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IN FOCUS

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Leverage Ratios in Bank Capital Requirements

This *In Focus* provides a summary of leverage ratios used in bank capital requirements. It also explains the concept of leverage and the rationale behind a leverage ratio.

Leverage and the Financial Crisis

What Is Leverage? A firm or individual can use debt (borrow) or their own funds (capital) to purchase assets. Generally, leverage is the use of debt, and increasing the use of debt relative to capital is referred to as becoming more leveraged.

Why Are Banks Leveraged? In the simplest form of banking, a bank takes in deposits and uses them to make loans. This is leveraged finance because the bank is using debt (deposits) to acquire assets (loans). Banks can also use capital to fund loans, but if the rate of return paid on capital is higher than the rate paid to depositors, it would be less costly for a bank to finance its activities with deposits.

Why Was Leverage an Issue in the Financial Crisis? A financial firm may use leverage to reduce its funding costs. But if assets fall in value, financial firms need capital to absorb those losses. Greater leverage means firms have less capital relative to assets, and therefore have relatively less ability to absorb losses before failing.

Many economists view excessive leverage as a contributing factor to the severity of the crisis. Leveraged losses depleted capital, causing investors to fear that firms might fail, making them unwilling to provide firms with more debt or capital. Firms were forced to sell assets—thereby further depressing the prices of assets—or reduce lending in order to reduce leverage ("deleverage"). Deleveraging reduced the availability of credit for businesses and households, thereby increasing the severity of the recession.

What Role Did Off-Balance Sheet Exposures Play in the Crisis? Some financial firms used off-balance sheet activities such as credit derivatives in which the bank is selling protection and credit guarantees. These increased risk exposures in ways that investors could not easily detect beforehand and, in some cases, allowed firms to become more leveraged. Subsequent losses caused by off-balance sheet exposures contributed to an atmosphere of uncertainty and unwillingness to lend or invest that spiraled into financial instability.

Basel III Changes to the Leverage Ratio

What Is Basel III? In response to the crisis, 27 countries agreed in 2010 to modify the Basel Accords, shared bank regulatory standards. The agreement, known as "Basel III," included modifications to capital requirements, which U.S. bank regulators implemented through rulemaking in 2013. For more information, see CRS Report R42744, *U.S. Implementation of the Basel Capital Regulatory Framework*, by Darryl E. Getter.

What Are Bank Capital Requirements? As part of U.S. safety and soundness regulation, banks are required to maintain various capital-to-asset ratios, one of which is the leverage ratio. If banks fail to meet these ratios, regulators must take prompt corrective action.

How Is Leverage Defined in Capital Requirements? The leverage ratio has a specific meaning in capital requirements. It is the ratio of Tier 1 capital (with certain adjustments) to consolidated assets. Tier 1 capital is high-quality, loss-absorbing forms of capital, such as common equity. (Basel III tightened the definition of Tier 1 capital.) Unlike other regulatory capital ratios, assets are not risk-weighted for purposes of the leverage ratio.

How Did Basel III Change the Leverage Ratio? The rule implementing Basel III raised the minimum leverage ratio from 3% to 4% for certain banks, including those with a strong supervisory rating. (Banks that did not have a strong supervisory rating were already required to maintain a 4% leverage ratio.) In other words, the value of the bank's Tier 1 capital must be equal to at least 4% of the value of the bank's assets. The bank must maintain a leverage ratio of at least 5% to be considered well capitalized, however.

Why Have Both a Leverage Ratio and Risk-Weighted Capital Ratios? Basel III measures most capital ratios in terms of "risk-weighted assets" to account for the fact that some assets are riskier than others. To determine how much capital is needed, each asset is assigned a risk weight; assets with higher risk weights require more capital. For example, if an asset received a 50% risk weight, half of its value would be included in the denominator of a capital ratio.

A basic tenet of finance is that riskier assets have a higher *expected* rate of return in order to compensate the investor for bearing more risk. Without risk weighting, banks would have an incentive to hold riskier assets since the same amount of capital must be held against riskier and safer assets. But risk weights may prove inaccurate. For example, banks held highly rated mortgage-backed securities (MBSs) before the crisis, in part because those assets had a higher expected rate of return than other assets with the same risk weight. MBSs then suffered unexpectedly large losses during the crisis. Thus, the leverage ratio can be thought of as a backstop to ensure that incentives posed by risk-weighted capital ratios to minimize capital and maximize risk within a risk weight do not result in a bank holding insufficient capital.

The leverage ratio is simpler and more transparent than risk-weighted capital measures because the public does not

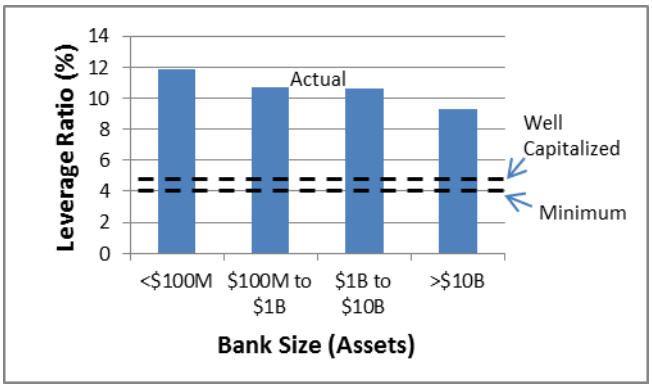
have full information on the risk weight assigned to each asset held by the bank. Therefore, the public can less easily assess whether a bank has enough capital to absorb potential losses based on risk-weighted ratios. Policymakers concluded that boosting simpler measures of capital was better at restoring confidence during the crisis.

Who Is Subject to this Rule? The Basel III rule applies to all banks currently facing U.S. capital requirements.

When Does this Rule Come into Effect? The rule came into effect on January 1, 2014, for the eight largest banks, and on January 1, 2015, for all other banks.

How Many Banks Already Meet the Rule? The regulators estimated that more than 95% of banks already met all of the Basel III capital ratios when the rule was finalized. Of the banks not currently in compliance, the regulators did not specify how many failed to meet the leverage ratio. The figure illustrates that on average banks hold far more capital than required by the leverage ratio.

Figure 1. Leverage Ratio: Average Actual vs. Required



Source: CRS based on FDIC data for first half of 2014

Supplementary Leverage Ratio

How Is the Supplementary Leverage Ratio Defined? Basel III introduced a supplementary leverage ratio (SLR) for the first time. The SLR also uses Tier 1 capital in the numerator and unweighted assets in the denominator. The difference between the leverage ratio and the SLR is that the SLR includes off-balance sheet exposures in the denominator. Thus, the numerator is the same, but the denominator is larger.

Who Is Subject to this Rule? All banks with at least $250 billion in total assets and $10 billion in foreign assets must meet an SLR of 3%. In addition, banks with more than $700 billion in assets or $10 trillion in assets under custody must maintain a 5% SLR to avoid restrictions on capital distributions and discretionary bonuses, and 6% for depository subsidiaries to be considered well capitalized. Currently, only eight of the largest banks meet the latter criteria. According to the regulators, there is less need to subject small banks to the supplementary leverage ratio because small banks on average have fewer off-balance sheet exposures.

Why Have a Leverage Ratio and a Supplementary Leverage Ratio? The SLR is intended to ensure that the bank is adequately safeguarded against off-balance sheet losses that are not captured in the leverage ratio. Regulators estimated that a SLR of 3% is equivalent to a leverage ratio of 4.3%, on average. Thus, the SLR requires affected banks to hold more capital on average than the leverage ratio.

Why Have Some Economists Called for Leverage Ratios to Be Raised for Large Banks? While large banks already face added capital requirements, including the SLR, some argue that the "too big to fail" (TBTF) problem should be addressed by requiring the largest banks to hold more capital, with some focused specifically on leverage. This approach could have two advantages. First, holding more capital reduces the likelihood that losses will lead to insolvency and systemic instability. Second, if their TBTF status results in lower funding costs than other banks, higher capital requirements could, in principle, help "level the playing field" by raising their funding costs.

When Does the SLR Come into Effect? Beginning in January 2018, banks subject to the rule will be required to meet the supplemental leverage ratio.

Do Banks Currently Hold Enough Capital to Meet the SLR? As of the second quarter of 2014, regulators estimated that the eight banks would need to raise $14.5 billion of capital in total to comply with the rule.

Leverage Ratio in the Dodd-Frank Act

Who Is Subject to the Provision? The Dodd-Frank Act (P.L. 111-203) requires heightened prudential standards for banks with more than $50 billion in assets and non-banks that have been designated as "systemically important financial institutions" (SIFIs) by the Financial Stability Oversight Council (FSOC), a council of regulators. The heightened prudential standards include a leverage ratio.

How Is It Calculated? The Dodd-Frank Act limits the ratio of liabilities to capital at 15 to 1. Unlike the two ratios discussed above, the Dodd-Frank ratio is based on liabilities instead of assets. It is calculated as total liabilities relative to total equity capital minus goodwill. This ratio is inverted compared to the other two ratios—capital is in the numerator rather than the denominator.

When Does It Come into Effect? The ratio is only applied if a bank receives written warning from FSOC that it poses a "grave threat to U.S. financial stability." At this time, the FSOC has not identified any bank as posing a grave threat. Rulemaking to implement the 15 to 1 leverage ratio for non-bank SIFIs has not yet been proposed.

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