# What Should Banks Be Allowed to Do?

*By Charles S. Morris*

The health of the U.S. economy depends crucially on the health of the banking system. Commercial banks play a critical role in supporting economic activity through their traditional services of taking deposits, making loans, and settling payments. Indeed, when several of the largest U.S. banking organizations experienced financial problems during the 2007-08 financial crisis, concern about potential harm to the economy led to a number of governmental support programs, including the Treasury's Troubled Asset Relief Program (TARP) and the Federal Reserve's emergency lending programs.

The largest U.S. banking organizations that experienced financial problems, however, did not look like traditional banks. They are large, complex financial organizations that combine traditional banking with a variety of nonbank activities. Nonbank activities provide additional revenue sources and may increase a banking organization's diversification of assets and revenue. However, they also may increase risk by raising an organization's complexity to such a degree that it is more difficult for the market, management, and regulators to assess, monitor, and control risk taking. Increased risk at the largest banking organizations endangers

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financial stability and the health of the economy, which can lead to expansion of the public safety net that puts taxpayers at greater risk.

This article suggests that one possible option for reducing the costs and risks to the financial system and public safety net is to restrict some of the nontraditional activities that have become allowable for banking organizations in recent years. The first section of the article reviews the traditional structure of the U.S. banking system. The second section discusses the erosion of the traditional structure and evolution into today's financial system. The third section discusses how the current structure potentially increases risk to the safety net and reduces financial stability. The fourth section provides one option for how the scope of permissible banking activities could be limited.

## I. THE TRADITIONAL STRUCTURE OF U.S. BANKING

Traditional commercial bank activities—taking demand and other deposits, making loans, and providing payment services—form the basis of the financial structure that supports economic activity. These traditional banking services intermediate the flow of credit from savers to borrowers and transform the short-term savings desired by households into longer term loans. In addition, banks form the plumbing of the financial system because they ultimately settle transactions between buyers and sellers.

Given the importance of a stable banking system, U.S. banks historically have been protected by a public safety net and prudentially supervised and regulated to ensure they operate in a safe and sound manner.[1] Solvent banks that have temporary funding problems have been able to borrow from Federal Reserve banks since 1914, while bank customers have been protected by limited federal deposit insurance since 1933—both of which provide a public safety net for banks and their customers.[2] Regulation through restrictions on banks' activities, prices, and locations greatly influenced the traditional structure of the industry. These restrictions were designed to improve safety by limiting risks that banks could take. The restrictions also were intended to improve safety through a "cushion" of profits provided by restricted competition, both among banks themselves and with nonbank financial companies.

Restrictions on commercial bank activities at the national level date to the National Banking Act of 1864, which limited national banks to investing their "… funds in short-term, self-liquidating loans to finance goods in the process of production or exchange" (White). In the early 1920s, however, national banks found they could use affiliated companies to engage in significant amounts of securities and investment banking activities.[3] The coincidence of the boom in stock prices in the 1920s and the growth of bank securities affiliates, followed by the stock market crash in 1929, led many to conclude that the combination of commercial and investment banking was responsible for the crash (White).

In response, Congress passed the Banking Act of 1933, and included in it the Glass-Steagall Act, which separated commercial and investment banking by prohibiting affiliations.[4] Specifically, deposit (commercial) banks were prohibited from affiliating with companies that conducted securities activities (underwriting and dealing), while securities companies were prohibited from taking deposits. The goal of the Glass-Steagall Act was to safeguard the banking system by limiting the risk-taking activities of commercial banks and by protecting them from direct competition with investment banks.

The Banking Act of 1933 also restricted the interest rates banks could pay on deposits. Banks were prohibited from paying interest on demand deposits, while the Federal Reserve was authorized to impose interest rate ceilings on time and savings deposits. Deposit ceilings, implemented through the Federal Reserve's Regulation Q, were designed to prevent deposit-rate competition among banks. The concern was that rate competition would lower profits, in turn leading to failures and instability in the banking system. State usury laws placed ceilings on loan rates, usually for consumer loans, which also can limit competition. These laws generally are no longer binding.

Banks also faced geographic restrictions on the location and number of offices they were allowed to have. States determined whether banks chartered in their state could have branches, and, if so, any restrictions that would apply, such as limiting branches to the county of the home office. States also determined whether bank holding companies (BHCs) could own more than one bank in the state. National bank branches and locations were restricted by the McFadden Act of 1927.

The act prohibited national banks from branching outside of their home state, but also allowed them to branch within their home state to the same extent as state banks to provide competitive equality. Like deposit rate ceilings, geographic restrictions, where they applied, limited local market competition, sometimes significantly, among banks.

The combination of prudential supervision and regulation, bank access to a public safety net, the Glass-Steagall Act, deposit rate ceilings, and geographic restrictions produced a fairly stable and profitable banking industry. Essentially, restricting banks to traditional activities, protecting those activities from nonbank competition, and limiting competition within banking created an initial "franchise" value that banks were able to maintain for many years. Over time, however, that franchise value eroded.

## II. EVOLUTION OF THE MODERN FINANCIAL SYSTEM

The traditional financial structure began to erode in the 1970s as commercial banks faced increasing competition for their core businesses of providing deposits and making loans. Improvements in computing power and information technology enabled nonbank financial companies to create a variety of competing financial products. In addition, unregulated financial companies had a competitive advantage in that banks were held to higher regulatory requirements. This disadvantage for banks was exacerbated by changes in the economic environment, such as rising inflation and high market interest rates in the 1970s that made deposit rate ceilings binding. While most banks today still focus on providing deposits and making loans, the increased competition has created a much more concentrated banking industry with fewer and larger banks. Moreover, the separation of commercial banking and investment banking has disappeared among the largest banking organizations, which now are involved in a variety of nontraditional banking activities.

### *Competition for bank deposits*

Over the past 30 years, banks have faced greater competition for household savings among themselves and from other financial companies, such as mutual funds, pension funds, and insurance companies. Competition among banks for time and savings deposits increased as

Regulation Q deposit rate ceilings were phased out by the Depository Institutions Deregulation and Monetary Control Act (DIDMCA) of 1980.[5] Nonbank competition in providing demand deposits also increased as innovations enabled nonbank financial companies to offer instruments similar to demand deposits but that differed by paying interest.

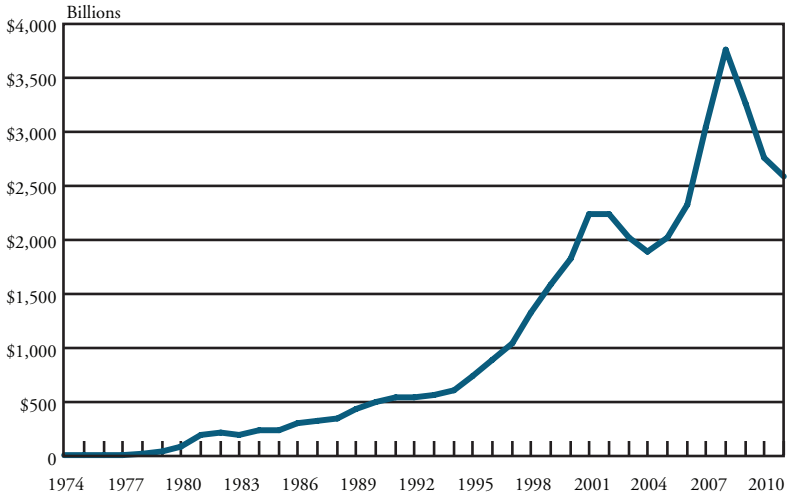
One major innovation was the interest-bearing Negotiable Order of Withdrawal (NOW) accounts developed by thrift institutions in the 1970s. NOW accounts had the same transactions features as demand deposits because funds were available on demand and could be transferred to others through unlimited check-writing privileges. However, unlike demand deposits, the accounts could pay interest because the thrifts reserved the right to require notice before allowing funds to be withdrawn or transferred by check. Banks were able to meet this competition in 1980 when DIDMCA allowed them to offer NOW accounts.

The other major innovation was the introduction in 1971 of money market mutual funds (MMMFs). The funds became a competitive alternative to banks because their shares are like demand deposits, but unlike demand deposits, they pay interest. MMMFs invest in high-quality money market instruments, which are fixed income securities with maturities of a year or less.[6] Historically, some of the more common MMMF investments were financial and nonfinancial company commercial paper, short-term municipal securities, Treasuries, and repurchase agreements (repos).[7] Recently, MMMFs have expanded into other investment instruments, such as asset-backed commercial paper (ABCP).[8] MMMF shares are like demand deposits in that funds can be withdrawn by investors on demand and, subject to some restrictions, transferred to third parties to make payments like checks.

MMMFs have grown rapidly over the past 40 years, peaking at $3.8 trillion in assets in 2008 (Chart 1). Because MMMFs paid interest and demand deposits could not, their growth first accelerated in the late 1970s and early 1980s as inflation and interest rates rose. In addition, because MMMFs invest in high-quality, short-term liquid assets, they were viewed as being safer than demand deposits by investors that had funds exceeding the deposit insurance limits.[9] As a result, MMMF shares are held by individuals, institutional investors, and corporate and noncorporate businesses as an alternative to bank deposits for cash management and payments purposes.

*Chart 1*

## MONEY MARKET MUTUAL FUND ASSETS




Notes: Data are for the fourth quarter of each year except 2011, which is for the third quarter. Although money market mutual funds were established in 1971, the Flow of Funds did not start including them until 1974.
Source: Board of Governors of the Federal Reserve System, Flow of Funds Accounts of the United States, Release Z.1, Table L121, Dec. 8, 2011

### *Competition for bank loans*

In addition to greater deposit competition, banks faced greater competition from a variety of institutions in making and holding loans. Banks have long faced loan competition from consumer finance companies, particularly the "captive" finance arms of auto companies and retailers. They also had to compete with factors, which are companies that finance trade receivables. These nonbank financial companies typically rely on the money market, specifically commercial paper, to fund much of their operations.

The increase in competition for loans largely came from investment banks through the growth of the corporate bond market and the development of commercial paper, high-yield bond, and securitization markets. Commercial paper became a competitive alternative to bank operating loans for large, highly-rated nonfinancial companies in the late 1960s and early 1970s.

High-yield bonds, also known as junk or speculative-grade bonds, are bonds that are rated below investment grade (the top four ratings). Historically, they were bonds issued as investment grade but that were

subsequently downgraded due to declines in the credit quality of the issuer. In the 1980s, the market for new issues of high-yield bonds developed and grew rapidly. These bonds were used, for example, to finance mergers and acquisitions and leveraged buyouts. The size of the high-yield bond market rose from just $10 billion of outstanding bonds in 1978 to $1.3 trillion in 2010 (Chart 2).

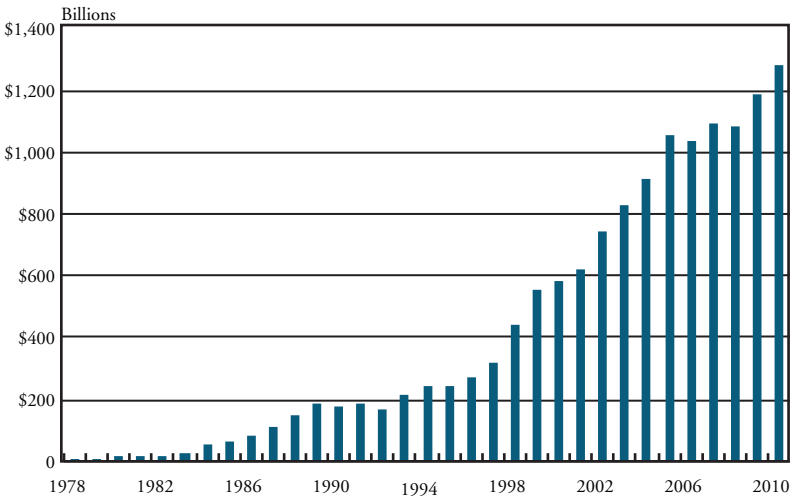
The final major change in competition for bank loans was the development of securitization. Securitization is a process. In its simplest form, it begins with a bank or nonbank financial company that originates loans but then, instead of holding the loans to maturity, sells them to another company. The buyer pools the purchased loans and funds them by issuing new securities. The resulting securities are known as asset-based securities (ABS) because payments of interest and principal come from the cash flows of the underlying assets in the pool. The development and growth of securitization reflected developments in information technology combined with lower regulatory restrictions, such as lower capital requirements, on nonbank financial companies.[10]

Securitization largely began in the early 1980s with the development of securities backed by mortgages guaranteed by the government sponsored enterprises—Fannie Mae, Freddie Mac, and Ginnie Mae. Mortgage-backed securities (MBS) were followed by the securitization of other types of loans, such as commercial mortgages, small business loans, and consumer loans (credit card, auto, and student loans). The ABS market grew rapidly, from virtually nothing in 1983 to $4.6 trillion in 2007 (Chart 3). Problems in the ABS market—initially caused by the securitization of low-quality loans such as subprime mortgages—were at the heart of the financial crisis. Since 2007, outstanding ABS has fallen more than 50 percent to about $2.1 trillion.

Securitization largely takes place through the so-called shadow banks, which are financial companies that are funded with wholesale money market instruments.[11] Instead of banking taking place in a single company, securitization takes place through a series of shadow banks in a supply-chain-like process that provides complete end-to-end banking—borrowing funds from savers, making loans to ultimate borrowers, holding the loans to maturity, and managing the various risks associated with lending (Pozsar, Adrian, Ashcraft, Boesky). Money market instruments—specifically commercial paper, ABCP, and repos—are the primary funding instruments at

*Chart 2*

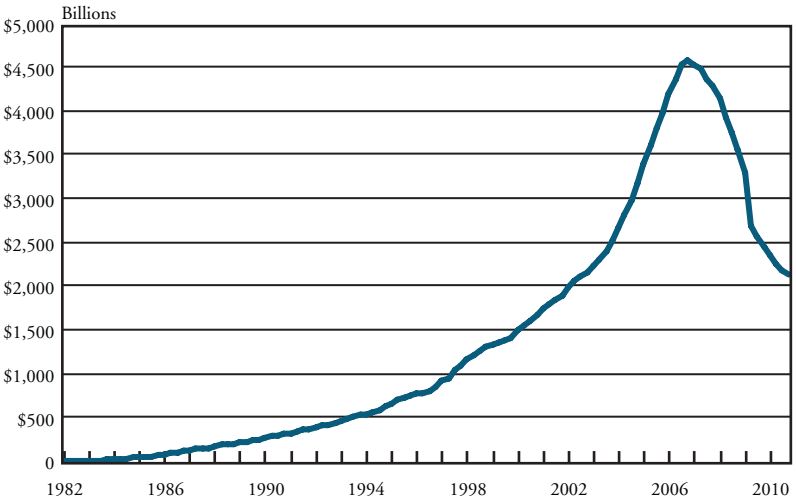
## HIGH-YIELD BONDS OUTSTANDING




Note: Data from 1978 to 2006 are midyear; data from 2007 to 2010 are year's end; 2010 is the most recent data available.
Source: Edward I. Altman, "Default, Recovery Rates Defy Forecasts in High-Yield, Distressed Debt Markets," October 2006, and "Defaults and Returns in the High-Yield Bond and Distressed Debt Market," published yearly February 2007-11

*Chart 3*

## ASSET-BACKED SECURITIES OUTSTANDING




Note: Data are for the fourth quarter of each year except 2011, which is for the third quarter.
Source: Board of Governors of the Federal Reserve System, Flow of Funds Accounts of the United States, Release Z.1, Table L121, Dec. 8, 2011

virtually each step in the process. Some of the largest banking organizations are part of the traditional and shadow banking systems because they have subsidiaries that are involved in securitization.

### *Impact on the structure of banking*

The increased competition that banks faced for their deposits and loans, combined with regulatory restrictions and requirements, led to reduced profits and declining franchise values. Over time, regulatory restrictions were eased or eliminated as banks pushed the regulatory boundaries. In addition, policymakers gradually changed their views about some of the restrictions on banks, realizing that the anticompetitive effects were often more costly than the benefits to financial stability. Deregulation began in 1980 with DIDMCA, which phased out all deposit rate ceilings except the prohibition of paying interest on demand deposits. It was followed by the elimination of restrictions on branching and nonbanking activities.

The pressure to eliminate branching restrictions began with banking organizations merging across state lines to increase the volume of traditional activities and take advantage of technological changes that made larger operations more efficient. BHCs were able to merge across state lines as neighboring states made reciprocal agreements to allow banks in their states to have common owners. By the early 1990s, this activity had become so widespread that in 1994 Congress passed the Riegle-Neal Interstate Banking and Branching Efficiency Act, which allowed full interstate banking.

The largest BHCs also started pushing against the limits on their activities in the late 1980s, focusing first on securities activities and later on market making and shadow banking activities. Banks were able to whittle away at the Glass-Steagall Act restriction on investment banking because the original restrictions actually allowed limited affiliations with securities firms.[12] To fully participate, however, banks needed the Glass-Steagall Act prohibition on affiliation with securities companies to be repealed. This was achieved in 1999 with the passage of the Gramm-Leach-Bliley Act (GLB Act). Beyond securities activities, the GLB Act allowed BHCs to engage in other nonbanking activities, such as merchant banking and insurance underwriting.

Technological improvements, interstate banking, and the GLB Act resulted in fewer banks and a much more concentrated banking industry, with the largest BHCs ultimately engaging in more varied and nontraditional activities. For example, the number of banks fell from about 12,500 in 1990 to about 6,400 in 2011. The share of industry assets held by the 10 largest BHCs rose from about 25 percent in 1990 to about 45 percent in 1997 (just before the GLB Act) and to almost 70 percent in 2011. The share of loans and deposits of the top 10 BHCs also rose sharply (Table 1). In addition, only four of the 10 largest BHCs that existed before the passage of the GLB Act remain today (Citigroup, JPMorgan Chase, Bank of America, and Wells Fargo), with those four BHCs having acquired five of the other top 10 BHCs.[13]

Table 1 also shows how the activities of the 10 largest BHCs have changed in the past 14 years. In 1997, the share of banking assets relative to total assets at these companies was 87 percent, with only one company having a share less than 80 percent.[14] Today, the share of banking assets is 58 percent, with only two BHCs having a share greater than 80 percent.

## III. IMPLICATIONS FOR RISK TO THE SAFETY NET AND FINANCIAL STABILITY

Today's largest banking organizations engage in a variety of nonbanking activities. These include the traditional investment banking activities of securities underwriting, merger and acquisition advice, and a variety of other activities. Among these other activities are securitization, securities lending and borrowing, prime brokerage, market making in securities and derivatives, and customer and proprietary trading. Banking organizations benefit from these additional activities because they can provide additional revenue and increase the diversification of assets and revenue streams. However, the benefits can be outweighed if the additional complexity makes it more difficult for the market, bank management, and regulators to assess, monitor, and control risk taking that endangers financial stability and expands the costs of and risks to the public safety net.

*Table 1*

## 10 LARGEST BANK HOLDING COMPANIES–1997 & 2011

**1997**

| | Billions of Dollars | | | | Share of Industry | | |
|---|---|---|---|---|---|---|---|
| | Assets | | Loans | Deposits (Domestic) | Assets | Loans | Deposits (Domestic) |
| | Total | Banking* (Share of Total) | | | | | |
| The Chase Manhattan Corp. | 366 | 328 (90%) | 168 | 118 | 8% | 6% | 5% |
| Citicorp | 311 | 270 (87%) | 188 | 56 | 7% | 7% | 2% |
| Nationsbank Corp. | 265 | 227 (86%) | 147 | 124 | 6% | 5% | 5% |
| J.P. Morgan & Co. Inc. | 262 | 215 (82%) | 32 | 11 | 6% | 1% | 0% |
| Bankamerica Corp. | 260 | 230 (88%) | 168 | 129 | 5% | 6% | 5% |
| First Union Corp. | 157 | 147 (94%) | 99 | 100 | 3% | 4% | 4% |
| Bankers Trust New York Corp. | 140 | 97 (69%) | 21 | 25 | 3% | 1% | 1% |
| Banc One Corp. | 116 | 99 (85%) | 84 | 75 | 2% | 3% | 3% |
| First Chicago NBD Corp. | 114 | 105 (92%) | 69 | 53 | 2% | 3% | 2% |
| Wells Fargo & Co. | 97 | 96 (98%) | 66 | 72 | 2% | 2% | 3% |
| **Top 10 Total** | **2,088** | **1,813 (87%)** | **1,042** | **762** | **44%** | **38%** | **30%** |

**2011**

| | Billions of Dollars | | | | Share of Industry | | |
|---|---|---|---|---|---|---|---|
| | Assets | | Loans | Deposits (Domestic) | Assets | Loans | Deposits (Domestic) |
| | Total | Banking* (Share of Total) | | | | | |
| JPMorgan Chase & Co. | 2,289 | 1,817 (79%) | 723 | 808 | 14% | 11% | 12% |
| Bank of America Corp. | 2,221 | 1,631 (73%) | 978 | 953 | 13% | 15% | 14% |
| Citigroup Inc. | 1,936 | 1,267 (65%) | 664 | 322 | 12% | 10% | 5% |
| Wells Fargo & Co. | 1,305 | 1,177 (90%) | 804 | 827 | 8% | 12% | 12% |
| The Goldman Sachs Group Inc. | 949 | 57 (6%) | 47 | 34 | 6% | 1% | 1% |
| Morgan Stanley | 795 | 58 (7%) | 43 | 65 | 5% | 1% | 1% |
| Metlife Inc. | 785 | 33 (4%) | 85 | 11 | 5% | 1% | 0% |
| Taunus Corp. | 381 | 40 (10%) | 32 | 18 | 2% | 0% | 0% |
| HSBC North America Holdings Inc. | 346 | 200 (58%) | 132 | 104 | 2% | 2% | 2% |
| U.S. Bancorp | 330 | 326 (99%) | 208 | 206 | 2% | 3% | 3% |
| **Top 10 Total** | **11,338** | **6,606 (58%)** | **3,718** | **3,347** | **68%** | **56%** | **50%** |

Note: Data for 1997 are as of Dec. 31; data for 2011 are as of Sept. 30.
Source: Board of Governors of the Federal Reserve System, FRY-9C reports
* Banking assets are the total assets of a BHC's bank subsidiaries

### *The risk to the safety net*

From a risk perspective, traditional banks that provide deposits and make and hold loans to maturity have to manage credit, interest rate, and operations risks. Nonbanking activities magnify the traditional risks and create new ones, such as price risk from trading, counterparty risk from derivatives transactions, and funding risk from greater dependence on rolling over uninsured, wholesale money market funding.

The dependence on wholesale money market funding, and rollover risk in particular, has become a threat to the stability of the global financial system. Today's largest banking organizations in the United States and other industrialized countries are highly dependent on wholesale money market funding from each other, MMMFs, and other institutions that actively manage their daily cash holdings. Such funding is much less stable than deposits because it is not backed by explicit insurance. Just as banks were subject to depositor runs that created liquidity crises before deposit insurance was available, banking organizations and other companies, such as shadow banks—which are dependent on money market funding—face the risk of runs by money market investors.[15] Such runs resulted in the near failure of Bear Stearns in March 2008 and the failure of Lehman Brothers in September 2008, which was immediately followed by a deepening of the financial crisis.

To the extent a large, complex financial company's problems may lead to runs on its short-term funding and threaten financial stability, they also can lead to an expansion of the public safety net beyond the depository institutions that normally have access to deposit insurance and central bank lending. Indeed, the safety net did expand in 2008. Starting in March 2008, after Bear Stearns nearly failed from a loss of repo funding, and continuing throughout the year, the Federal Reserve implemented several emergency lending programs to protect the economy but that also directly or indirectly supported nonbank companies.[16] In addition, the federal government expanded the safety net through its direct investments in banking organizations with TARP and in the insurance holding company American International Group (AIG). Moreover, the FDIC temporarily increased the deposit insurance limit from $100,000 to $250,000 on all nondemand deposits and provided unlimited insurance on noninterest-bearing demand deposits (which are primarily business deposits). The FDIC also guaranteed

short-term, senior unsecured debt issued by banks, savings and loans, and their holding companies.[17]

Expanding the safety net, especially in an ad hoc manner during a crisis, raises policy concerns. Most would agree that the programs initiated during the recent financial crisis helped prevent the crisis from becoming more severe. In addition, the programs charged fees or earned interest or dividends, and, for the most part, earned profits. Nevertheless, such programs create policy concerns because they expose the safety net, and, therefore, taxpayers to significant ex ante risk. In addition, these programs create an undesirable incentive for large, complex banking organizations to take greater risks by reinforcing the belief they will receive public support if they suffer large losses—the so-called moral hazard problem—which further increases taxpayers' exposure.

### *How the new activities make it more difficult to monitor and manage risk*

The potential problems with banking organizations that are engaged in traditionally nonbanking activities is not that they are risky—all financial activities are inherently risky, even traditional banking activities. The question is, can the company manage and price the risk of all of its activities appropriately so that it does not threaten financial stability and create excessive risk to the public safety net? Some nonbanking activities can be managed appropriately, but others may create complexity that makes it difficult for the market, bank management, and supervisory authorities to monitor, manage, and control an organization's overall risk.

*Reduced transparency reduces market discipline.* Banking organizations with a variety of nontraditional activities tend to be less transparent than others, which makes it difficult for the market to discipline their risk taking. Relative to nonfinancial companies, it is difficult for investors to evaluate the condition of traditional banks and their riskiness because their balance sheet assets and activities are opaque and easily changed. Traditional banking is opaque because banks have more information than investors about the quality and risk of their loans. Banks that engage in nontraditional activities, such as trading, hedge funds, private equity, and market making are even less transparent because the success of these strategies depends on the confidentiality of

their positions and speed at which their exposures can be changed.[18] Given the lack of transparency, regulators must play a larger role relative to the market in monitoring and disciplining banks, but as discussed below, regulators also are at a disadvantage when dealing with banks that are engaging in nontraditional activities.

*Risk management complexity.* Complexity can make managing risk more difficult for banking organizations.[19] Risk management is particularly difficult when a banking organization has many different operational divisions and activities. Examples include understanding all of the different business lines and their interactions, having appropriate management information systems, and appropriately allocating and pricing capital across activities. Such difficulties and shortcomings in risk management practices and effectiveness at several U.S. and foreign global banking organizations leading up to and during the recent financial crisis are highlighted in two reports by the Senior Supervisors Group (2008, 2009).

The risk management of a complex institution can also vary with the background of its senior leadership. For example, trading is risky in the short term, so it attracts people predisposed to taking risks. In contrast, lenders tend to have a longer term perspective. As a result, an organization's risk culture and appetite is likely to be lower if its senior leadership has a commercial banking background rather than a trading background. To the extent that a bank's senior management has difficulty understanding and managing its risks, it is even more difficult for supervisors to scrutinize and monitor a banking organization's risks.

*Supervisory complexity.* The goal of prudential supervision is to ensure that banks operate in a safe and sound manner and do not endanger the safety net and expose taxpayers to undue risk. Supervision includes reviewing a bank's operations and risk management policies; monitoring its financial condition, lending, operations, risk management, and other practices; and enforcing regulatory rules. Because of the periodic nature of bank supervision, supervisors get only a snapshot of bank processes, risk exposure, and capital positions at a given time. Even for the largest complex banking organizations, at which supervisory staff work on site and are continuously looking at some part of the organization and its operations, supervisors still only have snapshots of various operations, albeit at higher frequencies. These snapshots are

limited in their ability to predict the safety of a bank's processes, its risk exposure, and its capital positions between supervisory examinations. The flexibility to adjust risk profiles between exams depends, to some extent, on a banking organization's activities and the nature of the risks.

Effectively supervising many of the nontraditional activities of large, complex banking organizations can be difficult because the activities can be very risky in the short term, which can quickly change an organization's risk profile. For example, trading and market making are difficult for supervisors to monitor because they are continuous activities that result in thousands of daily transactions. As a result, snapshots of the positions of these activities may have limited predicative value for future positions. Continuous supervision at the largest banking organizations clearly provides a better understanding of their risks than the traditional approach of periodic exams. Nevertheless, understanding and monitoring the risks still can be difficult, especially when management itself has difficulties in understanding and monitoring risk. Thus, while bank supervision is not meant to prevent risk taking, and is subject to errors regardless of a bank's activities, effective supervision of complex organizations that engage in many nontraditional banking activities is even more difficult.

*Regulation complexity.* Banking organizations involved in a variety of activities also require more complex regulations, which can be difficult for the market, bank management, and regulators to monitor and understand. The variety and complexity of the Basel risk-based capital measures and requirements provides a good example of the difficulty in effectively regulating complex financial companies.

To account for the relative risks of the variety of banking organization activities, the Basel capital requirements use risk-based capital measures, which are ratios of various measures of capital to assets weighted according to their relative riskiness. Risk weights essentially are relative prices, and they are set under the Basel rules, either administratively through regulation or using the banks' own internal models. Administratively setting risk weights generally will misprice risks. In addition, allowing banks to set risk weights with their own risk models can systematically under price risk. In fact, recent news articles (Braithwaite, Vaughan) cite several examples of U.S. and foreign banks that plan on "managing" risk weights or are engaging in "risk-weighted asset

optimization" to lowering their risk-weighted assets and increase their risk-based capital ratios. Thus, it should not be surprising that leading up to the financial crisis the regulatory capital requirements did not adequately align bank capital levels with their risk.

*Resolution complexity.* Another regulatory concern is that resolving more complex organizations when they fail, to the extent it is possible, is more difficult and costly. Even with the FDIC's new authority under the Dodd-Frank Act to liquidate a failed complex banking organization, doing so in a quick and orderly manner will be difficult.

Lehman Brothers is a good example of the difficulty of resolving a complex company. The number of transactions and complexity of interconnections made it very difficult to determine the company's value quickly enough to find a buyer and have it reopened the following Monday morning. Moreover, Lehman Brothers was a relatively simple company compared to some of the largest BHCs. Some of these BHCs have a thousand or more majority-owned subsidiaries, several of which could be as large and complex as Lehman Brothers. It would be much harder to wind down or find enough buyers to transfer the critical operations necessary for an orderly resolution. In addition, while the Dodd-Frank Act allows the FDIC to run a failed BHC as a "bridge" organization until the activities can be wound down or sold, efficiently operating a complex organization with new management would be difficult.

## IV. RESTRICTING ACTIVITIES TO REDUCE COSTS AND RISKS TO THE FINANCIAL SYSTEM AND SAFETY NET

During the recent financial crisis, several of the largest U.S. banking organizations received public financial support beyond what could be provided by the traditional banking safety net. This additional financial support expanded the safety net and created significant additional risks for U.S. taxpayers. One possible option for protecting the financial system and taxpayers is to restrict banking organizations from engaging in activities that make it more difficult to assess, monitor, and control risk taking. One criterion could be that activities beyond the core services of taking deposits, making loans, and settling payments would be permissible

only if they do not significantly impede the ability of the market, bank management, and regulators to assess, monitor, and control risk taking.[20]

The financial activities of the largest banking organizations can be categorized in six groups (Richardson, Smith, and Walter):

- Commercial banking—deposit taking and lending to individuals and businesses.
- Investment banking—underwriting securities (stocks and bonds) and providing advisory services.
- Asset and wealth management—managing assets for individuals and institutions.
- Dealing and market making—intermediating securities, money market instruments, and over-the-counter derivatives transactions for customers.
- Brokerage services—brokering for retail and institutional investors, including hedge funds (prime brokerage).
- Proprietary trading—trading for an organization's own account and owning hedge and private equity funds.

Under the criterion for permissible activities stated above, banking organizations would be able to conduct the following activities: commercial banking, investment banking (as defined above), and asset and wealth management. Investment banking and asset and wealth management are mostly fee-based services that do not put much of a firm's capital at risk. In addition, asset and wealth management are similar to the trust services that always have been allowed for banks.

In contrast, the other three categories—dealing and market making, brokerage services, and proprietary trading—have little in common with core banking services and create risks that are difficult to assess, monitor, and control. Banking organizations would be restricted from activities that involve trading, including customer trading.[21] While allowing customer trading might seem reasonable, it would make restrictions on proprietary trading difficult to enforce because the securities inventory used to facilitate customer trading cannot be easily distinguished from proprietary assets. In fact, this difficulty is one reason the banking regulators' proposal for implementing the Dodd-Frank Act's Volcker rule, which prohibits proprietary trading but not customer trading, is so complex (Office of the Comptroller of the Currency, and others). Prime brokerage services not only require the ability

to conduct trading activities, but also allow companies to finance their activities with "free balances," which can be highly unstable funds.[22]

Historically, bank investments were restricted to loans and investments in investment-grade securities. As demonstrated in the financial crisis, the complexity of many AAA-rated ABS made it difficult to determine their true credit quality. As a result, consideration could be given to reforms that ensure bank investment portfolios contain only high-quality securities that truly are investment grade. For example, it may be possible to segment "complicated" securities, such as multilayer structured securities (for example, collateralized debt obligations), that are difficult to value, and to determine and monitor credit quality.[23]

Prohibiting the activities mentioned above would likely make banking organizations less complex and more transparent, which could lead to better market discipline, supervision, regulation, and resolution. Restricting banks to these activities also could allow capital regulation to be simplified and improved. As noted in the previous section, the complexity of the Basel capital regulations is necessary given the complexity of banking organizations, but its effectiveness is questionable, partly because of the difficulty in satisfactorily addressing the risks of the variety of allowable activities. Capital regulation would be simpler and more effective because there would be less need for complicated risk-based requirements if the balance sheet is largely limited to loans and investment-grade securities. For example, capital regulation could be structured as a relatively high, simple leverage ratio combined with supervision.[24] Moreover, restricting banking organizations to the suggested activities could reduce the opportunities for regulatory arbitrage between balance-sheet and off-balance-sheet activities, and between banking and trading activities.

These possible activity restrictions also could improve the risk management of banking organizations by focusing their activities solely on the traditional banking business with exposure only to risks inherent in these activities. The underlying factors that make commercial banks successful are inherently different from those that make securities firms successful. Banking is based on a long-term customer relationship in which the interests of the bank and customer are the same. Both the bank and loan customers benefit if borrowers do well and are able to pay

off their loans. In contrast, trading is an adversarial zero-sum game—the trader's gains are the counterparty's losses. Thus, restricting trading activities removes a potential conflict of interest when the counterparty is a customer, which could produce a more stable, less risky company.

The inherent riskiness of securities trading, dealing, and market-making attracts and, in fact, requires people who are predisposed to taking short-term risks rather than lenders with a long-term perspective. The combination of securities with commercial banking activities in a single organization provides opportunities for senior management and boards of directors to be increasingly influenced by individuals with a short-term perspective. As a result, the increased propensity of these corporate leaders to take risk can lead to more of a short-term-returns culture throughout the organization.[25]

## V. CONCLUSION

In 2007 and 2008, the United States suffered through the worst financial crisis since the Great Depression. Concerns about financial problems at several of the country's largest banking organizations pushing the economy into depression led to a substantial expansion of the public safety net, putting taxpayers at significant risk. The problem was not that these banking organization were large, but that they were so complex and opaque that the market, regulators, and even their own senior management, had difficulty monitoring and controlling their risk.

This article suggests that one possible solution for reducing the costs and risks to the financial system, economy, and public safety net is to restrict some of the nontraditional activities that have become allowable for banking organizations in recent years. Whether an activity beyond the core banking services (deposits, loans, and payments services) is permissible would be based on the principle that it does not unduly impede the market, management, and regulators in assessing, monitoring, and controlling a banking organization's risk taking. Based on this principle, banking organizations could conduct traditional investment banking (underwriting securities and advisory services) and asset and wealth management. Other activities, such as market making, brokerage, and securities and derivatives trading, would not be allowed for banking organizations. While these other activities are an important

part of today's financial system and economy, combining them with traditional banking activities can expand the costs and risks to the safety net and the public by more than the additional benefits to an individual banking organization.

## ENDNOTES

[1]Supervision and regulation occurs at the federal and state level, with supervisory authority depending on whether a bank has a national or state charter, and for state banks, whether they are members of the Federal Reserve System.

[2]The FDIC and federal deposit insurance were established in Section 8 of the Banking Act of 1933. Eight states had adopted deposit insurance programs between 1908 and 1917, but all of these programs had ceased operations by 1930 (FDIC). Banks could borrow from the Federal Reserve only if they were members of the Federal Reserve System until the Depository Institutions Deregulation and Monetary Control Act of 1980 allowed nonmember banks to borrow.

[3]The most common way to organize an affiliate was by bank stockholders owning pro rata shares of the affiliate. Two other ways were forming securities affiliates as subsidiaries of the bank and holding companies that owned the bank and the affiliated companies (White). The move into securities activities was spurred by increased competition for business loans from the growth of corporate bonds and by profit opportunities from the increase in federal government bonds needed to finance World War I.

[4]Technically, the Glass-Steagall Act is the entire Banking Act of 1933. However, the Glass-Steagall Act generally refers to sections 16, 20, 21, and 32, which separate commercial and investment banking. At the time, some thought that the securities activities created excessive risks for commercial banks. Others argued that commercial banks had conflicts of interest in underwriting stocks and bonds for corporate clients. For example, the client could use the proceeds to pay off loans to the bank, or the bank might favor the securities it underwrites in marketing them to its depositors or lending to its depositors to purchase them (Spong). Research conducted in the 1980s and 1990s, however, showed that neither view was supported by the evidence (White, Kroszner, and Rajan).

[5]However, the legal prohibition of paying interest on demand deposits was retained until the Dodd-Frank Act eliminated it as of July 2011.

[6]MMMFs are regulated in the United States by the Securities and Exchange Commission (SEC) under Rule 2a-7 of the Investment Company Act of 1940. Under rule 2a-7, MMMFs must meet a number of requirements, such as a maximum weighted average maturity (60 days) of its assets and minimum levels of asset quality and liquidity. The requirements were strengthened in 2010 in response to the financial crisis and failure in September 2008 of the Reserve Primary Fund, the oldest MMMF.

[7]A repo is a collateralized loan in which a borrower sells a security to a lender and agrees to repurchase the security at a predetermined future date for a higher price, which determines the interest rate for the repo loan. Repos have become one of the most common forms of overnight and other short-term collateralized loans.

[8]ABCP is commercial paper for which repayment is backed by a pool of underlying assets, such as mortgage-backed securities. Repayment is entirely dependent on the performance of the underlying assets. The reason is that companies create a corporate trust specifically to hold the assets and fund them by issuing the ABCP; that is, the trust has no other source of income or purpose than to fund the underlying assets with the ABCP.

[9]Deposit insurance limits rose from $20,000 in 1969, to $40,000 in 1974, to $100,000 in 1980, and to $250,000 in 2008.

[10]The financial problems of many of the largest banking organizations in the financial crisis were due to problems in subsidiaries that securitized assets, such as subprime mortgages. Banking organizations moved assets from their balance sheets to these subsidiaries because it lowered their regulatory capital requirements and raised their measured risk-based capital ratios. Acharya, Schnabl, and Suarez provide evidence consistent with such regulatory arbitrage. Holding assets in the subsidiaries lowered a company's total capital requirements under the Basel I and Basel II accords because assets in off-balance sheet subsidiaries had lower capital requirements than the same assets carried on-balance sheet. Moreover, in July 2004, the Office of the Comptroller of the Currency, Federal Reserve, FDIC, and Office of Thrift Supervision exempted ABS in subsidiaries funded by ABCP from the calculation of risk-weighted assets, which raised measured capital ratios.

[11]Shadow banks include some of the more traditional nonbank intermediaries, such as finance companies, as well as hedge funds and entities involved in securitization. Some have credited Paul McCulley, chair of the Global Society of Fellows at the Global Interdependence Center and former managing director at PIMCO, with coining the term "shadow banking" at the Kansas City Federal Reserve Bank's 2007 Jackson Hole Symposium, "Housing, Housing Finance, and Monetary Policy." At the symposium, McCulley referred to shadow banks as companies funded by commercial paper, and he argued that they need "to be put back on the balance sheet of the real banking system." However, there is no unique definition of shadow banks. For example, the Financial Stability Board defines shadow banking as "credit intermediation involving entities and activities outside the regular banking system."

[12]Section 20 of the Banking Act of 1933, the section that prohibited the affiliation of banks with securities firms, technically prohibited affiliation with organizations that "engaged principally in the issue, floatation, underwriting, public sale, or distribution of stocks, bonds, debentures, notes, or other securities." As a result, BHCs were able to create "Section 20" subsidiaries that were not "principally engaged" in securities activities. For many years, the administrative limit for not being principally engaged was that underwriting and dealing accounted for 5 percent or less of a subsidiary's gross revenue. As banks became larger, underwriting and dealing became cost effective even with the 5 percent revenue limit. Over time, banking organizations began petitioning for larger limits, to which the Fed-

eral Reserve agreed based on assessments of the risks and benefits to the economy, with the limit eventually rising to 25 percent in 1997.

[13]Bankers Trust was the only top 10 company in 1997 not acquired by one of these four BHCs, but it was acquired by Germany's Deutsche Bank, which is also the parent of Taunus Corp., the eighth largest U.S. BHC in 2011.

[14]Banking assets are the total assets of a BHC's bank subsidiaries.

[15]Banking organizations often fund their activities in the money market by issuing ABCP through bankruptcy-remote subsidiaries. These entities are bankruptcy remote because the parent or affiliated companies that sponsor them have no legal obligation to support payments to the ABCP holders if there is insufficient cash flow from the underlying assets to meet all repayments. However, in practice, sponsors often support the ABCP because of reputational risk, which ultimately exposes the parent companies to the risk of runs. The parent company often will either purchase the underlying assets and bring them on-balance sheet or provide capital to avoid the negative reputational effects of a subsidiary defaulting on its securities. Moreover, even commercial bank subsidiaries can be exposed to the risks because they often provide credit guarantees on the money market instruments issued by affiliated off-balance sheet subsidiaries.

[16]Examples include nonbank primary dealers, the insurance holding company American International Group, MMMFs, businesses that issued commercial paper, and consumers and businesses that borrowed money from banks that was ultimately funded by ABS.

[17]The deposit insurance limit was permanently raised to $250,000 by the Dodd-Frank Act. The unlimited deposit insurance on demand deposits and guarantee of short-term debt was implemented through the FDIC's Temporary Liquidity Guarantee Program. The eligible debt generally had to have a maturity of no more than about three years because it had to be issued between Oct. 14, 2008, and June 30, 2009, and mature by June 30, 2012.

[18]Morgan provides evidence on the increased opacity of banks from combining lending and trading activities.

[19]All aspects of managing a large, complex financial company are difficult, but given the context of this article, the focus is on risk management.

[20]Restricting the activities of banking organizations alone does not completely address financial stability and public safety net exposure problems. In fact, such restrictions could worsen the risk of financial instability by pushing even more activities from the regulated banking sector to the unregulated (from a prudential perspective) shadow banks. As discussed in the text, a major source of the threat that shadow banks pose to financial stability is the use of short-term, wholesale funding. Reform to shadow banking is beyond the scope of this article. See Hoenig and Morris for suggested changes to shadow banking, which focuses on reducing the supply of short-term, wholesale money market funding of shadow banks through reforming MMMFs and the repo market.

[21]Banking organizations would be allowed to purchase and sell derivatives to hedge their assets and liabilities.

[22]Hedge funds hold cash balances with their prime brokers to finance and facilitate transactions. "Free balances" is the cash a hedge fund client has a right to demand on short notice.

[23]Section 939A of the Dodd-Frank Act requires the federal financial regulatory agencies to eliminate from their regulations references to credit ratings used to determine the creditworthiness of securities and money market instruments. It is possible that some of the problems caused by investment in complicated securities will be addressed by the new requirements for determining permissible investment securities.

[24]Admati and others provides an excellent discussion of the reasons for substantially increasing bank capital requirements. Hellwig provides arguments for abandoning risk-sensitive capital requirements.

[25]Critics of restricting banking organization activities cite a number of arguments against such restrictions. Some argue it would reduce efficiencies because of economies of scale and scope at the largest companies. In addition, by preventing U.S. financial companies from achieving such economies, it would hinder their success in global markets and ability to provide large corporations one-stop shopping for financial services. U.S. banking organizations also would be at a competitive disadvantage relative to universal banks, particularly in Europe, and it would drive U.S. banking organizations to move their headquarters to other countries. Finally, some argue it would be too difficult to "break up" the largest companies. See Hoenig and Morris for discussion of these criticisms.

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