Leverage, Proprietary Trading and Funding Activities

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Abstract: A major cause of the crisis was the web of interconnections among the largest financial institutions - the result of their borrowing from one another to fund the buying and selling of assets and derivatives for their own rather than customers' accounts (proprietary trading) As borrowing rose to many multiples of their capital (leverage), the system became undercapitalized and it became more likely that any interruption in the ability of leveraged institutions to fund the huge positions their borrowings had created could erode the capital cushion of many of those institutions to the point of insolvency. To prevent a recurrence of this threat, the following reforms must be put in place: resetting leverage limits at lower levels for all financial institutions; extending margin requirements to all financial instruments (not just stocks;, limiting loans to other financial institutions; and using both higher capital requirements and transactions taxes to curtail proprietary trading

Overview of the problem: Crisis management efforts continue to flounder on the problem of deleveraging the assets on the books of financial institutions that can no longer be sold at their original prices. Of these so-called "toxic" assets, a substantial portion held by the largest institutions was acquired as a result of excessively high levels of short-term borrowing in relation to capital. The rise in financial sector debt from 63.8 to 113.8 percent of GDP over the decade from 1997 to 2007 is a telling indicator of how leverage had bloated the system and made it vulnerable to any event that might threaten its ability to roll over the funding that supported its leveraged aggregate balance sheet.

A key issue for reform is to understand how leverage contributes to liquidity in a boom, feeds bubbles and causes credit implosions when bubbles burst. During the credit boom that fed the housing bubble, rising levels of borrowing inflated the size of individual institutions and the financial sector as a whole, fueled the increase in financial sector profits and made possible the excessive levels of compensation doled out to managers and employees of the largest institutions. Moreover, leverage was used to siphon off financial resources into activities such as proprietary trading that provided no benefits to customers or to the economy. In addition, the fact that much of the run up in the debt of financial institutions involved borrowing from other financial institutions helped create the web of interconnectedness that came to characterize the system and ensured its implosion.

In short, rising leverage was a substantial part of what went wrong in 2007. Its scale was exacerbated by deregulation – in particular, the Financial Services Modernization Act (Gramm, Leach, Bliley) of 1999 that permitted banks to borrow in order to fund traditional and nontraditional financial investments and the SEC's relaxation of the leverage ratio for investment banks from $12 to $1 of capital to over $30 to $1. Preventing a repeat of the financial crisis will require containing leverage across the system by imposing limits on borrowing by all financial institutions to reduce the systemic threat that leverage poses.

But constraining the potential for bubbles may require other measures. For example, margin requirements - the Depression-era reform that limited the amount of their value that can be borrowed to purchase equities – was used very effectively in the 1960s and early 1970s to dampen the potential for stock market booms. Extending margin requirements to cover all significant financial instruments would have helped contain the bubbles in markets for mortgage backed securities (MBS) and commodities that developed in the 2000s.

Proprietary trading: Mounting leverage within the financial sector made possible the extraordinary growth in proprietary trading over the last decade as commercial banks joined investment banks and hedge funds in using borrowed funds to make investments for their own accounts rather than the accounts of customers. Profits earned by engaging in proprietary trading are larger than earnings on services to customers but also much riskier.

During the 1990s, carry trades evolved as the primary channel for proprietary trading. Carry trades involve borrowing short-term at low interest rates to invest in higher-yielding long-term assets. At the end of the 1990s and again after 2005, the yen-dollar carry trade made up a substantial share of proprietary trading. Converting yen borrowed at low interest rates into dollars to buy assets that paid higher rates depressed the value of the Japanese currency, caused the dollar to appreciate and produced gains for traders from both differences in interest rates and currency appreciation.

The rise in proprietary trading by commercial banks grew out of their efforts to minimize the amount of capital proscribed under the 1988 Basel capital adequacy requirements. Since assets acquired through trading were assumed to be temporary holdings in connection with lending activities, the amount of capital backing required was minimal. As noted, a further boost to the activity was given by the GLB Act in 1999 that authorized expanded borrowing by banks and by the SEC's action in raising the leverage ratio for investment banks. In effect, the proprietary trading of commercial and investment banks enabled them to produce high profit levels like those that the growing number of hedge funds were reporting over the same period.

Higher leverage ratios made it possible for institutions to borrow much more without adding more capital backing, to take much larger (and thus more risky) positions and make substantial profits on investments with relatively low margins. Moreover, for both banks and investment banks, an additional incentive was that their trading accounts were booked off balance sheet and not monitored by regulators or scrutinized by credit rating agencies. As a result, proprietary trading exacerbated risk while leaving the system seriously undercapitalized.

But an equally critical problem is that proprietary trading creates conflicts of interest as it puts institutional traders in competition with their customers. Anticipating changes in market prices based on information about clients' orders to buy or sell, institutions face no restrictions if they engage in "front running" by trading for their own accounts before executing trades for their customers. Such behavior is obviously inconsistent with their fiduciary responsibility as intermediaries. Moreover, since financial resources are ultimately derived from the earnings and savings of nonfinancial sectors, the profits financial institutions earn by trading for their own accounts produce no benefits for either the economy as a whole or for those whose money is at risk in the game.

As proprietary trading accelerated the growth of leverage, it also caused problems for central banks in both developed and developing countries. Carry trades drove up the volume of international capital flows and exerted a substantial influence on interest rate differentials and exchange rates. As early as 2002, the International Monetary Fund (IMF) and the Bank for International Settlements (BIS) were warning that the international markets had become an arena for speculation. Moreover, the steady rise in borrowing by financial institutions from other financial institutions added another dimension of risk to the global system (Federal Reserve, *Flow of Funds;* Bank for International Settlements, *Annual Report* (various issues)

Leverage changes funding strategies. Rising levels of leverage and the growth of proprietary trading expanded the market for repurchase agreements (repos) which are essentially short-term borrowings backed by pledges of securities. In the decade from 1991 to 2001, repurchase agreements used as a source of funding for commercial and investment banks, finance companies and hedge and private equity funds rose from $230 billion to $788 billion. By year-end 2001, liabilities for repos were larger than checkable deposits and 20 percent of banks' total deposits. At the end of 2007, security repos had jumped three-fold to $2,364.8 billion before falling back to $1,757.1 billion in the fourth quarter of 2008. The peak year for financial sector borrowing through security repos was 2006 when their increase was only one-third less than the increase in checkable and time deposits (Federal Reserve, *Flow of Funds)*

The dramatic rise in the use of security repurchase agreements had the effect of intensifying the interconnectedness of financial institutions. Half or more of the financial sector's liabilities for repos in the years after 2001 were held as assets by other financial institutions. Other sources of funding for US financial institutions were foreign banks and the commercial paper market. A substantial share of the commercial paper used by banks, investment banks and a wide variety of other financial institutions to fund both traditional investments and off balance sheet positions was bought and held by other financial institutions, especially money market mutual funds (MMMFs). The extent to which intra-sector borrowing and lending contributed to systemic risk was dramatically demonstrated by the threat the collapse of Lehman Brothers posed for other financial institutions and the degree of government intervention it prompted.

Because such a large share of financial sector funding was borrowed in the short-term repo and commercial paper markets, the loss of confidence triggered by the Lehman bankruptcy almost immediately caused a halt in funding for the major financial institutions. Many institutions were unable to roll over the loans used to buy assets and were forced to sell those assets at a loss. Others faced calls for additional collateral as prices of the assets backing outstanding loans declined. The unwillingness of financial institutions to lend to one another caused what some see as an implosion in the financial sector. Others saw the freeze as a run on the financial sector by the financial sector itself. There was no protection against the charges against capital caused by these losses until the Federal Reserve and Treasury stepped in to halt the meltdown in capital that threatened the solvency of a substantial portion of the financial sector.

What remedies have or should be proposed to deal with the problem? In January 2009, the Group of 30 under the leadership of former Federal Reserve Chairman Paul Volcker proposed that strict capital and liquidity requirements be imposed on the proprietary trading activities of systemically important banking institutions. Stricter capital requirements would reduce the amount of borrowed funds institutions could use to leverage their positions and increase their profitability. Liquidity requirement would limit mismatches between the maturity of assets and liabilities involved in trading and make carry trades less profitable (Group of Thirty, 2009).

While higher capital requirements are the favored solution proposed by all official institutions, they are an indirect way of dealing with the problems posed by leverage and proprietary trading. In his testimony before the House Committee on Banking and Financial Services on September 24, 2009, former Chairman Volcker moved toward a more direct solution. He proposed that a heavy volume of proprietary trading should be prohibited and that the distinction between "proprietary" and "customer-related" trading should be maintained by the active use of capital requirements.

One of the problems with the proposals made so far is that they tend to focus on increasing capital and liquidity requirements for banks without noting that, as the crisis unfolded, not all the institutions defined as systemically important were banks. If higher requirements are seen as necessary for banks, they are undoubtedly necessary for all large, highly leveraged and interconnected institutions. Thus, capital, liquidity and reporting requirements should be imposed comprehensively across all sectors.

However, since banks were so successful in evading capital requirements in the decades after they were imposed at the end of the 1980s, it would seem prudent to introduce or reclaim regulatory tools used effectively in earlier periods to deal with problems similar to those caused by leverage, proprietary trading and the concentration of borrowing and lending within the financial sector. Such tools should include:

Lower leverage limits. An obvious first step would be to re-impose leverage limits at the lower levels that prevailed for banks before 1999 and for investment banks before 2004 and extend them to all systemically important institutions such as finance companies and hedge and private equity funds. Like higher capital requirements, limits on leverage will shrink the financial system and reduce its profitability. But lower leverage limits are a more direct means to curtail the scale of proprietary trading because they constrain the ability to fund large positions – a point US investment banks made. when they asked that the limits be raised to enable them to compete with European banks.

Securities transactions tax. The so-called Tobin tax on securities transactions would also be an effective tool for dampening the level of proprietary trading.

Limits on loans to other financial institutions. Reducing the level of interconnectedness that fuels contagion in the system is another critical element of the reforms needed to prevent a recurrence of another financial crisis. That, too, should be addressed by extending the prohibitions of existing law. For example, the prohibition against loans to any one non-financial borrower above a given percentage of a bank's capital - in force since passage of the National Bank Act in the 1860s – could be adapted to limit counterparty transactions among financial institutions.

Imposing margin requirements on purchases of all financial instruments. The requirement that buyers of equities be allowed to borrow only a given percentage of a stock's value was one of the major reforms adopted in the 1930s. It authorized the Federal Reserve to raise or lower margin requirements to moderate large movements in stock prices and was used effectively to dampen booms in both the 1960s and early 1970s. Preventing a future bubble built on the kind of asset concentrations that excessive leverage fuels could be accomplished by extending margin requirements to all major credit market instruments such as mortgage- and other asset-backed securities.

Most of the above proposals reflect the kind of regulatory framework that was dismantled by deregulation and is now being reconsidered in discussions of "macroprudential" tools. They provide a framework that favors rules over discretion and rejects a regulatory approach that has permitted adherence to belief in the equilibrating power of market forces to become an excuse for self-regulation. Returning to that approach would only invite renewed crises. Stripping away the excesses that developed in the era of deregulation will require direct tools like those that were put in place in the 1930s to restore and guard the stability of the financial system.

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