aggregate 2-Yr. Losses per Management | Peer 25th Percentile | Peer Median | Peer 75th Percentile x 1.25 |
| Total Estimated 2-Year Losses | \$1,000 | \$7,451 | \$18,526 | \$54,115 |
| Annual Loss Rate | 0.06\% | 0.47\% | 1.17\% | 3.50\% |
| Two-Year Loss Rate | 0.13\% | 0.94\% | 2.34\% | 7.00\% |
| 12/31/2017 Loan Balance | \$950,000 | \$906,049 | \$857,475 | \$671,885 |
| 12/31/2017 Tangible Assets | \$1,134,000 | \$1,100,500 | \$1,067,000 | \$933,000 |
| Projected ALLL / Total Loan Ratio | 1.50\% | 1.84\% | 2.19\% | 3.14\% |
| ALLL on 12/31/2017 Loan Balance | \$14,250 | \$16,694 | \$18,736 | \$21,095 |
| 2-Year PTPP Projection | \$35,000 | \$33,362 | \$31,579 | \$24,795 |
| Bank Dividend Distribution | \$16,000 | \$16,000 | \$12,000 | \$0 |

## CALCULATION OF "RESOURCES TO ABSORB LOSSES"

|  | Budget | Moderate | More Adverse | Acute Stress |
| :---: | :---: | :---: | :---: | :---: |
| Subject Bank | Aggregate 2-Yr. Losses per Management | Peer 25th Percentile | Peer Median | Peer 75th Percentile x 1.25 |
| Bank's Two-Year PTPP Projection (1) | \$35,000 | \$33,362 | \$31,579 | \$24,795 |
| Plus: Actual 12/31/2015 ALLL | \$12,500 | \$12,500 | \$12,500 | \$12,500 |
| Minus: ALLL on 12/31/2017 Loans | (\$14,250) | (\$16,694) | (\$18,736) | (\$21,095) |
| Total Resources to Absorb Losses | \$33,250 | \$29,168 | \$25,343 | \$16,200 |
| Minus: Estimated 2-Year Losses | (\$1,000) | (\$7,451) | $(\$ 18,526)$ | (\$54,115) |
| Net Resources After Losses | \$32,250 | \$21,717 | \$6,818 | $(\$ 37,915)$ |
| Net After-Tax Resources (2) | \$20,963 | \$14,116 | \$4,431 | $(\$ 24,645)$ |
| 2-Year Dividend Distribution | (\$16,000) | $(\$ 16,000)$ | $(\$ 12,000)$ | \$0 |

${ }^{(1)}$ PTTP for Budget Scenario is based on projected financial performance as provided by management. PTTP = Pre-Tax Pre-Provision (net interest income + noninterest income - noninterest expense). Represents earnings capacity that can be applied to capital or loan losses.
${ }^{(2)}$ Based on a $35.0 \%$ tax rate.

## CASE STUDY: PRO FORMA CAPITAL RATIOS

|  | Budget |  |  | Moderate |  |  | More Adverse |  |  | Acute Stress |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
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|  | 2015 <br> WellCapitalized Guidelines | Fully <br> Phased-In <br> Capital Guidelines |  | 2015 <br> Well- <br> Capitalized <br> Guidelines | Fully <br> Phased-In <br> Capital <br> Guidelines |  | 2015 <br> Well- <br> Capitalized <br> Guidelines | Fully <br> Phased-In <br> Capital <br> Guidelines |  | 2015 <br> Well- <br> Capitalized Guidelines | Fully <br> Phased-ln <br> Capital <br> Guidelines |  |
| Target Leverage Ratio | 5.00\% | 5.00\% | 8.00\% | 5.00\% | 5.00\% | 8.00\% | 5.00\% | 5.00\% | 8.00\% | 5.00\% | 5.00\% | 8.00\% |
| Pro Forma Leverage Ratio |  | 9.26\% |  |  | 8.92\% |  |  | 8.66\% |  |  | 8.08\% |  |
| Excess/(Deficit) | \$48,263 | \$48,263 | \$14,243 | \$43,091 | \$43,091 | \$10,076 | \$39,081 | \$39,081 | \$7,071 | \$28,705 | \$28,705 | \$715 |
| Target Tier 1 Risk-Based Ratio | 8.00\% | 8.50\% | 10.00\% | 8.00\% | 8.50\% | 10.00\% | 8.00\% | 8.50\% | 10.00\% | 8.00\% | 8.50\% | 10.00\% |
| Pro Forma Tier 1 Risk-Based Ratio |  | 11.57\% |  |  | 11.14\% |  |  | 10.83\% |  |  | 10.10\% |  |
| Excess/(Deficit) | \$32,387 | \$27,851 | \$14,243 | \$27,684 | \$23,282 | \$10,076 | \$24,143 | \$19,875 | \$7,071 | \$15,643 | \$11,911 | \$715 |
| Target Total Risk-Based Ratio | 10.00\% | 10.50\% | 12.00\% | 10.00\% | 10.50\% | 12.00\% | 10.00\% | 10.50\% | 12.00\% | 10.00\% | 10.50\% | 12.00\% |
| Pro Forma Total Risk-Based Ratio |  | 12.82\% |  |  | 12.39\% |  |  | 12.08\% |  |  | 11.35\% |  |
| Excess/(Deficit) | \$25,583 | \$21,047 | \$7,439 | \$21,081 | \$16,679 | \$3,473 | \$17,741 | \$13,473 | \$669 | \$10,045 | \$6,313 | $(\$ 4,883)$ |
| Target CET1 Risk-Based | 6.50\% | 7.00\% | 8.50\% | 6.50\% | 7.00\% | 8.50\% | 6.50\% | 7.00\% | 8.50\% | 6.50\% | 7.00\% | 8.50\% |
| Pro Forma CET1 Risk-Based |  | 11.57\% |  |  | 11.14\% |  |  | 10.83\% |  |  | 10.10\% |  |
| Excess/(Deficit) | \$45,995 | \$41,459 | \$27,851 | \$40,890 | \$36,488 | \$23,282 | \$36,947 | \$32,679 | \$19,875 | \$26,839 | \$23,107 | \$11,911 |

**Fully phased-in capital guidelines include a capital conservation buffer which increases in each annual period to $2.5 \%$ in 2019 .

## AUSTIN ASSOCIATES OVERVIEW

Consulting and Investment Bankers to Community Banks

- Community bank advisors for more than 40 years
- Specialized services through multiple practice areas

Investment Banking

## Strategic Consulting

Financial Management
Technology Solutions

- Owners are consultants/managers
- Over 200 bank/thrift clients in 2015 from 28 states
- Nationally-ranked leader in community bank M\&A for 4 decades


## PRESENTERS

## Managing Directors of Investment Banking

## Craig Mancinotti

- Joined the firm in 1982 and co-manages the firm's Investment Banking and Strategic Consulting divisions.
- Served as an instructor at the Stonier Graduate School of Banking and the Bank Administration Institute School.
- Served for 10 years as a director of a $\$ 400$ million Midwest community bank.
- Annual speaker at Bank Directors' "Acquire or Be Acquired" conferences.
- Licensed rep of IBS (a registered broker dealer) and holds Series 63 and 79 (Investment Banking) licenses.


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# Craig Mancinotti 

Managing Director \& Principal Investment Banking \& Consulting

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## CAPITAL PLAN - ELEMENT \#1

Identify and Evaluate All Material Risks

| Risk Factor | Inherent <br> Risk | Risk <br> Management | Composite <br> Risk Level | Trend |
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| Credit |  |  |  |  |
| Operational |  |  |  |  |
| Liquidity |  |  |  |  |
| Market |  |  |  |  |
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| Legal |  |  |  |  |

- Start with regulatory risk assessment
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|  | 25th Pct. | 0.06\% | 0.07\% | 0.10\% | 0.15\% | 0.18\% | 0.20\% | 0.16\% | 0.10\% | 0.11\% | 0.07\% | 0.19\% |
|  | Median | 0.12\% | 0.19\% | 0.23\% | 0.40\% | 0.33\% | 0.39\% | 0.33\% | 0.22\% | 0.19\% | 0.15\% | 0.37\% |
|  | 75th Pct. | 0.26\% | 0.35\% | 0.58\% | 0.82\% | 0.89\% | 0.86\% | 0.78\% | 0.46\% | 0.36\% | 0.31\% | 0.87\% |
| Peer | Aggregate | 0.25\% | 0.30\% | 0.60\% | 1.20\% | 1.10\% | 0.75\% | 0.60\% | 0.35\% | 0.20\% | 0.15\% | 1.15\% |
|  | 25th Pct. | 0.10\% | 0.15\% | 0.20\% | 0.35\% | 0.45\% | 0.40\% | 0.25\% | 0.05\% | 0.10\% | 0.05\% | 0.43\% |
|  | Median | 0.15\% | 0.25\% | 0.35\% | 0.75\% | 0.80\% | 0.55\% | 0.40\% | 0.20\% | 0.15\% | 0.10\% | 0.78\% |
|  | 75th Pct. | 0.35\% | 0.40\% | 0.65\% | 1.50\% | 1.35\% | 1.00\% | 0.75\% | 0.40\% | 0.30\% | 0.25\% | 1.43\% |
| Subject | Bank | 0.05\% | 0.10\% | 0.40\% | 0.55\% | 0.75\% | 0.90\% | 0.65\% | 0.30\% | 0.10\% | 0.05\% | 0.83\% |

Highest two consecutive NCO rates between 2006Y-2015Y
Note: Peer statistics include all banks in the peer group.
State statistics include only those banks reporting net-charge offs for each reporting period.
Due to changes in reporting, certain data may not be available for all banks for all periods. Statistics calculated based on information as available and may be based on a limited number of banks for certain periods.

## THE "ART" OF ESTIMATING LOSS RATES

- Loan portfolio categories
$\checkmark$ Stratify portfolio into categories with similar loss characteristics
$\checkmark$ Call Report categories and sub-categories works for nearly all community banks (Schedule RC-C)
$\checkmark$ Internal reporting categories and sub-categories
$\checkmark$ Need for sufficient sample size
- Historical time periods
$\checkmark$ 4-quarter, 8-quarter versus 12-quarter
$\checkmark$ Loss rates during the financial crisis to estimate "worst case"
- Loan level stress testing
$\checkmark$ High risk or "at risk" portfolios - Construction, CRE, etc.
$\checkmark$ Stress loans based on LTV, DSC, etc. (system reporting limitations)
$\checkmark$ Select sample
$\checkmark$ Extrapolate over portfolio
- Subjective adjustments nearly always appropriate and necessary


## CASE STUDY: BUDGETED/STRESSED LOSS RATES

|  | Budget |  | Moderate |  | More Adverse |  | Acute Stress |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Aggregate 2-Yr. Losses per Mngt. |  | Peer 25th Percentile |  | Peer Median |  | Peer 75th Percentile x 1.25 |  |
|  | Average Annual Est. Loss | Annual Loss Rates | Average Annual Est. Loss | Annual Loss Rates | Average Annual Est. Loss | Annual Loss Rates | Average Annual Est. Loss | Annual Loss Rates |
| 1-4 Construction Loans | \$25 | 0.25\% | \$258 | 2.65\% | \$474 | 4.98\% | \$1,100 | 12.36\% |
| Other Construction Loans | \$50 | 0.10\% | \$705 | 1.43\% | \$1,725 | 3.57\% | \$5,017 | 11.15\% |
| Construction \& Land Development | \$75 | 0.13\% | \$963 | 1.63\% | \$2,199 | 3.80\% | \$6,117 | 11.35\% |
| Loans Secured by Farmland | \$0 | 0.00\% | \$125 | 0.31\% | \$452 | 1.14\% | \$1,195 | 3.08\% |
| Revolving 1-4 Family (HE Lines) | \$75 | 0.15\% | \$125 | 0.25\% | \$315 | 0.63\% | \$740 | 1.50\% |
| Closed End First Lien 1-4 Family | \$100 | 0.10\% | \$155 | 0.16\% | \$360 | 0.36\% | \$940 | 0.95\% |
| Closed End Junior Lien 1-4 Family | \$38 | 0.38\% | \$61 | 0.61\% | \$144 | 1.46\% | \$367 | 3.81\% |
| Total 1-4 Family | \$213 | 0.13\% | \$341 | 0.21\% | \$819 | 0.51\% | \$2,047 | 1.30\% |
| Multifamily | \$13 | 0.02\% | \$505 | 0.68\% | \$1,100 | 1.49\% | \$2,785 | 3.86\% |
| Secured by Owner-Occupied CRE | \$25 | 0.02\% | \$360 | 0.24\% | \$990 | 0.66\% | \$2,585 | 1.75\% |
| Secured by Other CRE Properties | \$25 | 0.02\% | \$690 | 0.54\% | \$1,470 | 1.17\% | \$5,125 | 4.19\% |
| Nonfarm/Nonresidential Loans | \$0 | 0.00\% | \$1,050 | 0.38\% | \$2,460 | 0.89\% | \$7,710 | 2.86\% |
| Total Real Estate Loans | \$300 | 0.05\% | \$2,984 | 0.49\% | \$7,030 | 1.16\% | \$19,854 | 3.35\% |
| Commercial \& Industrial | \$135 | 0.08\% | \$625 | 0.36\% | \$1,900 | 1.10\% | \$6,150 | 3.64\% |
| Credit Card Loans | \$0 | 0.00\% | \$41 | 1.65\% | \$70 | 2.86\% | \$163 | 6.99\% |
| Other Consumer Loans | \$10 | 0.14\% | \$29 | 0.42\% | \$56 | 0.81\% | \$129 | 1.87\% |
| Total Consumer Loans | \$10 | 0.11\% | \$70 | 0.74\% | \$126 | 1.34\% | \$292 | 3.17\% |
| Total Other Loans | \$5 | 0.17\% | \$47 | 1.59\% | \$207 | 7.42\% | \$762 | 34.03\% |
| Total Loans | \$500 | 0.06\% | \$3,726 | 0.47\% | \$9,263 | 1.17\% | \$27,057 | 3.50\% |
| Total Estimated 2-Year Losses | \$1,000 | 0.13\% | \$7,451 | 0.94\% | \$18,526 | 2.34\% | \$54,115 | 7.00\% |

## STEP 2: KEY MODEL INPUTS

Quantifying the effect of stressed loss rates on reserves, revenue and capital

- Estimated credit losses based on preceding analysis
- PTPP Income
$\checkmark$ Budget scenario is the "baseline" plus 3 stressed scenarios
$\checkmark$ Adjust PTPP income for reduction in interest income due to NCO's, increase in loan collection costs and balance sheet deleveraging
- ALLL Level
$\checkmark$ Beginning ALLL is the same in all scenarios
$\checkmark$ Projected ALLL increases in stressed scenarios
- Balance Sheet reduction in stressed scenarios
$\checkmark$ Projected loan balances
$\checkmark$ Historical practice during financial crisis
$\checkmark$ Need to consider NCOs and liquidity needs
- Dividends - present level and projected level in stressed scenarios


## CASE STUDY: KEY MODEL INPUTS

|  | Budget | Moderate | More Adverse | Acute Stress |
| :---: | :---: | :---: | :---: | :---: |
|  | Aggregate 2-Yr. Losses per Management | Peer 25th Percentile | Peer Median | Peer 75th Percentile x 1.25 |
| Total Estimated 2-Year Losses | \$1,000 | \$7,451 | \$18,526 | \$54,115 |
| Annual Loss Rate | 0.06\% | 0.47\% | 1.17\% | 3.50\% |
| Two-Year Loss Rate | 0.13\% | 0.94\% | 2.34\% | 7.00\% |
| 12/31/2017 Loan Balance | \$950,000 | \$906,049 | \$857,475 | \$671,885 |
| 12/31/2017 Tangible Assets | \$1,134,000 | \$1,100,500 | \$1,067,000 | \$933,000 |
| Projected ALLL / Total Loan Ratio | 1.50\% | 1.84\% | 2.19\% | 3.14\% |
| ALLL on 12/31/2017 Loan Balance | \$14,250 | \$16,694 | \$18,736 | \$21,095 |
| 2-Year PTPP Projection | \$35,000 | \$33,362 | \$31,579 | \$24,795 |
| Bank Dividend Distribution | \$16,000 | \$16,000 | \$12,000 | \$0 |

## CALCULATION OF "RESOURCES TO ABSORB LOSSES"

|  | Budget | Moderate | More Adverse | Acute Stress |
| :---: | :---: | :---: | :---: | :---: |
| Subject Bank | Aggregate 2-Yr. Losses per Management | Peer 25th Percentile | Peer Median | Peer 75th Percentile x 1.25 |
| Bank's Two-Year PTPP Projection (1) | \$35,000 | \$33,362 | \$31,579 | \$24,795 |
| Plus: Actual 12/31/2015 ALLL | \$12,500 | \$12,500 | \$12,500 | \$12,500 |
| Minus: ALLL on 12/31/2017 Loans | (\$14,250) | (\$16,694) | (\$18,736) | (\$21,095) |
| Total Resources to Absorb Losses | \$33,250 | \$29,168 | \$25,343 | \$16,200 |
| Minus: Estimated 2-Year Losses | (\$1,000) | (\$7,451) | $(\$ 18,526)$ | (\$54,115) |
| Net Resources After Losses | \$32,250 | \$21,717 | \$6,818 | $(\$ 37,915)$ |
| Net After-Tax Resources (2) | \$20,963 | \$14,116 | \$4,431 | $(\$ 24,645)$ |
| 2-Year Dividend Distribution | (\$16,000) | $(\$ 16,000)$ | $(\$ 12,000)$ | \$0 |

${ }^{(1)}$ PTTP for Budget Scenario is based on projected financial performance as provided by management. PTTP = Pre-Tax Pre-Provision (net interest income + noninterest income - noninterest expense). Represents earnings capacity that can be applied to capital or loan losses.
${ }^{(2)}$ Based on a $35.0 \%$ tax rate.

## CASE STUDY: PRO FORMA CAPITAL RATIOS

|  | Budget |  |  | Moderate |  |  | More Adverse |  |  | Acute Stress |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total Estimated 2-Year Losses | \$1,000 |  |  | \$7,451 |  |  | \$18,526 |  |  | \$54,115 |  |  |
| Annual Loss Rate | 0.06\% |  |  | 0.47\% |  |  | 1.17\% |  |  | 3.50\% |  |  |
| 12/31/2017 Loan Balance | \$950,000 |  |  | \$906,049 |  |  | \$857,475 |  |  | \$671,885 |  |  |
| Projected ALLL / Total Loan Ratio | 1.50\% |  |  | 1.84\% |  |  | 2.19\% |  |  | 3.14\% |  |  |
| ALLL on 12/31/2017 Loan Balance | \$14,250 |  |  | \$16,694 |  |  | \$18,736 |  |  | \$21,095 |  |  |
| 2-Year PTPP Projection | \$35,000 |  |  | \$33,362 |  |  | \$31,579 |  |  | \$24,795 |  |  |
| Bank Dividend Distribution | \$16,000 |  |  | \$16,000 |  |  | \$12,000 |  |  | \$0 |  |  |
|  | 2015 <br> WellCapitalized Guidelines | Fully <br> Phased-In <br> Capital Guidelines |  | 2015 <br> Well- <br> Capitalized <br> Guidelines | Fully <br> Phased-In <br> Capital <br> Guidelines |  | 2015 <br> Well- <br> Capitalized <br> Guidelines | Fully <br> Phased-In <br> Capital <br> Guidelines |  | 2015 <br> Well- <br> Capitalized Guidelines | Fully <br> Phased-ln <br> Capital <br> Guidelines |  |
| Target Leverage Ratio | 5.00\% | 5.00\% | 8.00\% | 5.00\% | 5.00\% | 8.00\% | 5.00\% | 5.00\% | 8.00\% | 5.00\% | 5.00\% | 8.00\% |
| Pro Forma Leverage Ratio |  | 9.26\% |  |  | 8.92\% |  |  | 8.66\% |  |  | 8.08\% |  |
| Excess/(Deficit) | \$48,263 | \$48,263 | \$14,243 | \$43,091 | \$43,091 | \$10,076 | \$39,081 | \$39,081 | \$7,071 | \$28,705 | \$28,705 | \$715 |
| Target Tier 1 Risk-Based Ratio | 8.00\% | 8.50\% | 10.00\% | 8.00\% | 8.50\% | 10.00\% | 8.00\% | 8.50\% | 10.00\% | 8.00\% | 8.50\% | 10.00\% |
| Pro Forma Tier 1 Risk-Based Ratio |  | 11.57\% |  |  | 11.14\% |  |  | 10.83\% |  |  | 10.10\% |  |
| Excess/(Deficit) | \$32,387 | \$27,851 | \$14,243 | \$27,684 | \$23,282 | \$10,076 | \$24,143 | \$19,875 | \$7,071 | \$15,643 | \$11,911 | \$715 |
| Target Total Risk-Based Ratio | 10.00\% | 10.50\% | 12.00\% | 10.00\% | 10.50\% | 12.00\% | 10.00\% | 10.50\% | 12.00\% | 10.00\% | 10.50\% | 12.00\% |
| Pro Forma Total Risk-Based Ratio |  | 12.82\% |  |  | 12.39\% |  |  | 12.08\% |  |  | 11.35\% |  |
| Excess/(Deficit) | \$25,583 | \$21,047 | \$7,439 | \$21,081 | \$16,679 | \$3,473 | \$17,741 | \$13,473 | \$669 | \$10,045 | \$6,313 | $(\$ 4,883)$ |
| Target CET1 Risk-Based | 6.50\% | 7.00\% | 8.50\% | 6.50\% | 7.00\% | 8.50\% | 6.50\% | 7.00\% | 8.50\% | 6.50\% | 7.00\% | 8.50\% |
| Pro Forma CET1 Risk-Based |  | 11.57\% |  |  | 11.14\% |  |  | 10.83\% |  |  | 10.10\% |  |
| Excess/(Deficit) | \$45,995 | \$41,459 | \$27,851 | \$40,890 | \$36,488 | \$23,282 | \$36,947 | \$32,679 | \$19,875 | \$26,839 | \$23,107 | \$11,911 |

**Fully phased-in capital guidelines include a capital conservation buffer which increases in each annual period to $2.5 \%$ in 2019 .

## AUSTIN ASSOCIATES OVERVIEW

Consulting and Investment Bankers to Community Banks

- Community bank advisors for more than 40 years
- Specialized services through multiple practice areas

Investment Banking

## Strategic Consulting

Financial Management
Technology Solutions

- Owners are consultants/managers
- Over 200 bank/thrift clients in 2015 from 28 states
- Nationally-ranked leader in community bank M\&A for 4 decades


## PRESENTERS

## Managing Directors of Investment Banking

## Craig Mancinotti

- Joined the firm in 1982 and co-manages the firm's Investment Banking and Strategic Consulting divisions.
- Served as an instructor at the Stonier Graduate School of Banking and the Bank Administration Institute School.
- Served for 10 years as a director of a $\$ 400$ million Midwest community bank.
- Annual speaker at Bank Directors' "Acquire or Be Acquired" conferences.
- Licensed rep of IBS (a registered broker dealer) and holds Series 63 and 79 (Investment Banking) licenses.


## Rick Maroney

- Joined the firm in 1984 and co-manages the firm's Investment Banking and Strategic Consulting divisions.
- Served as an instructor at the Stonier Graduate School of Banking.
- Annual speaker at "Acquire or Be Acquired" conferences.
- Licensed rep of IBS (a registered broker dealer) and holds Series 63 and 79 (Investment Banking) licenses.



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