

THE PARADOX OF SHADOW BANKING

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Some Examples of Shadow Banking Transactions

An independent mortgage broker takes an application for a prospective homebuyer and submits it for approval to a finance company, which finances the loan and sells it on to an industrial loan company that gathers and warehouses loans and sells them in bulk onto the financial markets. A broker-dealer subsidiary of a major bank places the loans into a bankruptcy-remote special purpose vehicle where they are structured into a mortgage-backed security underwritten by the broker-dealer. While the special purpose vehicle is a separate entity and bankruptcy remote, it is often enhanced by guarantees offered by the underwriting bank. Thanks to subordination, the senior tranches of these securities are seen as low risk and are attractive to institutional investors.

More junior tranches of mortgage-backed securities are less attractive to outside investors and accumulate in the inventory of a broker-dealer. The broker-dealer structures the tranches into a new securitization with its own subordination structure and adds credit guarantees from outside insurers. The newly structured collateralized debt obligation (CDO) is held by a special purpose vehicle, which funds the purchase using commercial paper backed by the CDO cash flows. The commercial paper is sold to entities such as money market funds or local government excess cash pools, which need a short-term investment that provides a return on their extra cash. The revenue from the CDO sale and the excess spread helps the broker-dealer purchase more loans from warehouse lenders, making loan financing more available to retail borrowers.

A bank makes a billion dollars of risky loans to shipping companies. Concerned at the amount of capital regulators require it to hold against this exposure, it sets up a trust which writes a credit default swap guaranteeing the first \$100 million in losses from the loans, in exchange for periodic premium payments by the bank. Investors in the trust receive the right to the premium payments in exchange for purchasing shares of securities issued by the trust. The transfer of default risks from the loans to outside investors not subject to regulatory capital requirements allows the bank to reduce the capital backing the loans.

An insurance company invests its premiums in stocks and bonds. To earn additional returns, it loans these securities to hedge funds and asset management companies seeking to sell short and hedge their long exposures. In exchange for the loan, it receives cash collateral plus a small fee (while continuing to earn the returns on the loaned securities). This cash collateral is reinvested in short-term commercial paper backed by credit card receivables. This reinvestment is usually low risk, but if the commercial paper defaults the insurance company must sell off securities, possibly at a loss due to the forced and rapid nature of the sale, in order to return the cash collateral.

What Is Shadow Banking?

All of the examples above represent so-called “shadow banking” transactions in modern financial markets. They demonstrate several of the key characteristics of shadow banking and the way it contrasts with the canonical model of commercial or relationship banking:

- Credit intermediation chains—the series of steps that transfer cash from a saver/investor to a final consumer or borrower—are much longer, more complex, and less transparent than under the commercial banking model.
- Credit intermediation chains include both regulated banks and unregulated non-banks.
- In shadow banking, credit is market mediated—exchanged and priced in markets for traded securities—rather than held on the books for a long period at the originating institution.
- Shadow banking is collateral intensive. The extensive use of private collateral to backstop liabilities provides some of the assurance that might otherwise come from an explicit government backstop such as insurance of deposits in commercial banks.
- The shadow banking system performs extensive credit, liquidity, and maturity transformation outside of the banking system. That is, shadow bank intermediation converts illiquid, risky, long-term assets into “safe” and liquid short-term securities. This made it possible to offer wholesale investors a combination of attractive securities returns along with seemingly low-risk “deposit-like” access to liquid funds. Such transformation is enabled by the use of collateral, and also by diversification, subordination, and guarantees provided by private parties.

The market-mediated nature of shadow banking is a key contrast to relationship banking under a Glass-Steagal Act type division between commercial banking and the financial markets. In its strongest form, relationship banking eliminates market trading altogether by requiring intermediaries to hold credit to maturity on their balance sheet. In contrast, the vast global markets central to shadow banking—such as the derivatives market, the securitization market, and the securities lending market—permit the continuous disaggregation and trading of risk through exchange markets.

Shadow banking is central and significant to the modern financial system. By 2007, over 60 percent of financial sector liabilities were funding shadow banking and less than 40 percent funded “traditional” regulated liabilities such as bank deposits, checking accounts, interbank loans, and declared reserves of insurance companies.

This compares to 1970, when some 80 percent of financial sector liabilities funded traditional forms of financial intermediation.¹ Another way of looking at the growth of shadow banking is through the proportion of end user, or real economy, liabilities funded through bank deposits. In 1980, 40 percent of end user liabilities were funded through bank deposits, while by 2007 the fraction had dropped to 23.6 percent.² Post-crisis the size of the “traditional” sector has rebounded somewhat but still accounts for only about half of total financial sector funding.³

However, the new centrality of market mediation should not be taken to indicate that banking entities themselves are no longer central to the system. The markets that are vital to shadow banking are heavily dependent on banks as market makers, dealers, and guarantors. These dealer banks play a central role in the system and have been, in a sense, its private regulators and sources of liquidity. Recent research has documented that banks and their subsidiaries supported and continue to support over 75 percent of major securitizations through the use of guarantees.⁴ The U.S. derivatives market is dominated by the four largest commercial banks. A few major banks dominate the market for repurchase agreements (repo) as well.⁵ Thus, bank holding companies are still essential to the system, but traditional relationship banking activities appear to be growing less and less significant compared to broker-dealer activities.⁶

The financial crisis of 2008 was to a large degree a crisis of shadow banking. Supposedly separate non-bank “shadow” entities (e.g. securitization conduits, structured investment vehicles, and, in some cases, hedge funds) failed first, challenging the solvency of undercapitalized parent banks, which had to execute on guarantees to these entities. Stressed banks sold off the asset-backed securitizations used as collateral for their borrowing, driving down valuations of these securities. This triggered margin calls across the repo and credit default swap markets that continued to drive down collateral values and stress bank balance sheets. The spiraling decline in collateral values and questionable solvency or failure of key dealer institutions created a massive run on interbank lending markets and on institutions such as money market funds dependent on bank-issued liabilities such as commercial paper. As many observers have pointed out, the crisis resembled a traditional run on the banking system, mediated not through deposits but through the interrelationships created by shadow banking.⁷

Some Benefits and Costs of Shadow Banking

Shadow banking may be beneficial because it allows borrowers to access funds from a wider variety of investors with a wider variety of risk preferences. The ability to transform cash flows from relatively illiquid assets such as long-term individual loans into liquid, tradable, diversified securities benefits investors interested in holding securities that provide a return and can be converted into cash relatively easily. The ability to customize securities also allows the creation of risk-return tradeoffs that are maximally attractive to all types of investors. Demand deposit products offered through commercial banking traditionally never offered the range and scope of risk-

return combinations available through market-mediated credit. Consistent with this argument, the expansion of shadow banking prior to the financial crisis coincided with and helped fuel a large increase in the sheer volume of available credit.

Another benefit of shadow banking is that it opens up possibilities for gains from specialization by credit providers, including both superior knowledge due to specialization in a single area of the market and economies of scale made possible by specializing in particular credit intermediation functions. Non-bank finance companies and credit guarantors can specialize in niche areas of the market that were not well served by banks. For example, some researchers have argued that non-bank finance companies have traditionally been superior to banks at servicing specialized consumer credit markets such as subprime auto lending and credit cards, as well as low quality corporate credits including airlines.⁸

Finally, it is important to remember that market mediated credit is not new. Traded credit instruments such as corporate bonds and forms of short-term commercial paper are at least as old as the depository banking system. More recently, some of the more sophisticated techniques used in the modern shadow banking system were pioneered in the (implicitly) government-backed housing markets, which was also designed to increase credit availability through the conversion of illiquid long-term, fixed-rate mortgages into liquid tradable securities. Entities such as the Federal Home Loan Banks, Fannie Mae and Freddie Mac have played roles similar to private sector warehouse lenders, securitization underwriters, and credit guarantors in shadow banking.

However, the growth in the size and complexity of private shadow banking over the past two decades has indisputably represented a major shift away from the commercial banking model dominant under the New Deal banking regulation. The clear relationship between the growth of shadow banking and the destructive 2008 financial crisis has highlighted the potential costs of under-regulated market mediated credit.⁹ There are two broad categories of such costs. The first is the opportunity for deception and exploitation created by the long, complex credit intermediation chains characteristic of shadow banking. The second—and related—cost is a major increase in financial fragility.

The long credit intermediation chains in shadow banking made monitoring of counterparties very difficult, and eliminated incentives for any one actor in the chain to ensure quality underwriting. In each step of the chain, there were potential agency problems, or incentives for sellers to deceive buyers.¹⁰ Under the relationship banking model, the originator of credit must hold it for an extended period, and has a strong incentive to underwrite properly. When securities are originated for sale in a market mediated system, the incentive may only be to create a product that will appear attractive to a buyer over the short term. Securities produced by the shadow banking process were misrepresented in numerous ways by multiple actors, ranging

from originators who lied about the income of borrowers to underwriters and credit rating agencies that cooperated to mislead investors concerning the risks of structured securities. The “free lunch” combination of attractive returns and high short term liquidity seemingly offered to investors by shadow banking may simply have rested on concealing risks. When those risks became fully evident, liquidity vanished. Shadow banking may have channeled risk not to those best able to bear it, but to those least able to understand it.

Second, shadow banking increased financial fragility. While it was once believed that securitization and shadow banking could improve financial stability by better distributing credit risks across a range of investors, since the financial crisis economists have developed a better understanding of how much credit risk remained within financial intermediaries due to guarantees and similar off-balance-sheet relationships.¹¹ Shadow banking enabled massive increases in financial sector leverage that were concealed from regulators and counterparties through the complexity of the system. The ability of banks to arbitrage capital requirements through the apparent transfer of risk to outside investors has been well documented.¹² These commitments, along with the full scope of funding flows through the shadow banking system, were not visible on the bank balance sheet scrutinized by regulators.

Securitization also created vast increases in effective leverage that were embedded in structured securities. For example, by 2006, \$1 of equity investment in a mezzanine CDO supported over \$111 of subprime mortgages.¹³ Thus, even small losses had a drastic impact on credit availability. The apparent effectiveness of shadow banking in leveraging investor capital to create high volumes of lending was catastrophically reversed when losses began to occur.

In addition to high leverage levels, the dependence of shadow banking on market intermediation and collateralized lending linked liquidity very tightly to volatile market prices. This mark-to-market (or fair value accounting) character of finance made the entire system extremely pro-cyclical—in other words, it was vulnerable to booms and busts.¹⁴ In periods of rising asset prices, balance sheet capacity expands drastically due to increases in the value of collateral. The heavy dependence on collateralized short-term lending in shadow banking markets means that increases in market valuations of collateral enable much higher levels of borrowing, lending, and liquidity. But when market prices come under question, the process reverses and a negative price spiral ensues. Such negative price spirals are analogous to bank runs, except mediated through margin calls and market “fire sales” of securities rather than through depositor withdrawals of funds. Just as rises in collateral pricing support rapid expansion of leverage, declines in the market valuation of collateral translated almost instantly into pressures on bank liquidity and solvency.

Perhaps the clearest example is in the market for repurchase agreements, which were a key source of liquidity for broker-dealers and many buy-side investors. The funds

available through these agreements were directly linked to the current market valuation of securities collateral. When the value of this collateral dropped, the funding stream of dealer banks was immediately threatened. The heavy dependence on overnight repo meant that problems in rolling over debt occurred with 24 hours, and margin calls resulted for longer-term repo commitments. The need for additional funding forced asset sales, which further depressed the value of repo collateral, causing more funding shortfalls and additional “fire sales” of securities. There was no effective government backstop to halt this process.

The financial fragility created by shadow banking can be contrasted to the situation of commercial banking. Commercial banking can be highly unstable due to depositor runs if there is no government insurance for deposits. When there is such insurance, commercial banking stability is still vulnerable to weak regulatory oversight, since access to government deposit insurance creates incentives for banks to take excessive risks. But the assumption that banks will hold credit to maturity (or at least for a long period) rather than trading it means that accounting valuations are generally based on historical cost, not current market prices. This can be problematic if regulators refuse to force banks to recognize losses on assets that are genuinely and permanently impaired. However, it also means that losses can be managed over a much longer time period, allowing much more time for planning and resolution than if bank stability was immediately threatened by volatility in market prices. Furthermore, in a commercial or a relationship banking system, the full nature of bank liabilities and assets should be much more visible to a supervisor, as there are fewer off balance sheet risk transfers and less dependence on long credit intermediation chains.

Regulating Shadow Banking

Shadow banking poses fundamental challenges to regulatory oversight of the financial system. These challenges involve the measurement and oversight of risk, the ease of regulatory arbitrage when risk and activities move easily between the regulated and unregulated entities, and the difficulty in defining the perimeter of the public safety net.

Such challenges are made even more difficult by the fragmentation of the U.S. financial regulatory system. Regulation is still shaped around a distinction between financial markets and banking entities that the repeal of the Glass-Steagal Act and the growth of shadow banking has rendered obsolete. For example, market regulators such as the Securities and Exchange Commission (SEC) and the Commodities Futures Trading Commission (CFTC) are separate from prudential regulators of individual banking entities such as the Office of the Comptroller of the Currency (OCC) and the Federal Deposit Insurance Corporation (FDIC). The authority of the Federal Reserve to oversee bank holding companies is also essentially a prudential authority over individual banking entities. The separation between jurisdiction over markets and jurisdiction over entities divides regulation in a way that makes it difficult to

oversee the relationships created by shadow banking. The Dodd-Frank Act has taken some steps toward addressing this regulatory fragmentation by creating a council of regulators—the Financial Stability Oversight Committee—to oversee systemic risk, and expanding the systemic authority of the Federal Reserve in various ways. Yet the essential division in jurisdiction remains, and it continues to pose a challenge for regulatory integration.¹⁵

The Dodd-Frank Act did not specifically target key elements of shadow banking. For example, the legislation contains no explicit consideration of key shadow banking markets such as securities lending and repo, or wholesale investors in the shadow banking system such as money market funds. However, many elements of the Dodd-Frank Act have profound implications for shadow banking. In addition, regulatory actions by the Federal Reserve, both independently and as part of the Basel III process, have explicitly targeted shadow banking issues.

Below, I discuss the relationship between shadow banking and three essential regulatory toolkits for addressing systemic risk: rationalizing the safety net, instituting restrictions on bank activities, and improving prudential regulation and supervision. The rise of shadow banking creates challenges for each form of regulation that have not yet been fully addressed.

Rationalizing the Safety Net

The scope of government guarantees and liquidity support—the perimeter of the safety net—is crucial to properly disciplining the financial sector and making financial regulation effective. Access to the safety net permits financial actors to behave irresponsibly by expanding in ways that increase profits but threaten financial stability. Counterparties permit this since they understand that government guarantees will be available in case of failure. When the perimeter of the safety net is aligned with the effective scope of government oversight, then regulators can at least theoretically limit this harmful behavior. When it is not, profit-motivated financial entities that are guaranteed but unregulated can increase their activities in ways that benefit them but create major negative externalities for the economy as a whole.

Yet properly aligning the scope of the safety net with the boundaries of regulation is not as simple as making a pre-commitment to support only regulated entities. Once financial stability is threatened, regulators face a powerful incentive to assist entities whose failure would seriously damage the broader economy, regardless of whether those entities are within the scope of the pre-crisis safety net. If such institutions truly are central to the economy, the failure to support continuation of their activities can greatly multiply the human suffering and economic harm created by a financial crisis. On the other hand, the ad hoc expansion of the safety net in ways that protect financial actors from the consequences of their own behavior can create moral hazard that prevents needed adjustment and plants the seeds for the next crisis.

Navigating this dilemma is not easy. The experience of the 1929 crash, driven by the “liquidationist” philosophy of Andrew Mellon and the contractionary policies of the Federal Reserve, shows the dangers of an insufficiently aggressive response to crisis. But the experience prior to and during the 2008 crisis demonstrates some dangers of an overly permissive expansion of the safety net in response to financial stress.

Prior to the crisis, the expansion of the shadow banking sector was indirectly supported by implicit or assumed expansions of the government safety net beyond commercial banking. As mentioned above, shadow banking activities were heavily dependent on private guarantees from entities such as investment banks and insurance companies. In cases where these guarantors had access to the government safety net, their private guarantees implicitly passed on the benefits of government safety net support to non-bank counterparties. Many factors contributed to uncertainty about the boundaries of the effective government backstop, including the increasing size and centrality of dealer banks important in the shadow banking system, and the intermingling of dealer and commercial bank activity. As well, there is a recent history of informal government support for the financial market as seen in the ‘Greenspan put’ and brokered assistance for hedge fund management firms such as Long-Term Capital Management. To highlight an example, Lehman Brothers Holdings, an investment bank, assured counterparties of its stability by claiming access to the Federal Reserve discount window through its relatively small commercial banking subsidiaries.¹⁶

Finally, over the decade prior to the crisis, there was an increasing subsidy to derivatives and repo markets central to shadow banking through the expansion of exemption from bankruptcy laws.¹⁷ Bankruptcy exemptions give users of derivatives and repo a significant advantage over all other creditors, in that derivatives and repo obligations are given first priority in distributing the assets of a failing company. The bankruptcy stay is crucial to the operation of these markets and constitutes implicit public support.

During the financial crisis, government stepped in to replace private guarantors in backing a broad range of shadow banking activities. The ability of private banks to act as guarantors of the shadow banking system came under question in the early phases of the crisis. The Federal Reserve responded by using its previously dormant 13(3) authority for emergency lending to create credit facilities that acted as the “dealer of last resort,” supporting the value of shadow banking collateral and shadow maturity transformation performed through the commercial paper market.¹⁸ Later in the crisis, when these interventions appeared inadequate and Lehman Brothers demonstrated the consequences of the failure of a major investment bank, the federal government stepped in with a massive ad hoc expansion of the pre-crisis safety net. The government rescued American International Group (AIG), a major private guarantor of shadow banking collateral, guaranteed the value of money market funds previously outside the safety net, guaranteed the debt of the entire banking sector, rapidly committed to support investment banks nominally outside the pre-crisis safety net, and, of course, made Troubled Asset Relief Program (TARP) capital infusions to save failing banks

from resolution. As researchers have documented, in aggregate the terms and duration of intervention went far beyond any traditional principles of “lender of last resort” support.¹⁹

The Dodd-Frank Act was passed while these unprecedented interventions were still ongoing. It was shaped by two conflicting imperatives. First, widespread public outrage at a seemingly indiscriminate government bailout of the entire financial sector created pressure to cut back the safety net. But at the same time, many regulators felt the experience of the financial crisis demonstrated the inadequacy of a safety net limited to commercial banking and deposits alone, and sought statutory authority for future interventions that better matched the new shape of the financial sector.

These conflicting pressures led to a complex set of changes that expand the scope of the safety net in many ways while contracting it in others. In cases where the safety net is expanded, the legislation seeks to blunt the moral hazard effect by placing additional legal limitations on public support and increasing the “cost sharing” of the financial sector in safety net interventions.

When compared to the ad hoc crisis interventions, the Dodd-Frank Act places new legal restrictions on government assistance. However, when compared to the explicit pre-crisis safety net, the legislation expands the formal safety net in several important ways:

- Title II resolution authority creates an avenue for public (Treasury) liquidity funding to systemically important failing financial institutions. The potential scope of this public support goes well beyond commercial banking and includes broker-dealer subsidiaries of investment banks, as well as non-banks designated as systemically significant.
- The Dodd-Frank Act permits derivatives clearinghouses to directly access liquidity support from the Federal Reserve discount window. At the same time, however, other sections of the Dodd-Frank Act grant regulators greater oversight over these clearinghouses.
- Section 1101 creates a new framework for Federal Reserve use of its 13(3) lending authority. Before 2007, this authority had never been used at any scale. While Title XI places new limitations on 13(3) authority—limiting its use to the creation of generally available lending facilities serving solvent institutions—these restrictions are at least nominally compatible with the “dealer of last resort” interventions used in the financial crisis. This section thus ratifies future use of this authority to support the value of collateral in shadow banking markets.
- Section 1105 authorizes an emergency guarantee of all bank debt similar to the FDIC debt guarantee programs created during the financial crisis. Unlike

Federal Reserve use of emergency lending authority under Section 1101, the Section 1105 guarantee authority requires explicit Congressional approval.

At the same time, the Dodd-Frank Act also limits the safety net in several ways, especially when compared to the ad hoc and arguably extra-legal bailout programs put in place during the crisis.

- The new resolution authority in Title II also gives regulators authority to impose losses on executives, stockholders, and creditors of a failing financial institution through a resolution and liquidation process. The broader financial sector must also eventually pay back any public losses experienced through the resolution authority.
- As discussed above, while Title XI gives explicit authority for several major crisis interventions, it also places certain new restrictions on them.
- The “swaps push out” provision in Section 716 of the Dodd Frank Act separates customized credit default swaps and other types of dealing in exotic derivatives from the depository institution, eliminating deposit insurance support for these activities.
- The Dodd-Frank Act bans the use the Exchange Stabilization Fund to insure money market funds, as was done during the crisis.

The full impact of these changes will be difficult to understand until the new safety net is tested in a crisis. Two vital questions are the use of Title II resolution authority and 13(3) authority, both of which are powerful tools that do not require Congressional approval. In both cases, the Dodd-Frank Act leaves regulators significant discretion to balance the potential need for broad assistance in order to maintain financial stability during a crisis, with the need to ensure accountability, minimize moral hazard, and properly delimit the scope of the public safety net. Even given this regulatory discretion, the statutory language clearly mandates an emphasis on accountability and strong limitations on indiscriminate assistance.²⁰

Unfortunately, early signs are that regulators may be leaning toward a greater emphasis on the ability to provide liquidity assistance during a crisis than on fulfilling the accountability mandate of the Dodd-Frank Act. It is concerning that the “single point of entry” approach to resolution has at times been portrayed as involving indiscriminate support of the full range of bank subsidiaries in order to maintain the value of the institution.²¹ The provisions for executive accountability under resolution authority proposals are also weak.²² The failure of the Federal Reserve to promote the required regulations to limit emergency lending also raises serious concerns.²³

When combined with the extremely broad exercise of safety net support during the 2008 crisis, the failure of regulators to make a strong commitment to limit indiscriminate intervention during future financial stress causes reasonable concern that extensive public support could again flow to shadow banking and related dealing activities. This undermines incentives for private market oversight and emphasizes the need to properly oversee shadow banking and align regulatory controls with the potential for public subsidy.

Activity Limitation

Shadow banking involves the expansion of bank involvement in financial market activities previously banned under Glass-Steagall Act limitations. As argued above, the fusion of financial market and banking activities is central to the increase in complexity, financial fragility, and interconnectedness created by shadow banking. The limitation of banking activities to restore a more effective separation between commercial banking and financial markets is thus an appealing response. There are an almost infinite variety of schemes for such limitation, but in this section I will focus on activity limitations under the Dodd-Frank Act, especially the Volcker Rule.

The Dodd-Frank Act does not rely heavily on activity limitations. In most cases, the legislation takes the approach of continuing to permit the full range of financial market activities that existed prior to the crisis, but instructing regulators to improve risk management, transparency, and prudential governance of those activities. For example, the Dodd-Frank Act continues to permit trading in over-the-counter or customized derivatives, but requires that those with sufficient liquidity be executed through a clearinghouse, and all must be reported.

The great exception to this approach is the Volcker Rule.²⁴ The Volcker Rule bans proprietary trading in banking institutions, and also requires that major banks eliminate material conflicts of interest and limit connections to off-balance sheet entities such as hedge funds and securitization vehicles. If properly implemented, these changes would significantly shift the banking business model and fundamentally change the relationship between regulated dealer banks and the shadow banking system of market-mediated credit.

Unlike the Glass-Steagall Act, however, the Volcker Rule explicitly permits financial market involvement by banks. In fact, it specifies that banks may engage in market making and underwriting to the extent that such financial market activities do not generate systemic or prudential risk or result in material conflicts of interest. Thus, the Volcker Rule challenges regulators to craft a new definition of the dealer or market maker role that is more stable and reliable due to the removal of proprietary trading incentives, but is still able to support market-mediated credit. In other words, regulators are being asked to define a reliable utility role for dealer banks in the financial markets.

This mandate makes sense. Contrary to some criticisms of the Volcker Rule, the proprietary trading incentives of dealer banks did contribute to the 2008 financial crisis.²⁵ For example, major dealer banks significantly overextended their capital and liquidity in chasing profits from the real estate bubble through underwriting, securitization, and other activities, and were unable to act as a stabilizing force in the market during the crisis.²⁶ The conflicts of interest involved in their simultaneous role as market intermediaries, proprietary traders, securitization managers, and underwriters also helped to drive exploitative and fraudulent behavior during the crisis.

Unfortunately, so far regulators appear to be somewhat paralyzed by the challenge of restructuring the dealer role of banks. More than three years after passage of the Dodd-Frank Act, and two years after publication of a Proposed Rule, the five agencies charged with agreeing on the details of the Volcker Rule have been unable to finalize a rule. Furthermore, the details of the Proposed Rule, which contains fairly conceptual and principles-based definitions of permitted activities and no actual penalties for violations, imply that, even after the rule is implemented, there will be an extended period of data gathering and calibration before forceful restrictions on bank activities emerge. Regulatory responses to the London Whale incident in 2012, as well as more recent press reports, also indicate disagreement regarding even what should be fairly straightforward Volcker Rule issues, such as the definition of permissible hedging.²⁷

A major substantive criticism of the Volcker Rule has been that modern market making cannot be effectively distinguished from proprietary trading, because contemporary market making is supported by proprietary profits and not by bid-ask spreads or fee income.²⁸ The Volcker Rule does grant regulatory discretion to negotiate this issue. It allows banks to accommodate reasonable fluctuations in client market making demands, while imposing extra capital and liquidity requirements that address risks emerging from proprietary trading related to the market making function. Restrictions on trader compensation are also important and mandated under the Volcker Rule to limit negative effects of proprietary trading incentives.

Nevertheless, to the degree that client demands for immediate accommodation by market makers do involve extensive proprietary trading, the Volcker Rule may lead to the migration of some market making functions outside the regulated banking sector, to hedge funds or asset managers. The migration of relatively small-scale boutique market making in illiquid and customized instruments—which will be particularly difficult if not impossible to police under the Volcker Rule—may not be problematic. Indeed, to the degree such boutique market makers are subject to proper market discipline, such migration may be beneficial, and improve the diversity of dealer choices for customers.

But the 2008 financial crisis experience showed that thanks to the expanded role of market-mediated credit, large scale market making can easily become central to the economy and be pulled within the implicit public safety net. The issues regarding the

scope of public support after the Dodd-Frank Act discussed in the previous section add to these concerns. Without more dramatic shifts in the structure of financial markets to displace the central role of dealers, it is important for large-scale dealing to remain regulated.

The Dodd-Frank Act does give scope to do this through designation of non-bank systemically important financial institutions (SIFIs). This authority should be used if the Volcker Rule results in migration of large-scale dealer activities out of banks. Section 13(a)(2) of the Bank Holding Company Act, added under the Volcker Rule, mandates the regulation and control of the risks of proprietary trading at non-bank SIFIs through additional capital and liquidity requirements and quantitative activity limitations. This section grants very extensive discretion, but it still requires that regulators limit the risks of proprietary trading at systemically important non-bank dealers in order to realize the benefits of the Volcker Rule.

Prudential and Capital Regulation

Prudential risk regulation is the systemic approach favored under the Dodd-Frank Act. In marked contrast to the lack of activity restrictions in the legislation outside of the Volcker Rule, Titles I, VI, and VII contain extensive directives to regulators to limit systemic risk through supervision, risk management, capital, collateral mandates, and diversification requirements such as credit exposure limits. Capital and liquidity regulation is dealt with in detail elsewhere in this volume, so this section will focus on the specific challenges to prudential supervision created by the rise of the shadow banking system.

One major such challenge is the ease of transferring financial commitments between the regulated and unregulated sector under shadow banking. As shown in the example of a “capital relief trade” in the introduction to this essay, the rise of derivatives and securitization markets have made it theoretically simple for a bank to transfer risk to an outside investor not subject to capital or prudential requirements. The same financial commitment will be capitalized and regulated differently depending where in the system it is held.²⁹

There are several possible avenues to address this. First, regulators could take more steps to limit the range of entities to which credit risk can be transferred and expand the regulatory perimeter to better oversee such entities. The steps in the Basel III rules to define a category of “eligible guarantee” and “eligible risk guarantor” that could be subject to regulatory oversight are one step in this direction.³⁰ Notably, such eligible guarantors would not include monoline insurers (insurance companies that provides guarantees to issuers) or in general entities subject to wrong-way risk (*i.e.* entities with institutional default risk highly correlated with the default risk of the instruments they guarantee). But the requirements for eligible guarantors remain broad and are dependent on institutional credit ratings that have not been reliable in the past. Furthermore, the Basel III rules still contain numerous avenues for the reduction of credit

risk through credit default swaps traded on the markets generally. These limits on risk transfer would have to be tightened significantly to fully address the problem.

Another challenge is the general migration of credit intermediation to shadow banking networks in response to increased regulation of the banking system. An important potential barrier to such migration is the dependence of the shadow banking system on private guarantees from large organizations seen as within the implicit public safety net. As discussed above, prior to the crisis many such guarantees were provided by banks. If this dependence continues, it may be possible to effectively regulate shadow banking through control of dealer banks.

A major issue in properly addressing shadow banking risk through bank regulation prior to the crisis was that linkages between regulated banks and the shadow banking system were not immediately visible on bank balance sheets. For example, most guarantees were permitted to remain off balance sheet, the lack of information on derivatives exposures concealed interconnections in the system, and, in general, regulators did not understand the length and complexity of intermediation chains. Post-crisis some real progress has been made on this problem. Changes in accounting rules have required guarantees and previously off-balance-sheet securitization vehicles to be made visible on the balance sheet. The increased reliance on explicit stress testing, rather than simply examining balance sheet commitments, has increased regulators' understanding of bank exposures. New data on derivatives should bring much greater transparency to this market. Work by the Office of Financial Research should also help to illuminate the relationship between the banking sector and less regulated non-banks.

Nevertheless, it would be unwise to rely on the assumption that guarantees provided by large banking organizations will remain central to the shadow banking system once capital and other prudential requirements on banks are increased. Many banking entities that provided guarantees prior to the crisis were less regulated investment banks that were not within the explicit public safety net. Non-bank guarantors such as monoline insurers were also very important. There are many large insurance companies, asset managers, and even hedge and private equity funds that could grow to become important non-bank guarantors of financial intermediation. Thoughtful scholars have concluded that the main barrier to imposing the substantially heightened bank capital requirements that most observers believe are necessary is not the supposed economic cost of capital, but the possibility of extensive risk migration to the shadow banking system.³¹

One possible way to address this issue is by designating entire intermediation markets for prudential oversight, rather than focusing oversight on single institutions. This could capture migration of risk away from regulated banks through traded markets. For example, the Financial Stability Board has recommended "haircuts" in securities lending markets generally, at the level of individual securities. Such regulation would,

in effect, limit the leverage available through collateralized lending generally, no matter which entity is involved. The effort to address run risk in money market funds generally also falls in this category. As well, protections in credit default swap markets have been improved through Title VII of the Dodd-Frank Act.

Conclusion: Moving Beyond the Dodd Frank Act to Better Address Shadow Banking

There are grounds for doubt that current regulatory efforts alone will properly address shadow banking risks. Below are two broad recommendations designed to contend with these risks. These are only some of the needed regulatory interventions.

End Complexity Bias and Introduce a Regulatory Preference for Simplicity and Standardization

The ideology that financial markets are efficient leads to a situation where regulators tend to permit any form of voluntary contracting between market participants. The obvious risks of arbitrage are generally addressed through ever more complex prudential requirements rather than steps to limit complex risk transfers. This tendency creates an effective bias toward complexity. Multiplied over numerous decisions, it creates extremely long and involved financial intermediation chains that conceal risks from market participants and regulators alike, and also adds to financial fragility. Regulators should address this bias and increase their willingness to actively simplify financial intermediation through limitations on risk transfer and affirmative steps to standardize and simplify the terms of financial contracts. For example, it is highly questionable whether the customization and complexity of private securitization has created more value in financial efficiency than it has subtracted in opportunities for regulatory arbitrage and outright fraud.

Take Steps to Expand the Role of Relationship Banking

While relationship banking certainly presents issues of its own, it creates significant benefits that are not present in the market-mediated and transactional relationships that characterize shadow banking. In addition, greater diversity of financial intermediation models could reduce systemic risk. This essay has already touched on some of the transparency and financial fragility issues related to the distinction between commercial banking and market-mediated credit. There is also clear evidence that relationship banking is beneficial to mid-market and smaller real economy businesses.³² There are a range of ways to expand the role of relationship banking, from the full restoration of an updated version of the Glass-Steagall Act as proposed in “The 21st Century Glass-Steagall Act” introduced by Sen. Elizabeth Warren (D-Mass.) and Sen. John McCain (R-Ariz.), to steps that regulators can easily take without statutory change, such as favoring originate-and-hold lending over originate-and-distribute in prudential rules.

Endnotes

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4. “Securitization Without Risk Transfer” Viral V. Acharya, Philipp Schnabl, and Gustavo Suarez. National Bureau of Economic Research. NBER Working Paper No. 15730 (Feb. 2010).
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6. “The Evolution of Banks and Financial Intermediation: Framing the Analysis” Nicola Cetorelli, Benjamin H. Mandel, and Lindsay Mollineux. FRBNY Economic Policy Review (July 2012). For example, since 1990 assets held by broker dealers have grown almost eight times faster than assets held by commercial banks generally.
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15. For example, prudential regulators have had strong conflicts with the Securities and Exchange Commission over the potential systemic risks posed by money market funds.
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17. “Systemic Liquidity Risk and Bankruptcy Exceptions” Enrico Perotti. Duisenberg School of Finance, DSF Policy Paper, No. 8 (Oct. 2010).
18. See “Shadow Banking” Appendix 8.
19. “The Lenders of Last Resort: A Critical Analysis of the Federal Reserve’s Unprecedented Intervention after 2007” L. Randall Wray. Levy Economics Institute of Bard College (Apr. 2013).
20. For example, Section 204(a) of the Dodd Frank Act states that a central purpose of resolution authority is to ‘minimize moral hazard’, and Section 204(a)(3) gives a strong mandate to regulators to ensure that all parties responsible for the condition of a failing financial company bear losses consistent with that responsibility. Title II also mandates liquidation of the failing company. Section 1101 of the Dodd Frank Act, regarding the Federal Reserve’s emergency lending authority, requires the establishment of specific procedures to limit any assistance to solvent borrowers and to ensure lending on good collateral.
21. See Stephen Lubben’s essay on resolution authority in this volume.
22. AFR May 2011 comment. Americans for Financial Reform (May 23, 2011)
23. Marcus Stanley. “The Fed’s Forever Bailout” USNews.com, June 26, 2013 (accessed October 2013).
24. It is telling that the original version of the Volcker Rule in the bill emerging from the Senate Banking Committee was not particularly forceful, and was greatly strengthened on the Senate floor by Sen. Jeff Merkley (D-Oregon) and Sen. Carl Levin (D-Mich.).
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