



WHY BASEL III IS NECESSARY

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INTRODUCTION

As a result of the Great Recession, politicians and central bankers realized that national economies had been put at risk by the behavior of a handful of major banking institutions located mainly in the US, Switzerland, UK and some European nations. They had grown “too big to fail” so that their collapse would cause even more economic damage. To avoid this scenario, governments had to step in, which cost taxpayers dearly. Consequently, officials wanted to force banks to more prudently manage their risk. To impose this prudence, Basel III was developed. Its objective is to prevent this type of crisis from happening again and to ensure that the banking sector supports the world’s economies rather than threatens them.

Competition leads to increased risk-taking by banks. As a result, prudent banking is undermined. The goal of Basel III is to force banks to act more prudently by improving their ability to absorb shocks arising from financial and economic stress by requiring them to maintain a much larger capital base, increasing transparency and improving liquidity.

FINANCIAL CRISIS AND SHADOW BANKING

The Great Recession was caused by overspeculation in real estate, loose lending standards, and the eventual downturn in the US real estate market. As a result, confidence in subprime loans, and the investment banks that held them, was badly damaged. Money market funds and the repurchase agreements (repos) used as funding degenerated, which led to panic in the shadow banking system.

The shadow banking system works differently than traditional banking where borrowers and lenders meet to interact. The shadow banking system takes place outside the normal banking system and many companies interact, working more or less together. Financing is obtained by issuing short-term commercial bonds to private companies and investors.



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The Financial Stability Board defines shadow banking as “credit intermediation involving entities and activities outside the regular banking system,” (FSB, 2012). Shadow banking engages in financial intermediation such as loan origination of automobile and mortgages; loan warehousing funded through asset-backed commercial paper (ABCP); asset-backed securities issuance; warehousing, pooling and structuring collateralized debt obligation. It also includes money market mutual funds, credit hedge funds, and structured investment vehicles.

In the US, the shadow banking system has developed over the last 35 years. Traditional banking became unprofitable in the 1980s due to disintermediation via money market mutual funds replacing demand deposits and junk bonds reducing corporate lending (Gorton, 2009). Keeping loans on the balance sheet became unprofitable, which led to securitization and a transfer of credit risk. However, the financial crisis exposed fundamental flaws in securitization (Adrian & Ashcroft, 2012). It began in March 2008, when Bear Stearns’ clearing bank refused to provide intraday credit, which Bear needed to pay its outstanding repos. Investors and clearing banks withdrew to protect their own assets. As a result, repo and asset-backed commercial paper prices collapsed. Credit transfer through new issuance of asset-backed securities and collateralized debt obligations evaporated.

The “straw that broke the camel’s back” was the meltdown in the repo market that began at Lehman Brothers’ UK subsidiary which left clients without collateral (Sing & Aitken, 2009).

The resulting fire sale created adverse feedback loops of mark-to-market losses, margin calls, and further liquidations. The breaking of the buck by the Reserve Primary Fund following Lehman's collapse triggered a run on the shadow banking system that required unprecedented support by the Treasury Department and the Federal Reserve. Investors quickly realized that lending to shadow banks was not risk-free, which transformed a dramatic correction in real estate into a crisis that consumed the whole economy.

The term shadow banks, especially after the crisis, connotes a mysterious banking system that operates outside of normal channels. Shadow banks simply do not take deposits; therefore, they are not regulated like banks. Some of the financial institutions that make up the shadow banking system are listed below.

Finance companies generally fund themselves by issuing short-term debt in the wholesale financial market instead of raising funds primarily from insured deposits. Ally Financial, originally General Motors Acceptance Corp (GMAC), which was established to buy automobile receivables, is an example. Borrowing short-term to lend long-term became problematic during the crisis.

Investment banks and brokerage houses also operate as non-banks. The problems at Bear Stearns, Lehman Brothers, and Merrill Lynch highlight their risk during the crisis; however, the largest US investment banks have had to merge with commercial banks since that time.



Hedge funds with sufficiently large financial leverage and credit exposure can pose significant risk to the system. Long-Term Capital Management in the late 1990s created problems that required the Fed to step in and arrange a private sector bailout in order to stabilize our financial system. Private equity and venture capital firms could fall into this category, as well, if the funds they manage are highly leveraged.

Money market mutual funds have operated as shadow banks as well. As noted above, the breaking of the buck on the Reserve Primary Fund sparked the run on the system.

Property and casualty insurers generally do not operate in shadow banking; however, as AIG demonstrated, they can become involved. Insuring against defaults and credit events theoretically reduced risk on debt, but instead obscured the risk in the system that it created.

Prior to the financial crisis, many of these institutions had little direct regulation due to the market they served: major corporate and individual investors who, many felt, lacked the need for protection against fraud and serious downward spirals. There were no official measures of the size of the repo market nor data on the identity of participants. There were no official measures of collateral usage in derivatives nor formal estimates of securitization. The implicit commitments by regulated banks to shadow banks, however, created the assumption that the liabilities were risk-free. This perception led to an underpricing of the risks embedded in these money-like instruments, making them an artificially cheap source of funding that created an oversupply and contributed to systemic risk (Speech by Governor Tarullo, 2013).

The financial crisis exposed the flaws in the system which led to risk insensitive funding. Implied credit and liquidity support, the presence of asymmetric information between financial firms and investors, and the lack of transparency require regulation to achieve efficiency (Adrian & Ashcroft, 2012). In addition, the sheer size of the market warrants supervision because shocks can destabilize whole economies. In 2007, shadow banking held \$22 trillion in liabilities while commercial banks held \$14 trillion (Bjarnesjo & Lundberg, 2013). Gorton (2010) estimates that the US repo market alone is about \$12 trillion.

Basel III reforms strengthen the regulatory requirements where there is contractual support for shadow banking activities. Basel III capital requirements increase from 0% to 20% the credit conversion factor for commitments with an original maturity of one year or less that are not unconditionally cancellable.

In addition, the Basel III liquidity coverage ratio (LCR) assigns a 100% drawdown rate to undrawn amounts of credit extended by banks to a special purpose entity (SPE), effectively requiring a bank to hold \$100 in high-quality liquid assets (HQLA) for every \$100 it commits to an SPE (Speech by Governor Tarullo, 2013). This provision significantly reduces the economic benefits of many types of securitization.



FINANCIAL CRISIS AND TRADITIONAL BANKING

While lack of regulation in the shadow banking system may have created the crisis, the interconnectedness of the financial system meant that counterparty defaults were transmitted through the entire banking system. When wholesale funding collapsed, banks found they had insufficient liquidity to meet their obligations. In addition, banks lacked good quality capital. To generate returns, they had relied too heavily on riskier financial products and leverage (Barfield, 2011). Without the necessary shock absorbers, coupled with insufficient regulation and supervision of the traditional banks, the downturn became more severe. In addition, the capital formula used in Basel II — the regulatory framework governing global banking at the time — was procyclical, making the probability of default and the amount of loss at default greater.

Banks and supervisors underestimated the risks. The minimum requirements for capital were too low and leverage was too high, resulting in a banking system that quickly became unstable when the markets turned (Byres, 2012). Consequently, as the crisis unfolded, banks had to seek liquidity from their central banks and governments to deal with assets for which values were questionable and there were no buyers. Basel III addresses these problems by raising the quality, quantity, and transparency of a bank's capital in order to better absorb losses, strengthening risk management by increasing the capital requirements for counterparty credit risk exposure, introducing a leverage ratio, initiating measures to increase capital in good times that can be used when markets deteriorate, and setting a minimum 30-day liquidity coverage ratio as a global standard (Barfield, 2011).

According to the Basel Committee for Banking Supervision (BCBS), the purpose of Basel III is to ensure that the financial sector remains in a position to fulfill its primary function of providing credit to individuals and businesses. Basel III uses the same basic framework as Basel II, but imposes stricter minimum capital and liquidity standards. The Basel Committee stated that the crisis showed that tangible common equity buttressed losses (BIS, 2010a). Common equity is defined in both Basel II and Basel III as basically common stock and retained earnings. In Basel III, common equity increases to 4.5% of the risk weighted assets. In addition, Tier 1 capital has to be at a minimum of 6% of risk weighted assets, with Tier 1 and Tier 2 capital equaling at least 8%.

To incorporate a countercyclical capital buffer to protect against future stress in good economic times, the capital conservation buffer needs to be 2.5% above Tier 1 capital requirements. This design would dampen lending when the economy is booming and encourage lending when times are tough. Meeting this 2.5% buffer is being phased in with full compliance scheduled for January 2019.

To reduce market risk, Basel III introduces an enhanced leverage ratio. According to the Basel Committee (BIS, 2010a), leading up to the crisis, banks increased their on- and off-balance sheet leverage while showing strong risk-based capital ratios. This leverage exacerbated the decline in asset prices. This new leverage ratio is meant to discourage the growth of excessive leverage.



The Basel Committee also stated that the crisis proved the need to strengthen risk coverage of the capital framework (BIS, 2010a). To reduce credit risk — the risk that a counterparty cannot meet its obligations during periods of financial stress — which happened with AIG and its credit default swaps during the recent financial crisis, Basel III introduces stress testing using three-year historic and current market data to monitor the risk.

As noted above, Basel III institutes the liquidity coverage ratio to decrease short-term liquidity risk. The objective of this new standard is to ensure that a bank has sufficient high-quality assets — assets that can be converted to cash in order to endure a 30-day liquidity crisis. Implementation must be completed by 2019. In addition, a net stable funding ratio has been proposed that would segregate sources of long-term funding and weight each category differently. Banks have until 2018 to meet this standard (BIS, 2010b).

As a result of Basel III, bank transparency, liquidity and capitalization will improve, a countercyclical buffer will be introduced, and supervision of shadow banks will be developed. But what will it cost?

BASEL III COSTS

Although not an independent body, the Basel Committee calculates a net benefit from adherence to the Basel III proposals because of the reduction in costs associated with fewer incidences of banking crises. However, looking at its expense estimates alone, the Committee expects the combined cost to meet the net stable funding ratio and capital requirements to be 38 basis points for a 1 percentage point increase in the capital ratio.

The banking industry believes the net stable funding ratio will be very expensive and gain little in safety. The academic community, however, is divided on this opinion. The industry also believes that the elimination of softer forms of capital will drive up costs. Everyone agrees that common stock provides the strongest form of capital protection. The industry argues that common stock is by far the most expensive form of capital for a bank to raise (Elliot, 2010). On the other hand, government officials have defended the proposal using Modigliani and Miller's theorem (1958) that states the bank's total cost of capital is independent of the mix between equity and debt. The total cost of capital for a bank (or any firm) is a function of the riskiness of its business. As leverage decreases, the risk on the debt decreases as well along with its cost and the cost of equity. However, this theory does not take into account the tax deductibility of interest on debt.

Kashyap, Stein, and Hanson (2008) estimate that a 10 percentage point increase in equity capital will require loans to increase 24 to 45 basis points to break even. Miles, Yang, and Marcheggiano (2011) studied stock returns from 1992 to 2010 and estimated that reducing leverage from 30 to 15 basis points would necessitate an increase in loan rates of 18 basis points.

Unfortunately, these studies may underestimate the costs going forward. Under Basel I and Basel II, banks generally held more capital than the minimum required. Under Basel



III, banks have had to raise capital. In 2012, banks estimated that equity capital would have to increase 30% to 100% (Ojo, 2012), which could reduce lending, so the actual costs of adherence could be higher.

In addition, an increase in capital costs will require a corresponding decrease in return on equity. Investors will have to consider this decrease, which could make it more expensive for banks to raise additional capital.

CONCLUSION

Therefore, increased regulation may increase costs and thus reduce lending; however, the crisis began as a consequence of too much leverage, so trimming back may be an effective way of creating long-term stable growth. Fractional reserve banking, by its nature, is unstable, and competition entices risky behavior. Because of the importance to the economy, banks need to be regulated. The shadow banking system is equally vital to the economy and is, in fact, banking. Initiating regulation on shadow banks, coupled with better capital standards, more transparency, and better liquidity, will not end future panics, but it should produce more prudent risk management in banks and make the financial system more resilient.



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