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Community Bank Valuation

Key Considerations in the Valuation of Banks and Bank Holding Companies

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Key Considerations in the Valuation of Banks and Bank Holding Companies

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Chapter 1

A Framework for Bank Valuation

This whitepaper focuses on the two issues most central to our work with depository institutions at Mercer Capital:

- What drives value for a depository institution?
- How are these drivers distilled into a value for a given depository institution?

We leave the more technical valuation discussion for subsequent chapters. At its core, though, value is a function of the following:

- A specified financial metric or metrics
- Growth
- Risk

Financial Metrics

Many industries have a valuation benchmark used by industry participants, although this metric does not necessarily cohere with benchmarks used by investors. In the banking industry, "book value" fills this role. In fact, there are several potential measures of book value, including:

- Stated shareholders' equity, as indicated in the institution's financial statements
- Tangible book value, which deducts purchase accounting intangible assets from stated shareholders' equity
- Tier 1 common equity, which is a regulatory capital measure that is less commonly used as a valuation metric

As interest rates increased in 2022 and 2023, TBV fell for most banks due to unrealized losses on securities classified as "available for sale," which flow through an equity account named "accumulated other comprehensive income" (AOCI). Some analysts have computed multiples of TBV excluding AOCI, recognizing that these unrealized losses eventually will reverse as interest rates decrease or the securities mature. While this approach has merit, it risks glossing over structural flaws in some banks' balance sheets that will impede earnings performance in coming years.

The most commonly used book value metric is tangible book value (or TBV). Like most industry benchmarks, simplicity and commonality are reasons industry participants embrace TBV as a valuation metric. Strengths of TBV as a valuation metric include:

- It is reported frequently and comparable from institution to institution.
- TBV is subject to less pronounced volatility than net income; thus, valuation multiples computed using TBV may be less prone to exaggeration when, for example, earnings are temporarily depressed.

- TBV can be used to capture the mean reversion tendencies of return on equity (ROE). For example, consider an institution with an ROE exceeding its peer group. Over time, as competitors understand and replicate its business model, these excess returns may diminish. An analyst could use TBV multiples to model potential mean reversion in ROE, which is more difficult to capture using a current period price/earnings multiple.

While TBV has its place, investors focus primarily on an institution's earnings and the growth therein. This earnings orientation occurs because investors are forward-looking, and TBV inherently is a backward-looking measure representing the sum of an institution's common stock issuances, net income, dividends, and share redemptions since its inception. In addition to being forward-looking, investors also appreciate that earnings ultimately are the source of returns to shareholders. With earnings, the institution can do any of (or a combination of) the following: [1]

- Reinvest (i.e., retain earnings), with the goal of generating higher future earnings
- Pay dividends to shareholders
- Repurchase stock, which supports the per share value by reducing the outstanding shares
- Acquire other companies. Because goodwill and intangible assets are deducted when computing regulatory capital, earnings offset the capital strain created by M&A transactions

More bluntly, investors like rising earnings and cash returns (dividends or share repurchases), which are difficult to provide without a sustainable base of strong earnings. Investors will tolerate some near-term drag on earnings from expansion or risk mitigation strategies, but their patience is not limitless.

In many industries, earnings before interest, taxes, depreciation, and amortization (EBITDA) or a similar metric is the preferred earnings measure. However, banks derive most of their revenues from interest spreads, and EBITDA is an inappropriate metric. Instead, bank investors focus on net income and earnings per share. When credit quality is distressed, investors may consider earnings metrics calculated before the loan loss provision, such as pre-tax, pre-provision operating income (PPOI).

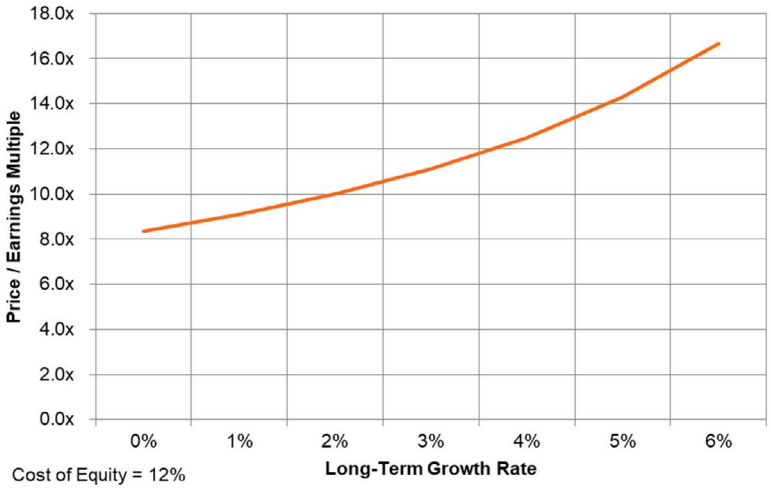
While earnings-based analyses generally should have valuation primacy in our opinion, TBV multiples nevertheless serve as an important test of reasonableness for a valuation analysis. It would be foolhardy to develop a valuation for a depository institution without calculating the TBV multiple implied by the concluded value. Analysts should be able to reconcile implied price/TBV multiples to public market or M&A market benchmarks and explain any significant discrepancies.

Occasionally, analysts cite balance sheet-based metrics beyond TBV, some of which have more analytical relevance than others. The most useful is a multiple of "core" deposits, a definition of deposits that excludes larger time deposits and deposits obtained from wholesale funding markets. Core deposits are time consuming and costly to gather; thus, a multiple of core deposits aligns a bank's value with its most attractive funding source. A less useful multiple is value as a percentage of total assets, the use of which would implicitly encourage management to stockpile assets without regard to their incremental profitability.

Growth

Investors like growth and accelerating growth even more. Without demonstrating the mathematics, higher expected growth rates produce higher valuation multiples. Further, price/earnings multiples expand at an increasing rate as growth rates increase, as indicated in the following chart.

Figure 1: Price/Earnings Multiples at Various Growth Rates



Banks report innumerable metrics to directors and investors, but what are the most relevant growth indicia to investors? Usually, investors focus on growth in the following:

- Balance sheet components like loans and deposits, which ultimately drive revenue growth
- Pre-tax, pre-provision operating income, which can eliminate volatility caused by periodic volatility in provisions for loan losses
- Net income per share
- Dividends per share
- Tangible book value per share (or TBV per share, excluding AOCI)

Valuation is inherently forward-looking, and historical growth rates are useful mostly as potential predictors of future growth. Further, most investors understand that there is some tradeoff between earnings today and investing for higher earnings in the future. While some near-term pressure on earnings from an expansion strategy is acceptable, strategic investments should not continually be used to explain below average profitability. After all, a bank's competitors likely are reinvesting as well for the future.

How does growth affect value? As a thought experiment, consider a bank with no expected growth in earnings and a 100% dividend payout ratio. Should this bank's common equity value increase? In this admittedly extreme scenario, the answer is no. This bank's common equity resembles a preferred stock investment, with a shareholder's return generated entirely by dividends. That is, for value to grow, one (or preferably more) of the preceding five factors must increase.

Should a bank prioritize growth in earnings per share, dividends per share, or another metric? The answer likely depends on the bank's shareholder base. In the public markets, investors tend to be more focused on earnings per share growth. If an investor desires income, he or she can sell shares in the public market. For privately-held banks, though, investors often are more keenly aware of dividend payments and emphasize the income potential of the investment. Of course, funding higher dividend payments requires earnings growth.

Growth creates a virtuous cycle – retained earnings lead to higher future net income, allowing for future higher dividends or additional reinvestment, and so the cycle continues. One important caveat exists, though. This virtuous cycle presumes that the retained earnings from a given year are invested in new opportunities yielding the same return on equity as the existing operations. If reinvestment occurs in lower ROE opportunities – such as liquid assets supported by excess capital beyond the level needed to operate the bank safely – then growth in value may be diminished.

This discussion of growth segues into the third key valuation factor, risk.

Risk

More than most industries, risk management is an overarching responsibility of management and the board of directors and a crucial element to long-term shareholder returns. Banks encounter the following forms of risk:

- **Credit risk**, or the risk that the bank's investments in loans and other assets may not be repaid in full or on a timely basis
- **Liquidity risk**, or the risk that arises from transforming liabilities that are due on demand (deposits) into illiquid assets (loans)
- **Interest rate risk**, or the risk attributable to assets and liabilities with mismatched pricing structures or durations
- **Operational risk**, such as from malevolent actors like computer hackers

While growth rates are observable from reported financial metrics, the risk assumed to achieve that growth often is more difficult to discern – at least in the near-term. Risk can accumulate, layer upon layer, for years until a triggering event happens, such as an economic downturn. Risk also is asymmetric in the sense that a strategy creating incremental risk, such as a new lending product, can be implemented quickly, but exiting the problems resulting from that strategy may take years.[2]

From a valuation standpoint, investors seek the highest return for the least risk. Given two banks with identical growth prospects, investors would assign a higher price/earnings multiple to the bank with the lower risk profile. Indicia of risk include:

- The launch of new products or business lines
- Expansion into new geographic markets
- Concentrations, such as to specific borrowers or loan collateral types
- Higher than average loan yields coupled with lower than average loan losses

None of the preceding factors necessarily implies higher risk vis-à-vis other banks in the industry; the key is risk management, not risk avoidance. However, if an investor believes risk is rising for any reason, then that expectation can manifest in our three-pronged valuation framework as follows:

- **Financial Metric.** The investor may view a bank's current earnings as unsustainable once the risk associated with a business strategy becomes evident, leading to reduced expectations of future profitability.
- **Growth.** An investor may assess that a bank's growth rates are exaggerated by accepting too much risk in pursuing growth. In this event, earnings growth expectations would be tempered as the bank realigns its growth, risk, and return objectives.
- **Risk.** Valuation multiples are inversely related to risk. By increasing the investor's required return, the investor increases his or her margin of safety in the event of unfavorable financial developments.

An old adage is that risk can be quantified and uncertainty cannot. This observation explains why pricing multiples and bank stock prices can be particularly volatile in periods of economic uncertainty or distress. If investors cannot quantify a bank's downside exposure, which often is more attributable to general economic anxieties than the quality of the bank's financial disclosures, then they tend to react by taking a pessimistic stance. As a result, risk premiums can widen dramatically, leading to turbulent stock prices.

Conclusion

This chapter provides an overview of the three key factors underlying bank stock valuations – financial performance, risk, and growth. Valuations of bank equities are more than a mere quantitative exercise. Integrating a bank's growth prospects and risk characteristics into a valuation analysis requires understanding the bank's history, business plans, market opportunities, response to emerging technological issues, staff experience, and the like. Those important influences on a valuation analysis cannot be gleaned solely from reviewing a bank's Call Report. Subsequent chapters will describe both the quantitative and qualitative considerations necessary to arrive at sound, well-reasoned, and well-supported valuations.

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Chapter 2

Bank Financial Analysis

With Chapter 1 providing a general overview of key valuation concepts, Chapter 2 pivots to the analysis of bank financial statements and performance.[2] Unlike many privately held, less regulated companies, banks produce reams of financial reports covering every minutia of their operations. For people with an analytical bent, it's a dream.

The approach taken to analyze a bank's performance, though, must recognize depositories' unique nature, relative to non-financial companies. Differences between banks and non-financial companies include:

- **Close interactions between the balance sheet and income statement.** Banking revenues are connected tightly to the balance sheet, unlike for non-financial companies. In fact, you often can estimate a bank's net income or the growth therein solely by reviewing several years of balance sheets. Banks have an "inventory" of assets that earn interest, referred to as "earning assets," which generate most of their revenues. Earning assets include loans, securities (usually highly-rated bonds like Treasuries or municipal securities), and short-term liquid assets. Changes in the volume of assets and the mix of these assets, such as the relative proportions of lower yielding securities and higher yielding loans, significantly influence revenues.

- **The value of liabilities.** For non-financial companies, acquisition motivations seldom revolve around obtaining the target entity's liabilities. Effective management of working capital and debt certainly influences shareholder value for non-financial companies, but few attempt to stockpile low-cost liabilities absent other business objectives. Banks, though, periodically buy and sell branches and their related deposits. The prices (or "premiums") paid in these transactions reveal that bank deposits, the predominate funding source for banks, have discrete value. That is, banks actually pay for the right to assume another bank's liabilities.

  Why do banks seek to acquire deposits? First, all earning assets must be funded; otherwise, the balance sheet would fail to balance. Ergo, more deposits allow for more earning assets. Second, retail deposits tend to cost less than other alternative sources of funds. Banks have access to wholesale funding sources, such as brokered deposits and Federal Home Loan Bank advances, but these generally have higher interest rates than retail deposits. Third, retail deposits generally are stable, due to relationships existing between the bank and customer. This provides assurance to bank managers, investors, and regulators that disruption to a wholesale funding source will not trigger a liquidity shortfall. Fourth, deposits provide a vehicle to generate noninterest income, such as service charges or interchange. The strength of a bank's deposit portfolio, such as the proportion of noninterest-bearing deposits, therefore influences its overall profitability and franchise value.

- **Capital Adequacy.** In addition to board and shareholder preferences, non-financial companies often have debt covenants that constrain leverage. Banks, though, have an entire multi-pronged regulatory structure governing their allowable leverage. Shareholders' equity and regulatory capital are not the same; however, the computation of regulatory capital begins

with shareholders' equity. Two types of capital metrics exist – leverage metrics and risk-based metrics. The leverage metric simply divides a measure of regulatory capital by the bank's total assets, while risk-based metrics adjust the bank's assets for their relative risk. For example, some government agency securities have a risk weight equal to 20% of their balance, while many loans receive a risk weight equal to 100% of their balance.

Capital adequacy requirements have several influences on banks. Most importantly, failing to meet minimum capital ratios leads to severe repercussions, such as limitations on dividends and stricter regulatory oversight, and is deleterious to shareholder value. More subtly, capital requirements influence asset pricing decisions and balance sheet structure. That is, if two assets have the same interest rate but different risk weights, the value maximizing bank would seek to hold the asset with the lower risk weight. Stated differently, if a bank targets a specific return on equity, then the bank can accept a lower interest rate on an asset with a smaller risk weight and still achieve its overall return on equity objectives.

- **Regulatory structure.** In exchange for receiving a bank charter and deposit insurance, all facets of a bank's operations are tightly regulated to protect the integrity of the banking system and, ultimately, the FDIC's Deposit Insurance Fund that covers depositors of failed banks. Banks are rated under the CAMELS system, which contains categories for Capital, Asset Quality, Management, Earnings, Liquidity, and Sensitivity to Market Risk. Separately, banks receive ratings on information technology and trust activities. While a bank's CAMELS score is confidential, these six categories provide a useful analytical framework for both regulators and investors.

Understanding the Balance Sheet

We now cover several components of a bank's balance sheet.

- **Short-Term Liquid Assets and Securities.** Banks are, by their nature, engaged in liquidity transformation, whereby funds that can be withdrawn on demand (deposits) are converted into illiquid assets (loans). Several alternatives exist to mitigate the risk associated with this liquidity transformation, but one universal approach is maintaining a portfolio of on-balance sheet liquid assets. Additionally, banks maintain securities as a source of earning assets, particularly when loan demand is relatively limited.

  Liquid assets generally consist of highly rated securities issued by the U.S. Treasury, various governmental agencies, and state and local governments, as well as various types of mortgage-backed securities. Relative to loans, banks trade off some yield for the liquidity and credit quality of securities. Key analytical considerations include:

  - **Portfolio Size.** While there certainly are exceptions, most high performing banks seek to limit the size of the securities portfolio; that is, they emphasize the liquidity features of the securities portfolio, while generating earnings primarily from the loan portfolio.
  - **Portfolio Composition.** The portfolio mix affects yield and risk. For example, mortgage-backed securities may provide higher yields than Treasuries, but more uncer-

tainty exists as to the timing of cash flows. Also, the credit risk associated with any non-governmental securities, such as corporate bonds, should be identified.

  - » **Portfolio "Duration."** Duration measures the impact of different interest rate environments on the value of securities; it may also be viewed as a measure of the life of the securities. One way to enhance yield often is to purchase securities with longer durations; however, this increases exposure to adverse price movements if interest rates increase.

  - » **Unrealized Gains and Losses.** Fluctuations in securities' market value affect shareholders' equity for bonds classified as "available-for-sale," whereas valuation changes for bonds deemed "held-to-maturity" do not affect reported shareholders' equity. Further, unrealized gains and losses on available-for-sale securities do not affect community banks' regulatory capital. This does not mean, however, that the unrealized losses are irrelevant. When bond portfolios have unrealized losses, earning power will be constrained until the low yielding bonds mature and are replaced with bonds at current market yields. Particularly large unrealized losses, as a percentage of total equity, may attract scrutiny by regulatory agencies regarding the bank's interest rate risk management. Finally, while a bond portfolio is intended to serve as a source of liquidity, one can question the true liquidity of bond portfolios with large unrealized losses, given the capital impact of selling the bonds at a loss.

- **Loans.** A typical bank generates most of its revenue from interest income generated by the loan portfolio; further, the lending function presents risk in the event borrowers fail to perform under the contractual loan terms. While loans are more lucrative than securities from a yield standpoint, the cost of originating and servicing a loan portfolio–such as lender compensation–can be significant. Key analytical considerations include:

  - » **Portfolio Composition**. Bank financial statements include several loan portfolio categories, based on the collateral or purpose of each loan. Investors should consider changes in the portfolio over time and compare the portfolio mix to peer averages. Significant growth in a portfolio segment raises risk management questions. Departures from peer averages may provide a sense of the subject bank's credit risk, as well as the portfolio's yield. Analysts may also wish to evaluate whether any concentrations exist, such as to certain industry niches or customer segments.

  - » **Portfolio Duration.** Banks compete with other banks (and non-banks in some cases) on interest rate, loan structure, and underwriting requirements. Most banks will say they do not compete on underwriting requirements, such as offering higher loan/value ratios, which leaves rate and structure. To attract borrowers, banks may offer more favorable loan structures, such as longer-term fixed rate loans. Viewed in isolation, this exposes banks to greater interest rate risk; however, this loan structure may be entirely justified in light of the interest rate risk inherent in the entire balance sheet.

  - » **Commercial Real Estate Concentrations.** Regulations set a threshold for commercial real estate concentrations—including nonowner-occupied CRE loans, multifamily loans, and construction and development loans—equal to 300% of regulatory capital.

A CRE concentration over this threshold requires greater monitoring and analysis of the portfolio. While the CRE threshold is not, according to the regulation, a hard cap, increasingly strict interpretations by regulators have sometimes made the CRE threshold appear to be a such a cap.

- **Allowance for Credit Losses ("ACL").** Banks maintain reserves against loans that have defaulted or may default in the future. The size of the ACL generally varies between banks based on (a) portfolio size, (b) portfolio composition, as certain loan types inherently possess greater risk of credit loss, (c) the level of problem or impaired loans, (d) historical credit losses, and (e) management's judgment as to an appropriate ACL level. Calculating the ACL necessarily includes some qualitative inputs, such as regarding the outlook for the economy and business conditions, and reasonable bankers can disagree about an appropriate ACL level. Key analytical considerations regarding the ACL and overall asset quality include:

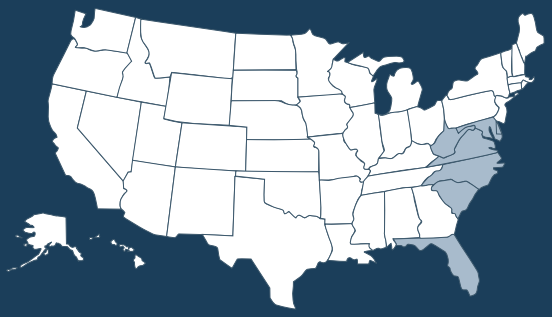
  - **ACL Metrics.** The ACL–as a percentage of total loans, nonperforming loans, or loan charge-offs–can be benchmarked against the bank's historical levels and peer averages. One shortcoming of the ACL methodology formerly used in practice (the incurred loss method) was that reserves tended to be countercyclical, meaning that reserves declined leading into a recession (thereby enhancing earnings) but were augmented during periods of economic stress when banks have less financial capacity to bolster reserves. The new ACL methodology, known as the Current Expected Credit Loss (CECL) model, adopted by most privately-held banks in 2023, may or may not remediate this issue. Only a period of economic stress will permit an evaluation as to whether the CECL methodology corrects the deficiencies deemed to exist in the incurred loss method

  - **Charge-Off Metrics.** The ACL decreases by charge-offs on defaulted loans, while recoveries on previously defaulted loans serve to increase the ACL. One of the most important financial ratios compares loan charge-offs, net of recoveries, to total loans. Deviations from the bank's historical performance should be investigated. For example, are the losses concentrated in one type of lending or widespread across the portfolio? Is the change due to general economic conditions or idiosyncratic factors unique to the bank's portfolio? Is a new lending product performing worse than expected?

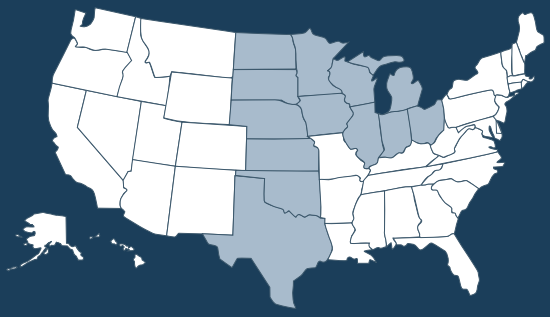
    Charge-off ratios also provide insight into the amount of credit risk accepted by a bank, relative to its peer group. However, credit losses should not be viewed in isolation–loan yields matter as well. It is safe to assume, though, that higher than peer charge-offs, coupled with lower than peer loan yields, are a poor combination. While banks strive to avoid credit losses, the pendulum can swing too far. A lengthy period marked by virtually nil credit losses could suggest that the bank's underwriting is too restrictive, sacrificing earnings for pristine credit quality.

  - **Loan Loss Provision.** The loan loss provision increases the ACL. A provision generally is necessary to offset periodic loan charge-offs, cover loan portfolio growth, and address risk migration as loans enter and exit impaired or nonperforming status.

Regional Public Bank Peer Reports



Atlantic Coast



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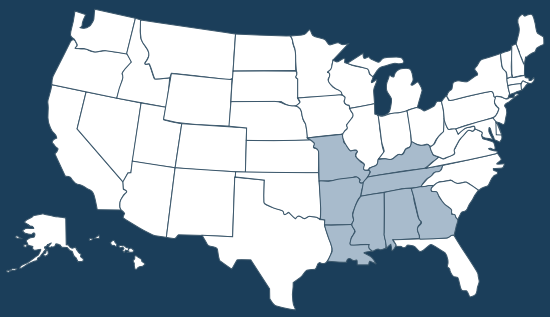

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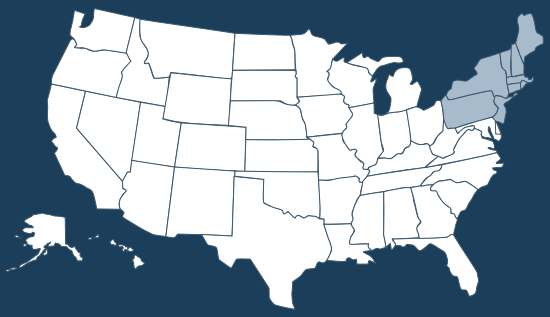
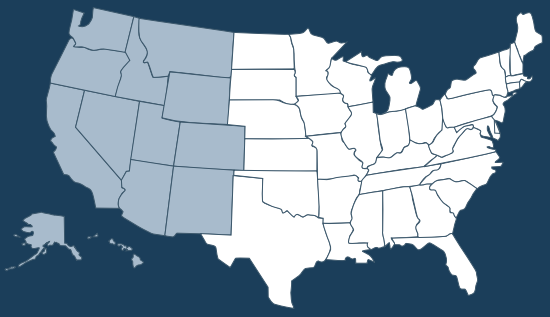


Northeast



West

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- **Deposits.** As for loans, bank financial statements distinguish several deposit types, such as demand deposits and CDs. It is useful to decompose deposits further into retail (local customers) and wholesale (institutional) deposits. Key analytical considerations include:

  - » **Portfolio Size.** Deposit market share tends to shift relatively slowly; therefore, quickly raising substantial retail deposits is a difficult proposition. Banks with more rapid loan growth face this challenge acutely. Often these banks rely more significantly on rate sensitive deposits, such as CDs, or more costly wholesale funds. Therefore, analysts should consider the interaction between loan growth objectives and the availability and pricing of incremental deposits.

  - » **Composition.** Investors generally prefer a high ratio of demand deposits, because these accounts usually possess the lowest interest rates, the lowest attrition rates and interest rate sensitivity, and the highest noninterest income. Of course, these accounts also are the most expensive to gather and service, often requiring significant investments in branch facilities and personnel. With that said, other successful models exist. Some banks minimize operating costs but offer higher interest rates to depositors.

  - » **Beta**. A deposit "beta" measures the sensitivity of a bank's deposit rates to some external index, such as the Fed Funds target rate. In periods of rising market interest rates, maintaining a low deposit beta is integral to profitability, particularly if the bank has accumulated a large amount of fixed rate assets.

  - » **Rate.** Banks generally obtain rate surveys of their local market area, which provide insight into competitive conditions and the bank's relative position. Also, it is useful to benchmark the bank's cost of deposits against its peer group. Deposit portfolio composition plays a part in disparities between the subject bank and the peer group, as do regional differences in deposit competition.

- **Shareholders' Equity and Regulatory Capital.** Historical changes in equity cannot be understood without an equity roll-forward showing the impact of retained earnings, share sales and redemptions, dividends, and other factors. In our opinion, it is crucial to analyze the bank's current equity position by reference to management's business plan, as this will reveal amounts available for use proactively to generate shareholder returns (such as dividends, share repurchases, or acquisitions). Alternatively, the analysis may reveal the necessity of either augmenting equity through a stock offering or curtailing growth objectives.

  The computation of regulatory capital metrics can be obtained from a bank's regulatory filings. Relative to shareholders' equity, regulatory capital calculations: (a) exclude most intangible assets, (b) exclude the mark-to-market adjustment on the securities portfolio that is included in reported shareholders' equity, (c) exclude certain deferred tax assets, (d) include certain types of preferred stock and debt, and (e) include the ACL, up to certain limits.

Understanding the Income Statement

There are five primary components of the bank's income statement:

- **Net interest income**, or the difference between the income generated by earning assets and the cost of funding.
- **Noninterest income**, which includes revenue from other services provided by the bank such as debit cards, trust accounts, or loans intended for sale in the secondary market. The sum of net interest income and noninterest income represents the bank's total revenues.
- **Noninterest expenses**, which principally include employee compensation, occupancy costs, data processing fees, and the like. Income after noninterest expenses commonly is referred to by investors, but not by accountants, as "pre-tax, pre-provision operating income" (or "PPOI").
- **Loan loss provision**
- **Taxes**

Net Interest Income

The previous analysis of the balance sheet foreshadowed this net interest income discussion with one important omission–the external interest rate environment. While banks attempt to mitigate the effect of uncontrollable factors like market interest rates on performance, some influence is unavoidable. For example, steeper yield curves generally are more accommodative to net interest income, while banks struggle with flat or inverted yield curves.

In 2024, net interest income for many banks was pressured due to excessive levels of long-term, fixed rate assets funded by deposits that were more rate sensitive than expected. This pressure occurred despite many banks' interest rate risk models predicting that net interest income would benefit in a rising interest rate environment, indicating that deposit behavior is difficult to reduce to a mathematical model. Falling deposit rates, coupled with an uninverted yield curve, are expected to boost net interest income in 2025 for many banks.

Another critical financial metric is the net interest margin ("NIM"), measured as the yield on all earning assets minus the cost of funding those assets (or net interest income divided by earning assets). The NIM and net interest income are influenced by the following:

- **The earning asset mix** (higher yielding loans versus lower yielding securities)
- **Asset duration** (longer duration earning assets usually receive higher yields, but these assets can also create NIM pressure when funding costs diverge from expectations as in 2023 and 2024)
- **Credit risk** (accepting more credit risk should enhance asset yields and NIM)
- **Liability composition** (retail versus wholesale deposits, or demand deposits versus CDs)
- **Liability duration** (longer duration liabilities usually have higher interest rates)

Noninterest Income

The sensitivity of net interest income to uncontrollable forces–i.e., market interest rates–makes noninterest income attractive to bankers and investors. Banks generate noninterest income from a panoply of sources, including:

- **Fees on deposit accounts**, such as service charges, overdraft income, and debit card interchange
- **Gains on the sale of loans**, such as residential mortgage loans or government guaranteed small business loans
- **Trust and wealth management income**
- **Insurance commissions on policies sold**
- **Bank owned life insurance where the bank holds policies on employees**

Some sources of revenue can be even more sensitive to the interest rate environment than net interest income, such as income from residential mortgage originations. Yet other sources have their own linkages to uncontrollable market factors, such as revenues from wealth management activities tied to the market value of account assets.

Expanding noninterest income is a holy grail in the banking industry, given its ability to diversify revenue and mitigate interest rate risk while avoiding credit risk. However, many banks' fee income dreams have foundered on the rocks of reality for several reasons. First, achieving scale is difficult. Second, cross-sales of fee income products to banking customers are challenging. Third, significant cultural differences exist between, say, wealth management and banking operations. A fulsome financial analysis considers the opportunities, challenges, and risks presented by noninterest income.

Noninterest Expenses

In a mature business like banking, expense control always remains a priority.

- **Personnel expenses.** Personnel expenses account for perhaps one-half to two-thirds of total expenses. Significant changes in personnel expenses generally are tied to expansion initiatives, such as adding branches or hiring a lending team from a competitor. Regulatory filings include each bank's full-time equivalent employees, permitting productivity comparisons between banks.
- **Occupancy expenses.** With the shift to digital delivery of banking services, occupancy expenses have remained relatively stable for many community banks, while larger banks have closed branches. Nevertheless, banks often conclude that entering a new market requires a beachhead in the form of a physical branch location.
- **Other expenses.** Regulatory filings lump remaining expenses into an "other" category, although audited financial statements usually provide greater detail. More significant contributors to the "other" category include data processing and information technology spending, marketing costs, and regulatory assessments.

Loan Loss Provision

We covered this income statement component **previously with respect to the ACL**.

Income Taxes

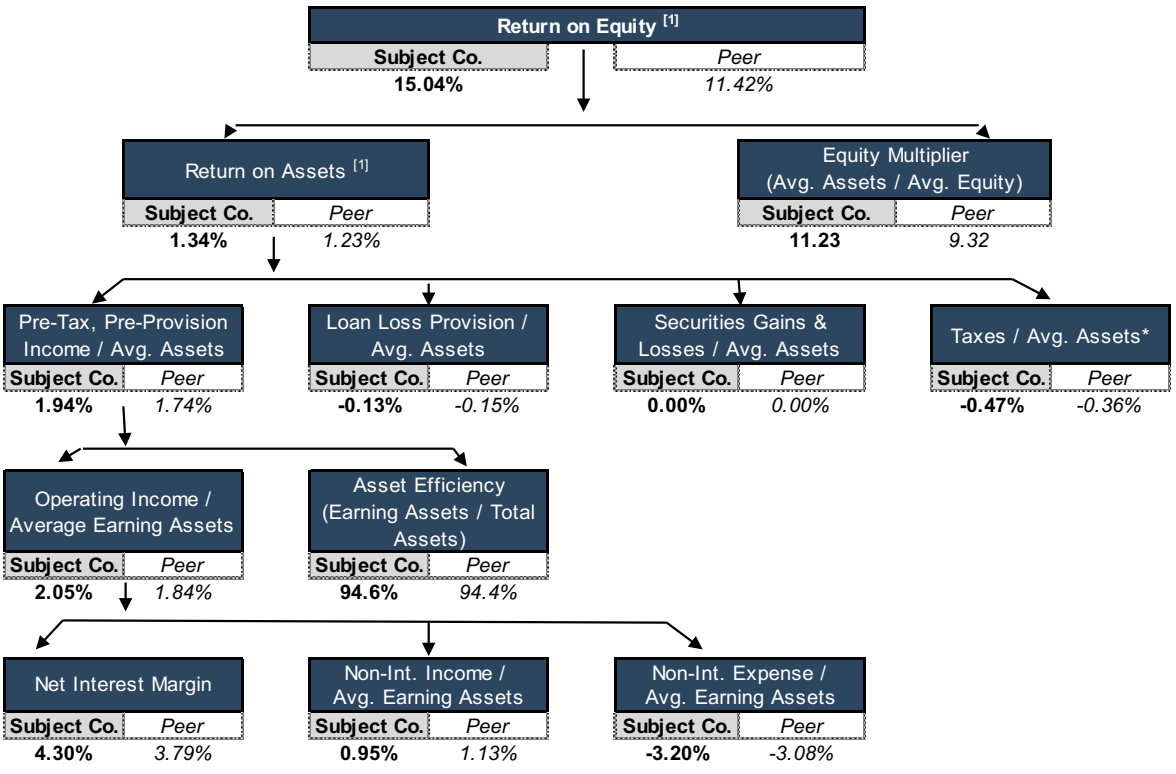
Banks generally report effective tax rates (or actual income tax expense divided by pre-tax income) below their marginal tax rates. This primarily reflects banks' tax-exempt investments, such as municipal bonds; bank-owned life insurance income; and vehicles that provide for tax credits, like New Market Tax Credits. It is important to note that state tax regimes may differ for banks and non-banks. For example, some states assess taxes on deposits or equity, rather than income, and such taxes are not reported as income tax expense.

Return Decomposition

As the preceding discussion suggests, many levers exist to achieve shareholder returns. One bank can operate with lean expenses but pay higher deposit interest rates (diminishing its NIM) and deemphasize noninterest income. Another bank may pursue a true retail banking model with low cost deposits and higher fee income, offset by the attendant operating costs. There is not necessarily a single correct strategy. Different market niches have divergent needs, and management teams have varying areas of expertise. However, we still can compare the returns on equity (or net income divided by shareholders' equity) generated by different banks to assess their relative performance.

Figure 2 presents one way to decompose a bank's return on equity relative to its peer group. This bank generates a higher return on equity than its peer group due to (a) a higher net interest margin, (b) a slightly lower loan loss provision, and (c) higher leverage (shown as the "equity multiplier" in Figure 2).

Figure 2: ROAE Breakdown



[1] For S corporations, taxes are applied at estimated C corporation rates

Income Statement Metrics

Figure 3 cites several common income statement metrics used by investors, as well as their strengths and shortcomings.

Figure 3: Common Income Statement Metrics

Metric	Computation	Strengths	Shortcomings
Loan Yield	Interest Income on Loans ÷ Average Loans	Measures revenue from lending activities	Ratio is not adjusted for credit risk or interest rate risk taken
Net Interest Margin	Net Interest Income ÷ Average Earning Assets	Most commonly cited interest rate spread metric	The accumulation of excess equity (i.e., equity above the bank's operating requirement or industry norms) can enhance the NIM but depress shareholder returns
Noninterest Income / Assets	Noninterest Income ÷ Average Total Assets	Permits comparisons of revenue diversification	Does not measure the profitability or risk associated with those sources of noninterest revenues
Efficiency Ratio	Noninterest Expenses ÷ Revenues	Relates expenses directly to revenues	Influenced by revenue changes beyond management's control. For example, efficiency ratio would be flattered by NIM widening due to a more favorable interest rate environment
Noninterest Expense / Assets	Noninterest Expense ÷ Average Total Assets	Unlike the efficiency ratio, expense/asset ratio is not influenced by NIM volatility	Peer comparisons can be distorted for banks with high noninterest income, due to the expenses required to service off-balance sheet assets like trust account assets. Ratio can appear favorable to peer for banks that operate with larger securities portfolios (relative to assets), as it takes more employees to manage larger loan portfolios. Favorable noninterest expense ratio may be offset, though, by disadvantageous revenue metrics
Return on Assets	Net Income ÷ Average Total Assets	A commonly cited metric that compares overall performance to the assets employed	Does not take into account shareholder returns. For example, ROA is enhanced by accumulating excess equity, which carries no "cost" from an accounting standpoint
Return on Equity	Net Income ÷ Average Total Equity	Relates performance to equity employed Growth rates in total equity and book value per share are tied directly to ROE Fewer analytical shortcomings than ROA	ROE could be enhanced by taking inappropriate risk in the short-run (credit or interest rate), which could jeopardize long-term shareholder returns Fluctuations in the market value of securities, which are outside of management's control, affect equity and therefore ROE

Sources of Information

Banks file quarterly Call Reports, which are the launching pad for our templated financial analyses. Depending on asset size, bank holding companies may file consolidated financial statements. All bank holding companies, small and large, file parent company only financial statements, although the frequency differs. Other potentially relevant sources of information include:

- Audited financial statements and internal financial data
- Board packets, which often are sufficiently extensive to cover our information requirements
- Budgets, projections, and capital plans
- Asset quality reports, such as criticized loan listings, delinquency reports, concentration analyses, documentation regarding ACL adequacy, and special asset reports for problem loans
- Interest rate risk scenario analyses and inventories of the securities portfolio

Conclusion

A rigorous examination of the bank's financial performance, both relative to its history and a relevant peer group and with due consideration of appropriate risk factors, provides a solid foundation for a valuation analysis. As we observed in Chapter 1, value is dependent upon a given bank's growth opportunities and risk factors, both of which can be revealed using the techniques described in this chapter.

Chapter 3

Parent Company Financial Analysis

Chapter 2 described key considerations in analyzing the financial statements of banks. However, we did not address one crucial set of relationships–those between a bank holding company ("BHC") and its subsidiary depository institution.

Most banks are owned by bank holding companies. While investors often state that they own an interest in a bank, this may not be legally precise. Usually, they own a share of stock in a bank holding company, which in turn owns a controlling interest in a subsidiary bank's common stock. Where a bank holding company exists, this entity's common stock generally is the subject of valuation analyses.

This chapter explores important relationships between banks and their holding companies, focusing particularly on cash flow and leverage.

The Holding Company's Balance Sheet

Compared to a bank's balance sheet, a holding company's balance sheet has fewer moving parts. The "left side" of its balance sheet, or its assets, usually is rather boring. The more intriguing analytical question, though, is how the bank holding company finances its investment in the bank.

Figure 4 presents a balance sheet for a BHC controlling 100% of the common stock of a bank with $500 million of total assets.

Figure 4

Assets		Liabilities & Equity	
Investment in Bank	$45,000,000	Bank Debt	$1,500,000
Cash	$1,000,000	Subordinated Debt	$5,000,000
Other Assets	$500,000	Total Equity	$40,000,000
Total Assets	**$46,500,000**	**Total Liabilities & Equity**	**$46,500,000**

Double Leverage	**113%**	*<> Investment in Bank ÷ Bank Holding Company Equity*

Usually, the holding company's assets consist virtually entirely of its investment in its subsidiary bank or banks, which equals the bank's total equity. The investment in the bank is carried at equity, meaning that it increases by the bank's net income and decreases by dividends paid from the bank to the holding company, among other transactions. Other material assets may include:

- **Cash.** BHCs with cash obligations payable at the holding company, such as interest payments or compensation, often will maintain a cash buffer to cover several months of operating expenses. In some cases, BHCs will maintain a larger cash position to react opportunistically if the bank subsidiary needs a capital injection for its growth or to repurchase BHC shares.

- **Other Assets.** Non-bank assets typically are relatively modest and consist of investments in other entities (such as an insurance agency), intangible assets related to acquisitions that were not "pushed down" to the subsidiary, or facilities. In periods marked by higher levels of nonperforming assets, BHCs may hold problem assets, which is one strategy to reduce the bank's classified asset/capital ratio.

Interestingly, BHCs can borrow from banks–just not their bank subsidiary–and other capital providers. If the funds are downstreamed into the bank, the borrowings may be transformed from an instrument not includable in the BHC's regulatory capital into Tier 1 capital at the bank. In order of seniority these funding sources include:

- **Bank Stock Loans.** These loans are collateralized by the subsidiary bank's stock and typically are obtained from another bank. As a secured borrowing, these loans generally have a lower cost than other alternatives. However, in the event of a default, the lender can seize their collateral (i.e., the bank stock).

- **Subordinated Debt.** After passage of the Dodd-Frank Act and the Basel III capital regulations, subordinated debt became a more prominent funding source, usually for organic growth or acquisitions. Various regulatory requirements govern subordinated debt offerings, but most community bank placements provide for a ten-year term with the interest rate fixed for five years. The securities may be considered Tier 2 capital for the holding company.

- **Trust Preferred Securities ("TruPS").** TruPS were created in the 1990s to combine the Tier 1 capital treatment of preferred stock with the tax deductibility of interest payments on debt. Rightly or wrongly, this instrument was viewed negatively after the financial crisis, and the Basel III regulations effectively nullified new issuances. Many BHCs still hold grandfathered TruPS, though, which often do not mature until the 2030s. TruPS generally have interest rates that float with SOFR, are subordinated to all other BHC obligations, and provide the issuer the right to defer payments for up to five years. TruPS count as Tier 1 capital for BHCs with under $15 billion in assets.

A BHC's equity generally consists almost entirely of common stock, which must be the principal form of capitalization under BHC regulations. However, BHCs can issue preferred stock, and regulations view most favorably non-cumulative, perpetual preferred stock.

Analytical Considerations

Why do holding companies exist? First, they provide an efficient way to raise funds that can be injected as capital into the bank, thereby accommodating its organic growth. Second, they can facilitate acquisitions. Third, BHCs can more efficiently conduct shareholder transactions, such as repurchases.

By using leverage, a BHC can enhance the bank's stand-alone return on equity (or exacerbate the ROE pressure arising from adverse financial scenarios). As indicated in Figure 5, BHC leverage magnifies the subsidiary bank's 12.0% ROE to 12.9% after considering the cost of the BHC's debt.

Figure 5

	Bank	BHC
Bank Net Income	$5,400,000	$5,400,000
- Interest on BHC Debt @ 5%	0	(325,000)
+ Tax Benefit @ 25%	0	81,000
Bank / BHC Net Income	**$5,400,000**	**$5,156,000**
÷ Equity	$45,000,000	$40,000,000
Return on Equity	**12.0%**	**12.9%**

As for a non-financial company, too much leverage can mean that the beneficial effect to shareholders of a higher ROE is swamped by the additional risk of financial distress. Various metrics exist to measure the holding company's leverage, but one is the "double leverage" ratio, which is calculated as the investment in the bank subsidiary divided by the BHC's equity. As indicated in Figure 4, the BHC's ratio is 113%, which is consistent with the median reported by all smaller BHCs at June 30, 2024 (115%, excluding some BHCs for which the BHC's equity exceeds the bank investment).

Cash Flow

Unfortunately, BHC regulatory filings and audited financial statements do not provide a sources and uses of funds schedule, although some cash flow data are provided. Nevertheless, understanding the BHC's obligations, and the cash required to service those obligations, is essential.

Sources of funds consist principally of the following:

- **Dividends from the bank subsidiary.** Access to upstream dividend payments should be evaluated in light of the bank's profitability, capital levels, and growth opportunities.
- **Debt issuances**
- **Common stock sales**

- **Intercompany payments.** For example, the bank may reimburse the holding company for certain expenses paid by the BHC. Additionally, banks and BHCs often have tax-sharing arrangements, whereby the bank makes tax payments to the BHC. If the holding company incurs expenses, then it may remit less to the taxing authorities than it receives from the bank, thereby providing a source of cash flow.

Uses of funds include the following:

- **Debt service**
- **Shareholder dividends**
- **Share repurchases**
- **Operating expenses.** Expenses such as compensation, directors' fees, and certain insurance premiums may be recorded by the holding company

Analysts should compare a bank's ability to pay dividends, given its profitability level and need to retain earnings to fund its growth, against the BHC's various claims on cash. Mismatches can sometimes arise due to changes in the bank's performance or operating strategy. For example, consider a BHC that historically has paid high dividends to shareholders. If its subsidiary bank adopts a new strategic plan focused on organic growth, then the bank will need to retain earnings rather than pay dividends to the BHC and, ultimately, BHC shareholders. Additional borrowings could fund a short-term gap, but this is not a long-term solution to a BHC cash flow mismatch.

Two other special circumstances arise when analyzing BHC cash flow:

- **Acquisitions.** Prior to entering into a transaction, the BHC's plan for funding any cash consideration should evaluate the availability and desirability of dividends from the bank, debt offerings, and stock sales. Further, the cash acquired from the target BHC may provide another source of transaction funding.

- **S Corporations.** Shareholders in an S corporation rely on the BHC for distributions to offset their pass-through tax liability, while the BHC in turn relies on the bank for dividends to fund those tax payments. There are no special capital rules at the bank level that provide flexibility regarding the payment of dividends to offset BHC shareholders' tax liability when other restrictions exist on upstream dividends from the bank to the BHC. That is, C corporations and S corporations face the same capital regulations.

  A situation could arise where an S corporation BHC generates taxable income but cannot pay distributions to its shareholders. This issue would not arise for a C corporation BHC, however, as a C corporation's shareholders only face a tax obligation if the BHC pays dividends. Boards of S corporations may desire to operate, at the margin, with a greater capital buffer to avoid a situation where the shareholders have taxable income but the BHC is unable to make distributions.

Capital

Capital requirements for BHCs vary based upon their asset size. Under current regulations, BHCs with assets below $3.0 billion are subject to the Federal Reserve's Small Bank Holding Company Policy Statement. This regulation does not establish any specific minimum capital ratios for small BHCs; however, a debt/equity ratio limitation exists for debt arising from acquisitions. Therefore, small BHCs have significant flexibility in managing their capital structure, although the Federal Reserve always remains a check on their creativity.

Large BHCs are subject to the Basel III regulations, which involve capital ratios calculated based on Tier 1 and total capital. Tier 1 capital generally is limited to common equity, non-cumulative perpetual preferred stock, and (potentially) grandfathered TruPS. In addition to the allowance for loan losses, Tier 2 capital may include subordinated debt. Large BHC management can balance these capital sources to minimize the BHC's weighted average cost of capital, maintain flexibility for unexpected events or opportunities, and ensure compliance with regulatory expectations.

Conclusion

While the subsidiary bank receives most of the analytical attention, the holding company should not be overlooked. This is particularly true if the holding company has significant obligations to service debt or pay other expenses. By understanding the linkages between the bank and holding company, analysts can better assess a BHC's potential future returns to shareholders and risk factors posed by the BHC that could jeopardize those returns.

Chapter 4

Minority Interest Valuations

While it would streamline the valuation process, there is no single value for a bank that is applicable to every conceivable scenario giving rise to the need for a valuation. Instead, valuation is context dependent. This chapter focuses on the valuation of minority interests in banks, which do not provide owners the ability to dictate control over the bank's operations. The next chapter focuses on valuation considerations applicable to controlling interests in banks, such as arise in acquisition scenarios.

Valuation Approaches

Valuation specialists identify three broad valuation approaches within which several valuation methods exist:

1. **The Asset Approach** develops a value for a bank's common equity based on the difference between its assets and liabilities, both adjusted to market value. This approach is less common in practice, given analysts' focus on banks' earnings capacity and market pricing data. In theory, a rigorous application of the asset approach would require determining the value of the bank's intangible assets, such as its customer relationships, which introduces considerable complexity.

2. **The Market Approach** provides indications of value by reference to actual transactions involving securities issued by comparable institutions. The obvious advantage of this approach is the coherence between the goal of the valuation itself (the derivation of market value) and the data used (market transactions). The disadvantage, though, is that perfectly comparable market data seldom exist. While we will not cover the topic in this white paper, transactions in the subject bank's common stock, which often occur for privately-held banks due to their frequently widespread ownership and stature in the community, may serve as another indication of value under the market approach.

3. **The Income Approach** includes several methods that convert a cash flow stream (such as earnings or dividends) into a value. Two broad subsets of the income approach exist – single period capitalization methods and discounted cash flow methods. For bankers, a single period capitalization is analogous to a net operating income capitalization in a real estate appraisal; it requires an earnings metric and a capitalization multiple. Alternatively, bank valuations often use projection-based methodologies that convert a future stream of benefits into a value. The strengths and weaknesses of a projection-based methodology derive from a commonality–they require a forecast of future performance. While creating such a forecast is consistent with the forward-looking nature of investor returns, predicting the future is, as they say, difficult.

The following discussion focuses on the valuation methodologies used most commonly for banks, the comparable company method and the discounted cash flow method.

Comparable Company Method

Bank analysts are awash in data, both regarding banks' financial performance and also regarding publicly-traded banks' market valuations. Figure 6 presents a breakdown by trading market of the number of listed banks in January 2025.

Figure 6 : Listed Banks (January 2025)

Trading Market	Number of Banks	Total Market Cap ($ Billions)	Average Market Cap ($ Billions)	Number of Banks with Total Assets < $1.0 Billion*
More Liquid				
NYSE	64	$2,023	$31.62	0
NASDAQGM & NASDAQGS	183	$363	$1.99	6
NYSEAM	6	$5	$0.80	1
Less Liquid				
NASDAQCM	80	$20	$0.25	19
OTCQX	110	$15	$0.14	38
OTCQB	20	$1	$0.04	14
OTC Pink	192	$20	$0.10	115
OTCEM ("Expert Market")	28	$3	$0	10
Total	**683**	**$2,451**	**$3.59**	**203**

Table includes U.S. banks and thrifts with a reported market capitalization at 1/3/25

* Total number of banks (683) includes 62 banks with no reported assets, which are not included in the 203 banks with assets of less than $1.0 billion.

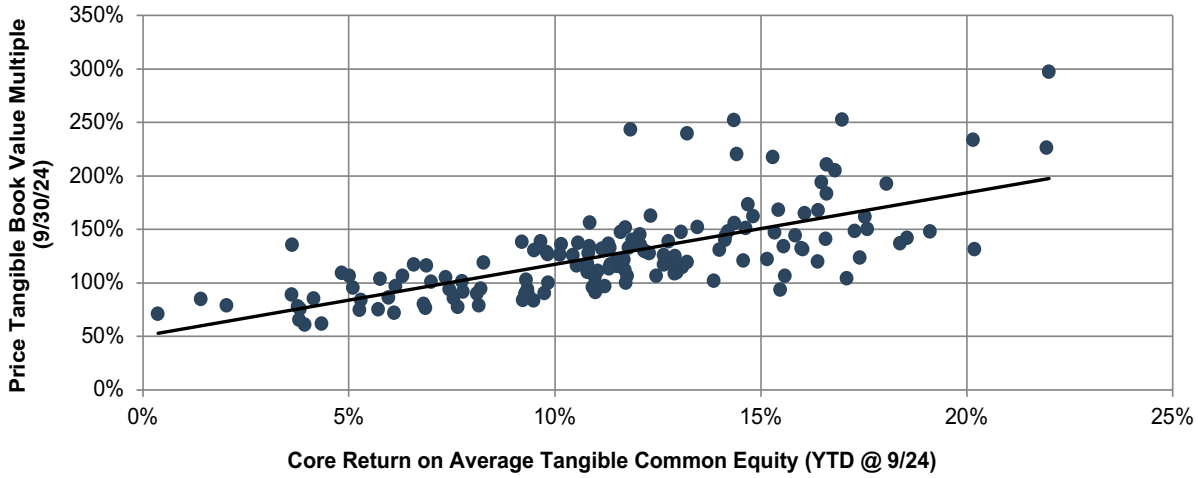
To narrow this surfeit of comparable company data, analysts often screen the publicly-traded bank universe based on characteristics such as the following:

- Size, such as total assets or market capitalization
- Profitability, such as return on assets or return on equity
- Location and size of the branch footprint
- Asset quality
- Revenue mix, such as the proportion of revenue from loan sales or asset management fees
- Balance sheet composition, such as the proportion of loans or dependence on wholesale funding
- Trading market or volume

Even after applying screens similar to the preceding, it remains doubtful that the publicly-traded banks will exactly mirror the subject bank's characteristics. This is especially true when valuing smaller community banks, as a relatively limited number of actively-traded banks exist with assets of less than $1.0 billion. Ultimately, the analyst must determine an appropriate valuation multiple based on the subject bank's perceived growth opportunities and risk attributes relative to the public companies. For example, analysts can compare the subject bank's historical and projected EPS growth rates against the public companies' EPS growth rates, with a materially lower growth outlook for the subject bank suggesting a lower pricing multiple.

Chapter 1 described various valuation metrics applicable to banks, most prominently earnings and tangible book value. It is important to reiterate that while bankers and analysts often reference price/tangible book value multiples, the earning power of the institution drives its value. Figure 7 illustrates this point, showing that price/tangible book value multiples rise along with the core return on tangible common equity.[3] Figure 7 includes banks traded on the NASDAQ, NYSE, or NYSEAM with assets between $1 and $10 billion.

Figure 7: ROE vs. Price/Tangible Book Value



Source: S&P Capital IQ Pro

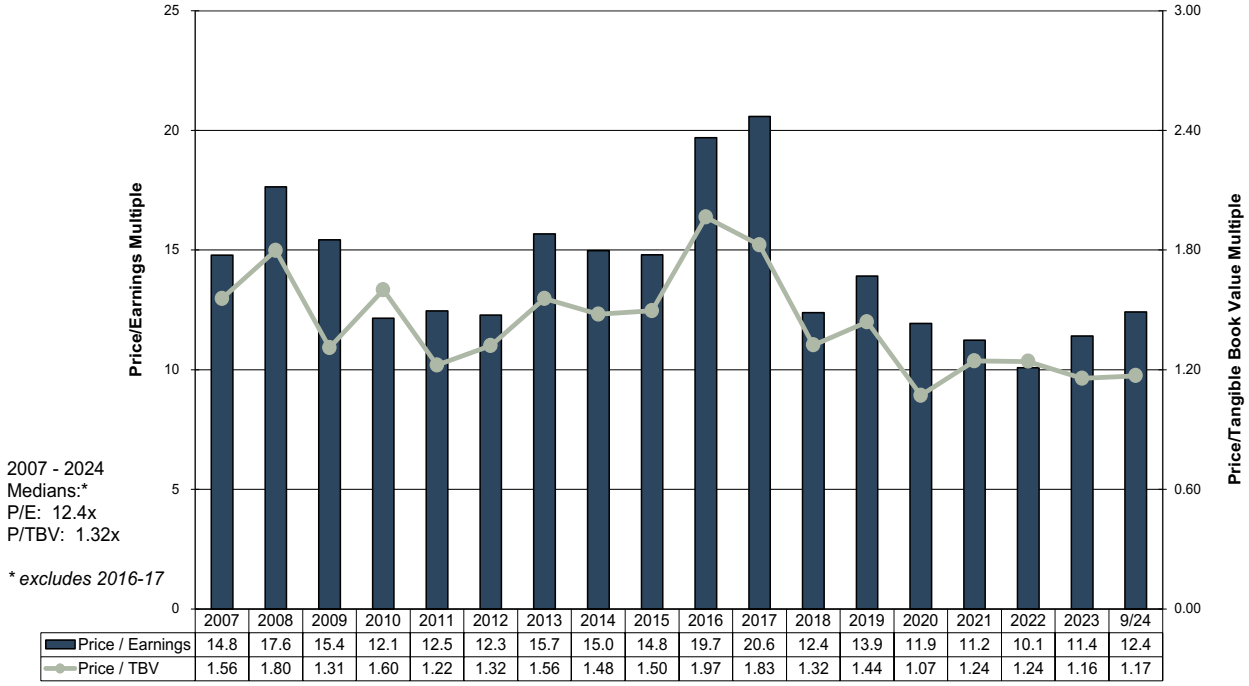
Core ROATCE	Median Price / Tangible Book Value
0% - 10%	90%
10% - 15%	128%
15% - 20%	147%
20% - 25%	230%

Since banking is a more mature industry, bank price/earnings multiples tend to vary within a relatively tight range. Figure 8 provides perspective on historical price/earnings and price/tangible book value multiples using banks traded on the NASDAQ, NYSE, or NYSEAM with assets between $1 and $10 billion and a return on core tangible common equity between 5% and 15%. Trading multiples in the first several years of the analysis may be distorted by recessionary conditions, while the multiples reported for 2016 and 2017 were exaggerated by optimism regarding the potential, at that time, for tax and regulatory reform. The diminished multiples at year-end 2022 and September 30, 2023 reflect

a challenging interest rate environment that heaped pressure on net interest margins and concerns regarding economic deterioration. P/E multiples began to improve in 2024 with a market rally for bank stocks. Lower unrealized losses on securities in the third quarter of 2024 boosted tangible common equity; therefore, P/TBV multiples at September 30, 2024 were little changed from year-end 2023.

Figure 8: Price/Earnings and Price/Tangible Book Value Multiples

Banks with Assets of $1 Billion - $10 Billion & Return on Tang. Equity btwn 5-15%



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	9/24
Price / Earnings	14.8	17.6	15.4	12.1	12.5	12.3	15.7	15.0	14.8	19.7	20.6	12.4	13.9	11.9	11.2	10.1	11.4	12.4
Price / TBV	1.56	1.80	1.31	1.60	1.22	1.32	1.56	1.48	1.50	1.97	1.83	1.32	1.44	1.07	1.24	1.24	1.16	1.17

Source: S&P Capital IQ Pro

Discounted Cash Flow Method

The discounted cash flow (DCF) method relies upon three primary inputs:

- A projection of cash flows distributable to investors over a finite time period
- A terminal, or residual, value representing the value of all cash flows occurring after the end of the finite forecast period
- A discount rate to convert the discrete cash flows and terminal value to present value

Cash Flow

First, a few suggestions regarding projections:

- For a financial institution, projecting an income statement without a balance sheet usually is inadvisable, as this obscures important linkages between the two financial statements. For example, the bank's projected net interest income growth may require a level of loan growth not permitted by the bank's capital resources.

- Including a roll-forward of the allowance for credit losses illustrates key asset quality metrics, such as the ratios of loan charge-offs and loan loss reserves to loans. The level of charge-offs should be assessed against the bank's historical performance and the economic outlook.
- Key financial metrics, both for the balance sheet and income statement, should be assessed against the bank's historical performance and peer banks.
- While projections can be prepared on a consolidated basis, we prefer developing separate projections for the bank and its holding company. This makes explicit the relationships between the two entities, such as the holding company's reliance on the bank for cash flow. For leveraged holding companies, a sources and uses of funds schedule is useful.

In preparing a DCF analysis for a bank, the most meaningful cash flow measure is either dividends or distributable tangible common equity. For the latter, the analyst sets a threshold tangible common equity/tangible assets ratio or another regulatory capital ratio based on management's expectations, regulatory requirements, and/or peer and publicly-traded comparable company levels. Equity generated by the bank above this target level is assumed to be distributed to the holding company. After determining the holding company's expenses and debt service requirements, the remaining amount represents shareholder dividends, which then is captured in the DCF valuation analysis.

Discount Rate

For a financial institution, the discount rate represents the entity's cost of equity. Outside the financial services industry, analysts most commonly employ a weighted average cost of capital (WACC) as the discount rate, which blends the cost of the company's debt and equity funding. However, banks are unique in that most of their funding comes from deposits, and the cost of deposits does not rise along with the entity's risk of financial distress (because of FDIC insurance). Therefore, a significant theoretical underpinning for using a WACC–that the cost of debt increases along with the entity's risk of default–is undermined for a bank. Analytical consistency is created in a DCF analysis by matching a cash flow to equity investors (i.e., dividends) with a cost of equity.

A bank's cost of equity bank generally is estimated based on the historical excess returns generated by equity investments over Treasury rates, as adjusted by a "beta" metric that captures the volatility of bank stocks relative to the broader market. Analysts may also consider industry or entity-specific risk factors–such as a concentration in a limited geographic market, elevated credit quality concerns, and the like–that distinguish the risk faced by investors in the subject institution relative to the norm for publicly-traded banks from which cost of equity data are derived.

Terminal Value

The terminal value is a function of a financial metric at the end of the forecast period, such as net income or tangible book value, and an appropriate valuation multiple. Two techniques exist to determine a terminal value multiple. First, the Gordon Growth Model develops an earnings multiple using (a) the discount rate and (b) a long-term, sustainable growth rate. Second, as illustrated in Figure 8, bank pricing multiples tend to vary within a relatively tight range, and an historical average trading multiple can inform the terminal value selection.

Correlating the Analysis

In most analyses, the values derived using the market and income approaches will differ. Given a range, an analyst must consider the strengths and weaknesses of each indicated value to arrive at a final concluded value. For example, earnings-based indications of value derived using the market approach may be more relevant in "normal" times, as the values are consistent with investors' orientation towards earnings as the ultimate source of returns (either dividends or capital appreciation). However, in more distressed periods marked by weak earnings, indications of value using book value assume more relevance. If a bank has completed a recent acquisition or is in the midst of a strategic overhaul, then the discounted cash flow method may deserve greater emphasis. We prefer to assign quantitative weights to each indication of value, which provide transparency into the process by which value is determined.

Relative Value Analysis

The analysis is not complete, however, when a correlated value is obtained. It is crucial to compare the valuation multiples implied by the concluded value, such as the effective price/earnings and price/tangible book value multiples, against those reported by publicly-traded banks. Any divergences should be explainable. For example, if the bank operates in a market with constrained growth prospects, then a lower than average price/earnings multiple may be appropriate. A higher return on equity for a subject bank, relative to the comparable companies, often results in a higher price/tangible book value multiple. As another reference point, the effective pricing multiples may be benchmarked against bank merger and acquisition pricing to ensure that an appropriate relationship exists between the subject minority interest value and a possible merger value.

Conclusion

There are many valuation issues that remain untouched in the interest of brevity, such as the valuation treatment of S corporations and the discount for lack of marketability applicable to minority interests in banks with no active trading market. Instead, this chapter addresses issues commonly faced in valuing minority interests in any community bank. A well-reasoned valuation of a community bank requires understanding the valuation conventions applicable to banks, such as pricing multiples commonly employed or the appropriate source of cash flow in a DCF analysis, but within a risk and growth framework that underlies the valuation of all equity instruments. Relating these valuation parameters to a comprehensive analysis of a bank's financial performance, risk factors, and strategic outlook results in a rigorous and convincing determination of value. In the next chapter, we move beyond the valuation of minority interests in banks, focusing on specific valuation nuances that arise when preparing a controlling interest valuation.

Chapter 5

Controlling Interest Valuations

This chapter focuses on concepts that arise when evaluating a controlling interest in a bank, such as in an acquisition scenario. While the methodologies we described with respect to the valuation of minority interests in banks have some applicability, the M&A marketplace has developed a host of other techniques to evaluate the price to be paid, or received, in a bank acquisition.

In the Minority Interest Valuations chapter, we discussed that valuation is a function of three variables: a financial metric, risk, and growth. From a buyer's standpoint, the ultimate goal of a transaction, of course, is to enhance shareholder value, which would occur if the target entity can, on balance, improve (or at least not detract from) the buyer's financial metrics, risk profile, and growth prospects. This can be achieved in several ways:

- The direct earnings contribution of the target, or the accretion to the buyer's earnings per share if the consideration consists of the buyer's stock. In a bank M&A scenario, this EPS accretion often derives from cost savings resulting from eliminating duplicative branches, back office functions, and the like.

- An acquisition can provide diversification benefits, such as different types of loans, additional geographic markets, or new funding sources. If these characteristics of the target reduce any concentrations held by the buyer, the acquirer's overall risk may lessen. However, numerous buyers have regretted entering lines of business or new markets via acquisition with which the buyer's management team lacked familiarity.

- Accessing new markets or business lines through acquisition gives the buyer more "looks" at new customers and transactions. For many banks, moving the needle on asset size or growth means looking beyond its existing markets or products, and the needle moves faster with an acquisition strategy versus a de novo market expansion strategy.

These benefits are not without risks, though. Some of the more significant acquisition risks include:

- **Credit surprises.** One or two unexpected losses usually do not affect the underlying rationale for a transaction, although they may create some uncomfortable conversations with investors regarding the buyer's due diligence process. A more significant risk is that the buyer's risk tolerance differs from the seller's approach, leading to a potentially significant disruption to future revenues as risk appetites are synchronized. However, credit surprises often cannot be detached from the prevailing economic environment. In a postmortem, many transactions closed in the 2006 time frame look ill-advised given the subsequent financial crisis. Entry timing thus matters to a transaction's achievement of anticipated financial benefits. Ultimately, factors outside the buyer's control may have the most impact on post-transaction credit surprises.

- **Cultural incompatibility.** While sometimes difficult to detect from the outside, differences small and large between the cultures of the buyer and target can jeopardize the anticipated post-merger benefits. More often than not, this is manifest in personnel issues. Mergers are like chum in the water to competitors; buyers can expect competitors to look for any opening to attract personnel from the target bank.

Similarities to Valuations of Minority Interests

Chapter 4 introduced the comparable company and discounted cash flow methods to bank valuations. Both of these methods remain relevant in assessing a controlling interest in a bank, meaning an interest of sufficient size to dictate the direction of the bank. Most often, controlling interest valuations arise in the context of an acquisition.

Comparable Transactions Method

In a controlling interest valuation, the comparable company method can be used. However, the resulting values often should be adjusted by a "control premium." Historical control premium data can be gleaned from transactions involving publicly-traded sellers, with control premiums being measured as the excess of (a) the acquisition value of the target over (b) the target's pre-deal announcement stock price. This approach has the advantage of synchronizing the controlling interest valuation to current market conditions, which can be a drawback of the comparable transactions approach.

More often, though, the comparable company method morphs into the comparable transactions method in an M&A setting. Comparable M&A transactions can be identified by reference to geography, asset size, performance, time period, and the like. Ideally, the transactions would be announced close in proximity to the date of the analysis; however, narrowly defining financial or geographic criteria may mean accepting transactions announced over a longer time period. The computation of pricing multiples, such as price/earnings or price/tangible book value, is facilitated by widespread data availability regarding targets and straightforward deal structures that usually allow analysts to identify the consideration paid to the sellers. In other industries, estimating the deal value often becomes clouded by factors like contingent consideration that becomes "real" consideration only if the target achieves pre-determined financial targets. However, deal values are not always publicly reported for transactions involving privately-held institutions.

While the comparable transactions approach is intuitive–by measuring what another buyer paid for another entity in an industry with thousands of relatively homogeneous participants–the most significant limitation of the comparable transactions method is created by market volatility. Buyers' ability to pay is correlated with their stock prices, and most bank M&A transactions include a stock component. Deals struck at a certain price when bank stocks traded at 16x earnings would not occur at that same price if bank stocks trade at 12x earnings without crushing dilution to the buyer. Thus, prices observed in bank M&A transactions need to be viewed in light of the market environment existing at the transaction's announcement date relative to the valuation date.

Discounted Cash Flow Method

We introduced the discounted cash flow method as a forward-looking approach to valuation reliant upon a projection of future performance. In an M&A scenario, buyers usually start with the target's stand-alone forecast, unaffected by the merger. Acquirers then add layers to the forecast reflecting the impact of the transaction, such as:

- **Expense savings.** In a mature industry, realization of cost savings typically is a significant contributor to transaction economics, with buyers often announcing cost savings equal to 20% to 40% of the target's operating expenses. These are derived primarily from eliminating duplicative branches, back office functions, and the like. As the expense savings estimates increase, there often is a rising risk of customer attrition, with cuts going beyond the back office into activities more noticeable to customers, like branch hours or staffing.

  While buyers may expect a certain level of expense savings, it is not clear that buyers "credit" the sellers in the purchase price with all of the expected expense savings. This occurs because the buyer bears the risk of achieving the expense savings, for which the buyer demands compensation in the form of returns to its shareholders. Ultimately, the value of the expense savings is split between the buyer and the seller, with the favorability of the split in one direction or the other dictated by the negotiating power of the buyer and seller.

- **Revenue enhancements.** Buyers may expect some revenue enhancements to occur from the transaction, such as if the buyer has a more expansive product suite than the target or a higher legal lending limit. However, buyers often are loathe to include these in transaction modeling, and revenue enhancements are seldom reported as a driver of the EPS accretion expected from a transaction.

- **Accounting adjustments.** While fair value marks on assets acquired and liabilities assumed should not drive the economics of a transaction, they can affect the near-term earnings generated by the pro forma entity. Further, purchase accounting adjustments also influence the buyer's pro forma regulatory capital. For example, unrealized losses on available-for-sale securities are excluded by the target when computing its regulatory capital. However, these losses effectively become realized in the buyer's post-acquisition financial statements, thereby affecting the buyer's regulatory capital. This can make transactions difficult to execute for target banks with large unrealized losses on securities or significant interest rate marks on loan portfolios. Therefore, buyers usually are keenly aware of the accounting implications of a transaction

One advantage of a discounted cash flow approach is that it allows the buyer to evaluate, for a given price, the level of earnings contribution needed from the target to justify that price. While if you torture the numbers long enough they will confess to anything, buyers should not lose sight of the reality of implementing the modeled business strategies.

Additional Considerations

While the comparable transactions and discounted cash flow methods crossover–no pun intended with another valuation approach described below–from a minority interest valuation environment, several valuation techniques are unique to M&A scenarios.

Tangible Book Value Earn-Back

After the financial crisis, investors became focused on the tangible book value per share earn-back period, sometimes to the point of seemingly ignoring other valuation metrics. There are several ways to compute this, but the most common is the "crossover" method. This requires two forecasts:

- The buyer's tangible book value per share, absent the acquisition
- The buyer's pro forma tangible book value per share with the target

The analyst then calculates the number of periods between (a) the current date and (b) the date in the future when pro forma tangible book value per share exceeds stand-alone tangible book value per share. Ultimately, the earn-back period is driven by factors like:

- The price/earnings or price/tangible book value multiples of the buyer's stock relative to the multiples implied by the transaction value
- The extent of the merger cost synergies
- The purchase accounting adjustments created by the transaction

The tangible book value earn-back method also exacts a penalty for deal-related charges, as a higher level of deal charges extends the earn-back period. From an income statement standpoint these charges often are treated by analysts as non-recurring items and, in that sense, neutral to value. However, these charges represent a real use of capital, which the TBV earn-back approach explicitly captures.

Investors often look favorably upon transactions with earn-back periods of fewer than three years, while deals with earn-back periods exceeding more than three years often face a chilly reception in the market. The earn-back period often is the real governor of deal pricing in the marketplace, which investors often like because it overcomes some limitations posed by EPS accretion analyses.

Earnings per Share Accretion

As for the tangible book value per share earn-back period analysis, an EPS accretion analysis requires that the buyer forecast its EPS with and without the acquired entity. EPS accretion simply is the change in EPS resulting from the transaction. The attraction of this analysis lies in the correlation between EPS and value. For a buyer trading at 12x earnings, a deal that is $0.10 accretive to EPS should enhance shareholder value by $1.20 per share, holding other factors constant.

But how much accretion is appropriate? Should a deal be 1% accretive to be a "good" deal, or 10% accretive? It is difficult to answer this question in isolation. This is especially true for a deal comprised largely of cash, where the buyer is forgoing the use of its capital for shareholder dividends or share repurchases in favor of an M&A transaction. Recent deal announcements often indicate EPS accretion in the mid to high single digits with fully phased-in expense savings.

Internal Rate of Return

An internal rate of return analysis is a close relative of a discounted cash flow analysis, whereby the internal rate of return (IRR) is the discount rate that equilibrates (a) the purchase price and (b) the present value of the anticipated future benefits. The IRR can be compared to the buyer's cost of equity, with buyers generally targeting deals with IRRs comfortably over their cost of capital.

One issue with an IRR analysis, as for a DCF analysis, is the dependence of the overall analysis on the "terminal value", or the value of the target at the end of a discrete forecast period. Typically, the terminal value comprises a large portion of the anticipated future benefits, with the terminal value multiple significantly influencing the terminal value itself. Therefore, increasing the terminal value multiple can flatter the IRR, holding other factors constant. Our advice is that the terminal value multiple likely should be consistent with either the buyer's current P/E multiple or the sector's average historical P/E multiple. Otherwise, the analysis may be assuming P/E multiple expansion over time, and the buyer likely should avoid "paying" the seller for speculative multiple expansion.

Contribution Analysis

A contribution analysis is most useful in transactions involving primarily stock consideration. It compares the buyer and seller's ownership of the pro forma company with their relative contribution of earnings, loans, deposits, tangible equity, etc. In a merger of equals transaction, where the two merger parties are roughly similar in size, this type of analysis is important in setting the final ownership percentages of the two banks.

Conclusion

A valuation of a controlling interest may take many forms; fortunately, the strengths of certain valuation methods described here offset the weaknesses of others (and vice versa). Value ultimately is a range concept, meaning that there seldom is a single value at which a deal fails to make economic sense. There are good deals, reasonable deals, and dumb deals. Evaluating a number of valuation indications puts a buyer in the best position to slot a transaction into one of these three categories and to negotiate a deal that accomplishes its objective of enhancing financial performance, controlling risk, and developing new growth opportunities. It is crucial to remember, though, that deals are tougher to execute in reality than in a spreadsheet.

Chapter 6

Wrap Up

This concludes our whitepaper examining the analysis and valuation of financial institutions. While approximately 5,000 banks exist, the industry is not monolithic. Instead, significant differences exist in financial performance, risk appetite, and growth trajectory. No valuation is complete without understanding the common issues faced by all banks–such as the interest rate environment or technological trends–but also the entity-specific factors bearing on financial performance, risk, and growth that lead to the differentiation in value observed in both the public and M&A markets. Mercer Capital has significant experience understanding the issues facing specific banks and correlating that entity-level analysis to the overarching market environment.

Endnotes

1 In the short-run, a bank could accomplish these corporate actions without earnings, but eventually that well (i.e., the bank's TBV) will run dry.

2 Risk also is asymmetric in the sense that the losses generated from a failed strategy can greatly exceed the income generated while the strategy "worked.". This is particularly true in light of the leveraged capital structures of most banks (i.e., ten-to-one or twelve-to-one leverage on TBV). For a bank with TCE of 10% of assets and loans equal to 70% of assets, writing off about 14% of the bank's loans would wipe-out its equity.

3 Core return on tangible common equity (ROTCE) for the year-to-date period ended September 30, 2024 may be distorted for some banks with larger unrealized losses on securities. That is, they may have low profitability, measured by return on assets, but generate a high return on equity due to a thin equity position (mathematically, ROA x Leverage = ROE).

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