Antitrust and the Financial Sector – with Special Attention to "Too Big to Fail"

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Abstract

Antitrust and the financial sector have traditionally had a wary relationship with each other. However, an analysis of the special features of finance and of financial regulation shows that the pro-competition stance of antitrust is as appropriate for the financial sector as it is for the other sectors of the U.S. economy to which antitrust enforcement regularly applies.

More recently, the involvement of "too big to fail" (TBTF) financial institutions in the financial crisis of 2008-2009 has caused some antitrust practitioners to believe that the "big" in TBTF must mean that antitrust somehow has a role to play in dealing with the TBTF problem. But TBTF is fundamentally a problem of subsidy and negative externalities, not of market power; consequently, this is not an antitrust issue.

Nevertheless, antitrust is relevant for many of the standard issues of the creation, enhancement, and/or exercise of market power in and around the financial sector. In addition, whether the communication among and/or collective action by securities holders in various circumstances (e.g., the creditors of a troubled enterprise) warrants antitrust scrutiny deserves some careful thought and analysis.

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JEL codes: G18; G21; G28; K21; K23; L49; L51

* This paper draws on White (2010a). During 1982-1983 the author was the Director of the Economic Policy Office of the U.S. Department of Justice's Antitrust Division. During 1986-1989 the author was a board member on the Federal Home Loan Bank Board, with responsibilities that included being a board member of Freddie Mac. Thanks are due to the participants at the Conference for helpful comments on an earlier draft.

I. Introduction.

Antitrust and the financial sector have had a wary relationship with each other. Because the financial sector traditionally has been and continues to be heavily regulated, incumbent firms in that sector have often preferred to be shielded from antitrust scrutiny by claiming (usually with the support of their regulators) that financial regulation was sufficient to protect the public interest and consequently that antitrust jurisdiction was not necessary. This appears to have been one of the arguments that were advanced by the appellees (but rejected by the Supreme Court) in U.S. v. Philadelphia National Bank.[1] Although this shielding has diminished over the decades, a prominent modern remnant of that tradition is the McCarren-Ferguson Act's continued exclusion of insurance companies (which are regulated by the states) from federal antitrust jurisdiction.

A more recent concern that appears to involve a connection between the financial sector and antitrust has been the fall-out from the financial crisis of 2008-2009 and the realization that a relative handful of very large financial institutions were at the heart of the crisis and that all but one of them (that exception being Lehman Brothers) were deemed "too big too fail" (TBTF). Although modern antitrust has severed the populist-oriented link between "big" and "worthy of antitrust attention" by replacing "big" with "market power", there is nevertheless a residual intestinal feeling by some antitrust practitioners that the "big" in TBTF means that there was and must still be an antitrust issue lurking somewhere in the financial crisis and its aftermath – especially since at least some of the giants of 2008 (notably JPMorgan Chase, Bank of America, and Wells Fargo) have grown considerably larger since the summer of 2008.

This paper will explore the connections between the financial sector and antitrust. It will argue that the competition paradigm that serves as the foundation for antitrust is as valid for the financial sector as it is for the other sectors of the economy where antitrust regularly applies.

[1] 374 U.S. 321, 368 (1963).

Accordingly, there should be no exemptions from antitrust scrutiny for the firms that are in and around the financial sector. At the same time, however, the "big" in TBTF should be seen as just that and not as an antitrust issue. Although large financial institutions do pose a serious policy issue for financial stability, and stronger remedies should be sought, the insights of antitrust will not help in the consideration of those remedies.

This paper will proceed as follows: Section II will lay out some important background concepts with respect to finance, the financial sector, and financial regulation. Section III will then address the issue of TBTF and why it is not an antitrust issue. Section IV will address other areas of finance where vigorous antitrust enforcement – public and private – has been present and is appropriate. Section V will conclude and suggest at least one area in the financial sector where new and original thinking is needed so as to help determine the appropriate role for antitrust.

II. Finance, and Financial Regulation.

Finance is special, for at least three reasons: First, finance is ubiquitous. Almost all enterprises need finance in order to obtain the resources for investments and in order to bridge the gap between the time when inputs are paid and the time when payment is received for the sale of outputs. Almost all governments need finance, again to obtain the resources for investments and to bridge the gap between the time that expenditures are made and the time when tax revenues are received. Almost all individuals need finance, so as to accommodate large investments and purchases and to bridge smaller expenditure/income gaps. In addition, finance underlies the operation of the monetary/payments system of any modern economy.

Second, finance unavoidably involves a time dimension: A loan or an investment is made at an initial point in time;[2] repayment is expected to occur at some future point in time.[3] This time interval means that the lender always faces some uncertainty as to whether the borrower will repay the loan. This uncertainty reflects the lender's informational disadvantage vis-à-vis the borrower ("asymmetric information"): Before the loan is made, the lender may have difficulty in figuring out whether a prospective borrower is likely to repay the loan (which leads to the problem of "adverse selection"); and after the loan is made, the lender may have difficulty in monitoring the borrower's actions, some of which may adversely affect the borrower's likelihood of repaying the loan (which leads to the problem of "moral hazard").[4]

Third, the time dimension of finance can readily lead to mathematical computations – such as compounding and discounting – that are more complicated than simple arithmetic and that many individuals (especially those who have difficulties with numbers) have difficulty comprehending. And it is easy for financial products and services to become yet more complicated, with yet more difficulties of comprehension.

Financial regulation is ubiquitous as well. Its ubiquity is surely due in large part to the pervasiveness of asymmetric information in the processes of finance. But the ubiquity of finance, as well as the difficulties that many individuals clearly have in comprehending finance, surely also help explain the ubiquity of financial regulation.

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[2] For ease of exposition, the following discussion will be in terms of a "loan" that has a "lender" and a "borrower"; but the basic ideas carry over to the issues that surround equity investing.

[3] For insurance, there is a similar time sequence: At an initial point in time a commitment to insure against a specific event is made, and the insured party makes a "premium" payment to the insurer; then, subsequently, if the insured-against event occurs, the insurance payment is made by the insurer back to the insured party.

[4] The provision of insurance creates similar problems: The insurer beforehand may not be able to discern the risk characteristics of its prospective insureds (leading to the problem of adverse selection); and it may not be able to monitor its insureds' actions after the company has provided them with insurance (leading to the problem of moral hazard). Indeed, the terms "adverse selection" and "moral hazard" were first used in insurance contexts. For their part, the buyers of insurance may face similar problems: Beforehand, a buyer may not know which company that offers insurance has the financial capability to honor its obligation in the event that an insured-against event occurs; and, once having bought insurance, the insured may still have difficulties getting the company actually to honor its obligation.

As part of an effort to categorize and understand financial regulation, there are a number of classification systems that can be used. One useful place to start is to separate firms in the financial sector into two broad categories: a) financial intermediaries, which are firms (such as banks, insurance companies, mutual funds, etc.) whose assets are largely or entirely financial assets (e.g., securities, mortgages, derivatives, etc.); and b) financial facilitators, which are firms that facilitate financial transactions – such as brokers, dealers, underwriters, advisors, analysts, accountants, auditors, rating agencies, etc. – that facilitate financial transactions but that are not major holders of financial assets.

A second, more fine-grained scheme is to identify the specific category within the financial sector that is being regulated: banks and other depository institutions;[5] insurance companies; pension funds; mutual funds; securities; options and futures; credit rating agencies; etc.

A third useful organizing framework is to identify what tools a regulatory effort uses and what market failures it is trying (at least nominally) to address.[6] Within this framework, there are three broad regulatory categories: "economic" regulation; health-safety-environment regulation; and information regulation.[7] We will discuss each in turn:

A. Economic regulation.

Economic regulation involves the direct regulatory control over prices, profits, entry, and/or exit. This type of regulation can be used to address monopoly/oligopoly problems (as is often found in electricity/gas/water distribution public utility regulation). For example, usury limits on the rates that lenders can charge may be an effort to address the market power of

[5] "Depository institutions" include commercial banks, savings banks, savings and loan institutions, and credit unions. Unless otherwise indicated, subsequent references to "banks" will encompass all depository institutions.
[6] Of course, the explicit or implicit goal of income redistribution – in favor of specific groups of consumers or of enterprises – often underlies regulatory efforts.
[7] This approach first appeared in Noll (1971).

lenders vis-à-vis borrowers. The limits that were placed on debit card interchange fees by the Dodd-Frank Act of 2010 were justified by its proponents on the basis of the market power that has been exercised by the two major debit card networks.

Perhaps more often than other forms, economic regulation can also serve to protect incumbents and thus enhance market power. A good example of this form of economic regulation is the history of limits on bank branching: Until the 1990s, branching across state lines was generally limited and in many instances forbidden; a number of states also had limits on intrastate branching. As another example, the imposition of maximum rates of interest that commercial banks could pay on deposits began in 1933, and the last vestige of these limits was erased only in 2010 in the Dodd-Frank Act. As yet a third recent example, limits on what kinds of companies could form a thrift holding company and thus own a savings and loan institution were placed in the Gramm-Leach-Bliley Act of 1999, specifically to prevent Walmart from becoming a thrift holding company and thereby entering the banking/depository business.[8]

B. Health-safety-environment regulation.

This form of regulation usually operates through altering production processes or product characteristics. In the finance area, the goal is improved safety. The underlying problems that are being addressed are usually negative externalities and/or asymmetric information.[9]

In turn, the focus of safety can occur at two levels: the safety of some categories of financial institutions;[10] and the safety of financial services consumers. With respect to financial

[8] See, for example, White (2009, 2010b).
[9] With respect to asymmetric information, the problem of "widows and orphans" should be added to the categories of adverse selection and moral hazard. The usual economic analysis of the latter categories assumes that the less-well-informed parties do eventually learn about their informational disadvantage; and, unless they can figure out a mechanism for protecting themselves, they will cease (or at least cut back on) undertaking the relevant transactions, and otherwise worthwhile transactions will fail to occur. "Widows and orphans", however, are individuals who never learn and therefore will continue to be taken advantage of.
[10] This is a term that can be used interchangeably with financial intermediary.

institutions, the safety regulatory regime is usually characterized as "prudential" regulation.[11] Prior to 2010, prudential regulatory regimes in the U.S. applied to five categories of financial institution: depository institutions (and their holding companies); insurance companies; defined-benefit pension funds;[12] money market mutual funds (MMMFs); and the three large government-sponsored enterprises (GSEs): Fannie Mae, Freddie Mac, and the Federal Home Loan Bank System. The Dodd-Frank Act expanded the category of financial institution that will be covered by prudential regulation to include all "systemically important financial institutions" (SIFIs).

The central goal of prudential regulation is to keep the relevant financial institutions solvent: i.e., to keep them in the condition where the value of their assets exceeds the value of their liabilities, and they can thus satisfy the claims of their creditors. For all but the MMMFs, the heart of prudential regulation is minimum "capital" requirements, which are (in essence) minimum net worth requirements; almost as important (and this includes the MMMFs) are limitations on the kinds of assets that these financial institutions can own and the kinds of activities that they can undertake, so as to limit their risk-taking (the downside of which could cause sufficient losses so as to render them insolvent).

The justification for prudential regulation has multiple bases: For some of these institutions (e.g., banks, insurance companies, defined-benefit pension funds), the institution's creditors (i.e., liability holders: depositors, insureds, and pension claimants) likely face substantial problems of asymmetric information and are in a poor position to be able to protect themselves against the insolvencies of these institutions, which could cause substantial hardship.

[11] With respect to U.S. banking regulation, "safety and soundness" is often used as well; but "prudential" has become a more widespread term.

[12] These are sometimes described as "traditional" pension funds, whereby a specified set of pension benefits are promised by a company to its employees. This contrasts with defined-contribution plans, where contributions to the pension funding by the employees and the company are specified, but the eventual pension benefits depend on the level of the contributions and the subsequent investment performance of those contributions.

It is no accident that all three of these categories have federal insurance funds (operated by the Federal Deposit Insurance Corporation, the National Credit Union Share Insurance Fund [which is administered by the National Credit Union Administration], and the Pension Benefit Guarantee Corporation) or state guarantee funds (for the state-regulated insurance companies) as a back-up to protect the creditors against the possibility that prudential regulation fails to prevent insolvencies.[13,14]

Further, for institutions that have substantial short-term liabilities that can be redeemed by the creditors at short notice, the short-term creditors' fears (e.g., in the case of banks, the depositors' fears) of insolvencies can lead to a contagion or cascade of "runs" (e.g., withdrawals) and consequent failures, since these institutions rarely have enough liquid assets that are readily available to satisfy all of their short-term creditors who could demand repayment in a run.[15] Prudential regulation can thus be seen as a response to the problem of asymmetric information on the part of the creditors, combined with the problem of negative externalities, since the presence of a run at one financial institution can cause the (imperfectly informed) creditors at a similar institution to fear the insolvency of their institution.

For the GSEs, the need for prudential regulation arises from the financial markets' belief that the special status of the GSEs[16] has meant that the federal government would intercede to protect their creditors if the GSEs were to experience financial difficulties – a belief that received

[13] Also, in the fall of 2008, in response to a substantial loss by one MMMF and a consequent run on MMMFs more generally, the Federal Reserve established a temporary guarantee for MMMF shares.
[14] With the presence of an insurance or guarantee fund, prudential regulation can also be interpreted as the set of rules that is intended to protect the fund against the payout consequences of the insolvencies of its constituent financial institutions.
[15] Until 2008, the only category of financial institutions that had experienced serious runs were depositories; and the creation of federal deposit insurance in 1933 effectively put an end to depositor runs in the U.S. However, in 2008 short-term creditor runs developed on the five large and thinly capitalized investment banks – Bear Sterns (in March); and Lehman Brothers, Merrill Lynch, Morgan Stanley, and Goldman Sachs (in September). Also in September 2008 a run developed on the MMMF industry.
[16] See, for example, Frame and White (2005) and Acharya et al. (2011b).

powerful support from the government's actions in declaring conservatorships for the insolvent Fannie Mae and Freddie Mac in September 2008. If the government is effectively responsible for keeping the GSEs' creditors whole, then it should want a system of prudential regulation so as to make such an occurrence unlikely.

The second category of safety – safety for the users of financial services – encompasses the prudential regulatory regimes just discussed but also includes information disclosure requirements for financial institutions, the licensing of some kinds of individuals within the financial sector (e.g., stockbrokers), and the banning of some products (e.g., payday loans or other financial products or services that are deemed predatory or otherwise seriously harmful). The aim is usually to deal with problems of asymmetric information.

C. Information regulation.

This form of regulation places requirements on firms to provide standardized information on their products and services and about themselves, so as to help overcome problems of asymmetric information. The provision of information in standardized forms can make comparisons by users easier and thereby enhance competition. Banks, for example, are required to provide standardized information about the fees and interest rates that are charged on loans of various kinds and on the fees charged and interest paid on various kinds of deposits. And all publicly traded companies are required to provide certified (by an auditing firm, which is itself certified) periodic financial statements to shareholders (or to creditors, in the case of private companies that issue publicly traded bonds) in a standardized format ("generally accepted accounting principles" [GAAP]).

D. A summing up.

This three-part categorization is not airtight, nor are individual instances of regulation always capable of being pigeonholed into one category of regulation or another. Nevertheless, this classification system does help make sense out of what otherwise might appear to be an undifferentiated mass of government intervention in markets.

Of the three broad forms of financial regulation, only economic regulation would seem to intersect with antitrust in any significant way. Prudential regulation of financial institutions, safety regulation to protect consumers, and information regulation have the goal of improving the allocation of resources by addressing market failures – asymmetric information and negative externalities – that have especially serious manifestations in the financial sector.[17] These regulatory efforts to address these market failures need not interfere with the goal of antitrust policy in addressing its market failure target: the exercise of market power. And, as a general matter (but see the discussion below), antitrust enforcement need not interfere with the execution of the regulatory efforts to deal with these other market failures.

Economic regulation clearly is different, however. In its pure "public utility" form – where economic regulation attempts to limit the market power of a "natural monopoly" (i.e., a firm that manifests economies of scale over the full range of likely output that is demanded by purchasers) through limits on the firm's prices and/or profits – economic regulation is an alternative to antitrust as a means of limiting the exercise of market power.

However, in many instances economic regulation takes the form of protection of the incumbents of an industry, typically through limits on price competition among the incumbents and/or limits on new entry that might challenge the incumbents. This version of economic regulation is the antithesis of antitrust. Although the transportation industries (i.e., rail, trucking,

[17] Of course, because of the possibility of regulatory "capture" of the regulatory process by the regulated entities, even these forms of regulation can become instruments that protect incumbents at the expense of potential entrants (or that favor larger incumbents over smaller incumbents, etc.).

and air) in the U.S. were the "poster children" for this form of anticompetitive economic regulation until the late 1970s and early 1980s, the regulatory history of banking – with limits on branching by incumbents across state lines and even within some states, limits on entry (that exceeded the limits that sensible prudential regulation would require), and limits on deposit interest rates paid by banks – shows a similar pattern. Fortunately, in banking (as in the transportation industries) these restrictions are largely in the past.

There is one aspect of these anticompetitive manifestations of economic regulation that warrants further attention: One justification for restrictions on competition in banking is that it encourages less risk taking and thereby enhances prudential regulation of banks. The essence of the argument is that the above-normal profits that the competition restraints allow are an additional level of capital – whether explicitly added to the net worth of the banks, or paid as a continuous stream of dividends to the bank owners and capitalized as the extra value from owning the bank. The extra capital means that the owners have more to lose from risk taking, and hence this extra capital will encourage safer behavior by the bank.[18] Similarly, an argument that justified the 1933 Banking Act's authorization of regulatory restraints on the interest that commercial banks could pay to their depositors (and the mandate that commercial banks could not pay any interest on their checking accounts that were held by business customers) was the belief that excessive competition among banks for deposits, which raised banks' interest costs, had led banks to make more risky loans, which contributed to the failures of thousands of banks between 1929 and 1933.

[18] Similar justifications for enhancing safety by restricting competition periodically arise in the transportation industries. See, for example, the discussion in Golbe (1986).

Although the argument that competitive restraints can substitute for direct prudential regulatory effort is technically correct,[19] the use of anticompetitive economic regulation to achieve a prudential regulatory goal is distinctly a second-best approach to achieving the prudential regulatory goal. First best, of course, would be to have higher minimum capital requirements (including capital requirements that are sensitive to the risks of the assets and underlying activities) for banks as part of their prudential regulatory regime.[20] Restrictions on competition among banks would no longer be needed – an unfettered antitrust approach could be employed – and the usual beneficial consequences of competition could be expected.

III. Understanding TBTF, and Why It Is Not an Antitrust Issue.

The concept of "too big to fail" has been around for a few decades.[21] Arguably, it was first given concrete meaning in 1984, when the FDIC put the insolvent Continental Illinois National Bank and Trust – then the seventh largest commercial bank in the U.S. – through a resolution process that kept the bank intact and that kept its creditors whole, although the bank's senior managers were replaced and the bank's shareholders were substantially diluted (but not wiped out).[22]

The basic idea underlying TBTF starts with a large financial institution. If (as a consequence of losses) that institution were to become insolvent – i.e., its assets would become inadequate to cover its liabilities[23] – it would be too large to put through a bankruptcy

[19] See, for example, Keeley (1990); but for an argument that a monopoly bank may be more prone to failure, see Boyd and De Nicolo (2005).
[20] Also, the 1930s argument about the risk consequences of the competitively driven higher interest rates that banks paid on their deposits had the causality backwards: It was the banks' need to find the funding for their expansion into higher-risk loans that led them to compete more vigorously for, and drive up the interest rate on, deposits.
[21] See, for example, the discussion in Stern and Feldman (2004).
[22] Further discussion of the Continental Illinois can be found in Sprague (1986) and FDIC (1998, Part II, ch. 4).
[23] And the usual limited liability protections would apply to the owners of a corporation, so that the liability holders (creditors) could not look to the owners to satisfy their claims.

proceeding or other resolution process, whereby a significant fraction of its creditors would be forced to absorb losses.[24] The fear is that the process of imposing losses on the creditors would have adverse societal consequences that would be too great. Since the institution is insolvent but the creditors will not be the parties who will absorb the concomitant losses, the government will instead be the absorber of the losses.

Why might the imposition of losses on the creditors of a large financial institution have adverse societal consequences? First, a bankruptcy procedure would likely freeze the claims of all of the creditors and create substantial uncertainty as to the value of those claims. Since the institution is large, the aggregate numbers of the creditors and the aggregate value of their claims will be large.[25] The financial solvency of many of these creditors might consequently be at risk, which could create a (large) cascade of further rounds of bankruptcies and yet greater uncertainties.[26]

Next, the losses of the initial creditors might lead the (poorly informed) creditors of other, similar financial institutions to start running on their institutions. Further, the prospects of a poorly managed bankruptcy, which could lead to a further decline in the value of the institution's assets (as has apparently been true of the Lehman bankruptcy) and thereby lead to greater losses for the creditors, could exacerbate these concerns.

[24] This description assumes that the creditors are otherwise not the beneficiaries of an explicit insurance arrangement (e.g., FDIC insurance for bank depositors) or guarantee arrangement (e.g., the states' guarantee funds for insureds); i.e., they would otherwise be at risk for losses.

[25] This is often described in terms of the "interconnectedness" of large financial institutions.

[26] An immediate consequence of the Lehman Brothers bankruptcy in September 2008 was that a major money market mutual fund (the Reserve Fund), which held a substantial amount of short-term Lehman obligations, was obliged immediately to recognize a substantial loss and had to inform its claimants (i.e., its shareholders) that it would have to "break the buck" and that they could redeem their shares at only 97 cents per share rather than the MMMF industry's norm of $1.00 per share. This immediately started a run on the Reserve Fund and on MMMFs more generally. To end the run, the Federal Reserve created a temporary guarantee program for the shares of MMMFs.

Finally, the creditors may be in a category for which the losses are politically/socially deemed too costly. For banks, the American polity appears to feel that the households and businesses that are the typical bank depositors ought not to be bearing the losses from bank insolvencies. For Fannie Mae and Freddie Mac, a significant fraction of the holders of their (combined) $1.5 trillion of debt were the central banks or the banking systems (for which those central banks had responsibility) of U.S. trading partners and/or economic allies; these were parties that the U.S. did not want to estrange in early September 2008, when financial markets were clearly strained and the U.S. might need international cooperation for solutions.[27]

It is important to note the central features of the TBTF conundrum:

a) A large financial institution. Generally, the societal consequences of the insolvency of a small financial institution would be unlikely to be substantial – except to the extent that the small financial institution could contribute to the negative externalities of a larger creditor run.

b) Creditors that can run. A financial institution is run-able if it has funded itself through the continual rolling over of substantial amounts of short-term debt that exceed its holdings of liquid (i.e., readily sold) assets. Thus, a financial institution that has little short-term debt would generally not be run-able. Non-run-able institutions would include stock and bond mutual funds, which mark their assets to market on a daily basis (so as to reduce uncertainties and asymmetric information about the value of the assets), that usually hold fairly liquid assets, and that do not have creditors (i.e., the mutual funds' shareholders are the equivalent of the equity owners of a

[27] See Paulson (2010, ch. 7).

company);[28] the category would also include financial institutions that fund themselves largely or entirely through long-term debt.[29]

c) Creditors that are imperfectly informed as to the financial institution's solvency. It is the fears and uncertainties of the short-term creditors about the financial institution's solvency that drive a run. Those uncertainties, in turn, are rooted in the conventions of GAAP accounting, which has an orientation toward an historical cost-based approach to placing values on assets and liabilities. In addition, publicly traded companies in the U.S. are required to release their financial results regularly only on a quarterly basis, and with a lag of a month or more. It is the absence of real-time market-value information that creates the uncertainties.

d) The financial institution's solvency is substantially at risk. Table 1 shows, as of year-end 2007, the size (measured by assets) and the percentage net worth levels of the 15 largest financial institutions in the U.S. For none of these institutions did their net worth levels exceed 10% of their assets.[30,31] For the five large investment banks, which in aggregate had more than $4 trillion in assets, none had net worth levels that exceeded 4% of assets; if Goldman Sachs (at 3.8%) is excluded, none of the remaining four investment banks had net worth levels that exceeded 3.3%. It is easy to see how short-term creditors and counterparties – which, for any firm in this list of 15, usually included many of the other 14 – could readily become nervous about the solvency of these thinly capitalized enterprises.

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[28] Note that MMMFs are run-able, primarily because the norm in the industry is to maintain a share value of $1.00; i.e., unlike other mutual funds, the share values of MMMFs do not fluctuate on a daily basis based on the mark-to-market values of their assets.

[29] In this context, a typical insurance company is much less run-able than a typical bank. And a pension fund is typically non-run-able, unless the pension claimants have the option of taking immediate lump sum payouts.

[30] The data for Citibank represent the aggregate assets of (approximately) a $1.2 trillion (in assets) depository institution and a $900 billion holding company. The net worth of the holding company equaled the net worth of the depository – which meant that the holding company effectively had no net worth of its own.

[31] The data for Fannie Mae and Freddie Mac neglect the fact that Fannie Mae had $2.1 trillion in its outstanding mortgage-backed securities (MBS) on which it had provided guarantees to the investors in those MBS and Freddie Mac had $1.4 billion in its MBS that carried its guarantees. If these amounts are added to the assets of these respective institutions, the effective net worth levels were really at the levels of 1.5% and 1.2%, respectively.

It is also important to notice what has not been mentioned in the preceding discussion: market power. That omission is not an oversight. It is not the presence of market power that makes a financial institution TBTF.

What are the consequences of a financial institution's being TBTF? Prior to any insolvency, because its creditors believe that they will be kept whole in the event of the institution's insolvency, those creditors will be content with a lower rate of interest on their loans to the institution than if they believed that they would be exposed to losses. With lower interest costs (which are the major category of costs for a financial institution), the TBTF institution is at an advantage vis-à-vis the non-TBTF institutions with which it competes. Its market share is likely to be larger than would otherwise be the case.

In essence, the TBTF financial institution is receiving a subsidy that keeps its borrowing costs too low. Since the costs of any insolvency will be borne by the government, it is the government (and ultimately taxpayers) that is the source of the subsidy.[32]

Further, since the creditors believe that they will be kept whole, they would be largely indifferent to any risk-taking by the TBTF institution's management. Since, in a limited-liability legal framework, the owner-shareholders in any corporation get the upside from any risk taking but are limited in any losses on the downside to their net-worth stake in the company, any losses that are larger in magnitude than the enterprise's net worth are usually borne by the firm's creditors. It is the fears of such losses that usually motivate creditors – through restrictions in bond covenants or in bank lending agreements – to restrain an enterprise's management from excessive risk taking. But the TBTF's creditors have no reason to bother.

[32] The origins of the Basle agreements internationally to harmonize minimum bank capital requirements were in the concerns – especially by large U.S. banks – that other large banks (with headquarters that were outside the U.S.) were operating with excessively low capital levels (because their home governments were providing implicit guarantees to those banks' creditors) and thus those other banks were being subsidized and could thereby out-compete the U.S. banks.

Consequently, the TBTF institution's management – operating in the best interests of the institution's owner-shareholders – will have the incentive to take excessive risks, which will increase the likelihood and/or severity of insolvency. In essence, the government subsidy becomes larger.

After a TBTF financial institution becomes insolvent, the costs to the government – and the additional costs that would be imposed by additional risk taking – become far more apparent. But the costs at that point have become sunk; and the best that the government can do is to try to prevent further risk taking that would exacerbate the costs. This was the approach taken by the federal government when it put Fannie Mae and Freddie Mac into conservatorships in early September 2008. Similarly, the federal government advanced funds that avoided the bankruptcy of A.I.G. in mid September 2008 and took effective control of the company.

Another way of describing the TBTF phenomenon is that the existence of the TBTF institution (and, of course, the exacerbation caused by excessive risk taking) creates a negative externality for taxpayers.

Although the TBTF financial institution's activities involve a distortion in the use of society's resources, that distortion is neither a consequence of nor an expression of market power. And, consequently, *antitrust has little relevance for addressing TBTF issues*.[33]

As an example to drive this last point home: Suppose that two financial institutions are contemplating a merger. Pre-merger, neither institution is sufficiently large to be considered to be TBTF. But post-merger the combined firm would be TBTF: because of its size and its run-

[33] This nihilism with respect to an antitrust approach to TBTF does not mean that public policy should foreswear all efforts to address TBTF. Instead, the negative externality insight should be exploited: Since size is clearly a major determinant of TBTF and the severity of its consequences, a tax on the negative externality – i.e., a tax on size – would be appropriate. Further, since thin capital (net worth) levels are also an important contributor to the TBTF's likelihood of insolvency, a regulatory regime – in essence, a prudential regulatory regime that would impose higher capital requirements and also restrain risk taking – is also warranted. This prudential regulatory approach was embraced by the Dodd-Frank with respect to "systemically important financial institutions (SIFIs). For further discussion, see Acharya and Richardson (2009) and Acharya et al. (2011a).

able short-term debt, etc. The two institutions might be from two non-competing specialties within the financial sector – e.g., a bank and an insurance company. Or the two institutions might be in the same specialty, but they operate in different geographic regions – e.g., one bank has branches and operates solely east of the Mississippi River, and the second bank has branches and operates solely west of the Mississippi River. *The DOJ-FTC Horizontal Merger Guidelines would not provide any useful analytic apparatus for recognizing and addressing the TBTF status of the combined institution.*

IV. Antitrust Enforcement in the Financial Sector.

The logic of Section II indicates that the standard arguments for why restraints on competition generally yield a less efficient allocation of resources apply as validly to the financial sector as to other sectors of the U.S. economy. Accordingly, vigorous antitrust enforcement is as appropriate for the financial sector as for other sectors of the U.S. economy.

This appears to be the stance that the U.S. Department of Justice's Antitrust Division has adopted vis-à-vis the financial sector. The DOJ's antitrust enforcement in this sector has been the most involved with banking. Although the topic of banking and antitrust is the subject of other papers at this Conference, there are few trends and activities that are worth noting:

First, there has been a substantial rise in the U.S. levels of nationwide banking concentration – as measured by the nationwide shares of deposits and/or assets that are accounted for by the largest banks. But even if one believes that the relevant markets for some bank products/services are at the national level – as they may well be for items such as credit card issuances or mortgage originations – the levels of concentration are nowhere near the levels

that would typically raise competitive concerns. For example, the recent aggregate shares of national bank assets or deposits by the ten largest banks are in the 45%-50% range.[34]

But the relevant markets for bank products/services where the concentration levels may be of concern are not at the national level. Instead, the relevant markets are far more local for the two products for which banks are the important providers: deposits, and loans to small and medium-size enterprises (SMEs). The DOJ and the Federal Reserve, which share merger enforcement responsibility under the Bank Merger Act of 1966, usually analyze the competitive impact of bank mergers (using the analytical tools of the DOJ-FTC Horizontal Merger Guidelines") for deposits[35] at the geographic levels of individual metropolitan areas and individual rural counties. When bank mergers that involve overlapping branch networks in metropolitan areas and/or rural counties have yielded pro forma post-merger concentration levels that are considered to be anticompetitive, the DOJ/Federal Reserve review process has required that branches be divested, so as to maintain more competitive local market structures. This process continued during the financial crisis of 2008, when divestitures were required in specific metropolitan areas when Wells Fargo acquired Wachovia and when PNC acquired National City.[36]

As a consequence of the long history of these merger reviews and mandatory branch divestitures, the average levels of concentration (as measured by deposits) in these relevant local markets have remained constant or have declined over the past 30 years.[37]

[34] See Adams (2012).
[35] For the DOJ, deposits are also considered to be a stand-in for bank loans to SMEs. For the Federal Reserve, deposits are considered to be a stand-in for a broader cluster of products/services that banks provide.
[36] More details on these divestitures can be found in Kim (2012).
[37] These data have been compiled by Adams (2007, 2012) and can also be found in White (2010a). By one measure of deposits (Adams 2012) the average Herfindahl-Hirschman Index (HHI) for metropolitan statistical areas (MSAs) in 2010 was around 1600, and the average HHI for rural counties was around 4100.

Next, credit card networks – which are dominated by banks – have been an area of continued antitrust concern, since the credit card networks are few. The DOJ sued Visa and MasterCard in 1998, charging that their rules – which allowed banks that were members of one those two networks to issue the cards of only the other network but not to issue the cards of any third network – were anticompetitive. The suit also charged that the governance structures of the two networks – whereby the board of directors of each network had the representatives of banks that were issuing the other network's cards as well – dampened competition between the two networks. The DOJ ultimately succeeded on its first claim (and American Express has since been able to use banks as issuers of its cards) but failed on its second claim.[38]

More recently, in 2010 the DOJ sued Visa, MasterCard, and American Express in relation to restrictions that the three networks had placed on merchants' ability to suggest lower-cost payment methods to their customers. Visa and MasterCard settled with the DOJ simultaneously with the filing of the suit; the settlement eases the networks' restrictions on their merchants. However, American Express did not settle, and that suit continues.[39]

Yet more recently the DOJ and financial regulators have pursued the major banks with respect to their manipulation of and coordinated behavior with respect to the fixing of the London Inter Bank Offered Rate (LIBOR) and benchmark rates in foreign exchange trading markets.

Outside of banking, the DOJ has been prepared to sue financial firms for price-fixing or other anticompetitive activities. Recently, the DOJ has pursued criminal cases against large banks for their involvement in bid-rigging conspiracies that were related to municipal bond investments.

[38] See U.S. v. Visa USA Inc., Visa International Corp., and Mastercard International Inc., 344 F.3d 229 (2003). For a discussion of the case, see Pindyck (2009).
[39] As of March 2014.

Although only DOJ prosecutions have been mentioned above, most of these cases have also involved private antitrust suits for treble damages, which have provided additional deterrence for the future.

In addition, readers with longer memories with respect to stock brokerage commissions will recall that prior to the early 1970s the New York Stock Exchange, with the approval of the Securities and Exchange Commission (SEC), had maintained a cartel of its member brokerage firms with respect to customer commissions for buying and selling shares of stock. It was the DOJ that pushed the SEC to reconsider its approval of the fixed commission system, which ultimately led to the May 1, 1975, fully competitive commission system.[40]

Finally, as was mentioned earlier, the McCarren-Ferguson Act of 1945 has unfortunately continued to exempt the insurance industry from federal antitrust scrutiny.

V. Conclusion.

Despite the special nature of finance and of financial regulation, the general stance of antitrust toward more competitive market structures is as valid for the financial sector as it is for other sectors of the U.S. economy. If one takes a long-run perspective, the political and regulatory processes of the U.S. have generally been acceding to this view. A snapshot of the financial sector fifty years ago, circa the early 1960s (e.g., at the time of Philadelphia National Bank[41]), would have yielded a landscape that was much more pockmarked with anticompetitive features – such as restrictions on entry and on branching in banking, regulated ceilings on bank deposit rates of interest, and a cartel that was legally fixing stock brokerage commissions – than

[40] For a recent review of that experience, and a discussion of the parallels with what a more competitive structure of real estate brokerage might look like, see White (2006).
[41] 374 U.S. 321 (1963).

is found today. Unfortunately, the insurance industry remains as a holdout from this enlightened trend.

The financial crisis of 2008-2009 and the prominent role of large financial institutions in that crisis has made the phrase "too big to fail" a common one in the business and financial media. The "big" in TBTF has caused some antitrust practitioners to believe that somehow antitrust must have an involvement as well. However, although TBTF is a genuine problem for the U.S. economy, it is a problem of subsidy and of negative externalities. It is not a problem that antitrust can usefully address, and antitrust practitioners, enforcers, and policy makers should not be distracted from more productive uses of their time.

Finally, it is worth considering whether (unlike TBTF) there are potentially worthwhile new areas for antitrust enforcement – or, at least, for clarity as to the limits of enforcement – in the financial sector. One such area that may be worth exploring is the communication among and the collective action by securities holders in various circumstances. For example, when an enterprise is in financial difficulties but has not yet declared bankruptcy, its creditors will often communicate among themselves and sometimes agree on a common set of actions. Should this communication and collective action be considered to be an antitrust violation? Or is it a legitimate means of overcoming coordination difficulties and thereby achieving more efficient long-run financial outcomes?

This appears to be a relatively unexplored topic,[42] and clear thinking about and analysis of these collective action issues could well be worthwhile.

[42] There have been a few legal cases – e.g., CompuCredit Holdings Corp. v. Akanthos Capital Management, LLC 661 F.3d 1312 (2011); United Airlines, Inc. v. U.S. Bank, N.A., 406 F.3d 918 (2005); and Sharon Steel Corp. v. Chase Manhattan Bank, N.A., 691 F.2d 1039 (1982) – and at least one law review article (Stoeppelwerth 2012).

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Table 1: Fifteen Largest Financial Institutions in the U.S.
(by asset size, December 31, 2007)

Rank	Financial institution	Category	Assets ($ billion)	Equity as a % of assets
1	Citigroup	Commercial bank	$2,182	5.2%
2	Bank of America	Commercial bank	1,716	8.6
3	JPMorgan Chase	Commercial bank	1,562	7.9
4	Goldman Sachs	Investment bank	1,120	3.8
5	American International Group	Insurance conglomerate	1,061	9.0
6	Morgan Stanley	Investment bank	1,045	3.0
7	Merrill Lynch	Investment Bank	1,020	3.1
8	Fannie Mae	GSE	883	5.0
9	Freddie Mac	GSE	794	3.4
10	Wachovia	Commercial bank	783	9.8
11	Lehman Brothers	Investment bank	691	3.3
12	Wells Fargo	Commercial bank	575	8.3
13	MetLife	Insurance	559	6.3
14	Prudential	Insurance	486	4.8
15	Bear Stearns	Investment Bank	395	3.0

Note: The Federal Home Loan Bank System ($1,272) and TIAA-CREF ($420) have been excluded from this list; if GE Capital were a standalone finance company, its asset size ($650) would place it at #12.

Source: Fortune 500, May 5, 2008.