

Repealing Glass-Steagall: The Past Points the Way to the Future

*Loretta J. Mester**

In many countries, commercial banks are allowed to perform investment banking activities such as helping their corporate customers bring new debt and equity issues to market. Yet in the United States, since the Glass-Steagall Act was passed in 1933, most U.S. commercial banks are not permitted to engage in such underwriting. Congress is debating whether to repeal this act. The legislation has undergone several revisions: some versions advocated al-

lowing commercial banks to affiliate with investment banks in the same holding company, and some advocated allowing commercial banks to directly underwrite securities. While passage has seemed probable at many points, the measure has stalled. But this has more to do with provisions concerning commercial banks' right to sell insurance than with the proposed repeal of the separation between commercial and investment banking.

Should Glass-Steagall be repealed? Bankers argue that the economic environment in which they operate has become much more competitive and that they will fall behind unless they are permitted to expand their set of profitable activities, including investment banking. And

*Loretta Mester is vice president and economist and head of the Banking and Financial Markets section in the Research Department of the Philadelphia Fed.

it might be more efficient for commercial banks to engage in underwriting, since banks already have much information about their corporate customers. If so, society would gain from having commercial banks engage in investment banking, since they could do it efficiently. On the other hand, as was argued at the time Glass-Steagall was passed, there are potential conflicts of interest between commercial banking and underwriting. Whether these conflicts of interest are present and whether they impose costs that outweigh the potential benefits of commingling investment and commercial banking activities is an empirical question.

Several studies have sought evidence on this question by looking at the experience of banks before 1933, when they were allowed to underwrite securities with few restrictions; one study looks at more recent experience. The results suggest that conflicts of interest were not a major problem and still aren't—they support repeal of the Glass-Steagall Act of 1933. The studies present mixed results on whether it is better to have a commercial bank directly underwrite securities or to house the commercial banking activities and investment banking activities in separate subsidiaries of a holding company.

THE ORIGINS OF GLASS-STEAGALL

One of the main activities of an investment bank is *underwriting*. When a firm wishes to issue new debt or equity, it goes to an investment bank, which prepares the issue. In underwriting, the investment bank usually guarantees to the firm that it will sell the issue at a specified price, which the bank determines after a credit evaluation of the firm and an assessment of market conditions. If the issue cannot be sold at the guaranteed price, the underwriter incurs the loss. This loss could occur because an unforeseen event causes the price of the issue to change during the period in which the underwriter is trying to distribute the issue or because buyers have a different view of the firm's value

than the underwriter did. Thus, to limit its own risk exposure, a good underwriter will need to know a lot about the firm and the firm's market and be able to certify to the market that its assessment of the firm's value is correct.

Prior to passage of the 1933 Glass-Steagall Act, state banks that were not members of the Federal Reserve System were permitted to underwrite securities and bonds. The McFadden Act of 1927 allowed national banks to underwrite bonds, and they were later allowed to underwrite certain equity issues. But even before 1927, national banks engaged in securities activities by organizing state bank affiliates.¹ So by the early 1920s, many commercial banks were heavily involved in the underwriting and distribution of securities.² The number peaked in 1928 when 591 commercial banks were engaged in securities activities either directly or through securities affiliates; of these, 235 were national banks and 356 were state-chartered.³

The background against which the Glass-Steagall Act was passed was one of tumult in financial markets. The economy was in depression; there was a record number of bank failures. To the average person, it appeared the stock market crash had caused the Great Depression, and banks had had a large role in the stock markets. This perception, coupled with widespread bank failures, led Congress to begin a series of investigations into market abuses and ways to reform the banking system, includ-

¹Two companies are affiliates of one another if they have a common owner. One company is a subsidiary of another company if it is owned by that other company.

²For a review of the early history of bank securities activities, see Benston (1990 and 1996) and Kroszner (1996).

³See Kroszner and Rajan (1994). Of course, in percentage terms, the number of banks engaged in securities activities was quite small—around 2.5 percent—since there were nearly 25,000 commercial banks in 1928 (see Board of Governors of the Federal Reserve System, November 1943).

ing the famous Pecora hearings of the U.S. Senate in 1933-34.⁴

Congress was concerned about certain questionable activities by banks and their securities affiliates. These activities included loans made by banks to their securities affiliates, loans extended by banks to others who wanted to buy securities from the banks' securities affiliates, banks' buying securities underwritten by their affiliate for their own or their customers' accounts, and securities affiliates buying the stock of firms that were customers of the bank. Rather than restrict these specific activities, Congress chose to separate commercial and investment banking altogether by passing the Glass-Steagall Act, which comprises four sections (16, 20, 21, and 32) of the National Bank Act of 1933.

Sections 16 and 21 prevent any bank that accepts deposits from *directly* engaging in most securities activities except for those involving municipal general obligation bonds, U.S. government bonds, private placements of commercial paper, and real estate bonds; these four are called "eligible securities." Sections 20 and 32 address *indirect* securities activities through bank subsidiaries or affiliates and apply to banks that are members of the Federal Reserve System (which includes all national banks and state-chartered banks that choose to become members). Section 20 prohibits these banks from affiliating with any organization "engaged principally" in underwriting securities, and Section 32 prohibits director, officer, or employee interlocks between these banks and firms "primarily engaged" in securities activities.

THE EROSION OF GLASS-STEAGALL

Since Glass-Steagall was passed, commercial

banks have gradually added some investment banking activities to their portfolio of permissible products. Today, commercial banks can perform agency functions for individual clients, that is, act as the client's agent in the market, including buying and selling stocks, safekeeping securities, and switching funds between bank accounts and stock accounts. They can operate discount brokerages, through which the public can buy stocks, and act as private placement agents (an issue marketed only to a few sophisticated investors is a private placement and legally is not a security). They can advise clients on mergers. They can underwrite and deal in municipal general obligation bonds, U.S. government bonds, Eurobonds (i.e., bonds issued outside the U.S.), municipal revenue bonds, and asset-backed securities. Some banks can underwrite and deal in corporate debt and equities, at least to a certain extent.

They've been able to do this without violating Glass-Steagall by arguing that the different language in Sections 20, 21, and 32 of the act—namely "engaged principally" in Section 20, "engaged" in Section 21, and "primarily engaged" in Section 32—indicates Congress established different standards for determining compliance with each of the provisions. Since the three terms weren't defined in the act, it has been up to the courts and regulators to determine the meaning and see that banks comply. In a series of orders beginning in December 1986, the Federal Reserve stated that subsidiaries of bank holding companies set up to underwrite U.S. government securities (which were always "eligible" securities under Glass-Steagall) may underwrite certain "bank ineligible" securities (the securities not included in the original four that Glass-Steagall allowed banks to underwrite) without violating Section 20 as long as the revenues obtained from underwriting these ineligible securities were within certain limits. (See the Appendix: *A Time Line of Permissible Securities Activities*.)

⁴The Stock Exchange Practices hearings of the Senate Committee on Banking and Currency were chaired by Senator Ferdinand Pecora. See Benston (1990) for discussion.

ARGUMENTS FOR AND AGAINST REPEAL OF GLASS-STEAGALL

Despite the fact that banks have been permitted to engage to some extent in the underwriting of corporate debt and equity and other ineligible securities, these activities are still highly regulated. Banks wishing to underwrite ineligible securities must seek approval from the Fed to set up so-called "Section 20" affiliates, and the revenue limits placed on such underwriting have begun to become binding on some banks.⁵ As of March 31, 1996, in the U.S. there were 38 Section 20 subsidiaries of commercial bank holding companies authorized to engage in limited underwriting of and dealing in ineligible securities, including municipal revenue bonds, 1-4 family conventional mortgage-backed securities, commercial paper, and asset-backed securities (Table 1).⁶ Twenty-one of these subsidiaries were authorized to underwrite both corporate debt and equity securities, and an additional three were authorized to underwrite corporate debt but not equities. Most of these organizations are located in the New York Federal Reserve District, where they can directly compete with large investment banks.

Arguments for Repeal. The erosion of Glass-Steagall suggests that commercial banks have had strong incentives to get into securities activities and that regulators have had incentives to allow the banks to do so. One reason banks want to perform these activities is that they are profitable. As financial markets have become deregulated, banks have faced increased competition for their core businesses of deposit-tak-

ing and loan-making. In addition, technological advances have allowed firms increased access to funding from nonbank sources. Thus, finding new pathways to profits has become increasingly important for commercial banks, and it appears that underwriting securities is one such avenue. For example, in 1993, the average return on equity for large investment banks was over 23 percent; for New York Stock Exchange broker/dealer firms it was about 16.25 percent; and for commercial banks it was about 15.25 percent.⁷ For the period 1990 to 1993, the return on equity averaged about 17.5 percent for investment banks and about 11 percent for commercial banks.

In addition, commercial banks that could also offer unlimited underwriting services would be able to retain some of their most creditworthy customers. These customers usually find it cheaper to issue commercial paper than to take out bank loans, so they have been turning to the markets to raise funds. Because of the legal limits on the amount of commercial paper commercial banks are permitted to underwrite, they have lost some of their better customers. This loss could lead to a contraction in the banking industry, which could impose costs on smaller, less creditworthy firms that cannot access the markets directly but depend on bank loans for financing.

One can also make the argument that allowing commercial and investment banking activities within the same institution could make the industry safer by allowing more diversification.⁸ In addition, there could be natural synergies between commercial and investment

⁵Hays and Wilke (1996) and Rehm (1994) discuss banks hitting the revenue limit. The Federal Reserve recently fined Swiss Bank Corporation \$3.5 million for exceeding the revenue limit.

⁶Some are foreign owned; one of the subs has been dormant since June 1995; one holding company has two Section 20 subs.

⁷Data from the Board of Governors of the Federal Reserve System, and from the *FDIC Quarterly Banking Profile*, FDIC, Third Quarter 1995.

⁸But there is mixed evidence on whether mixing commercial banking with other nonbank activities leads to lower insolvency risk for the institution. See Mester (1992a) for a brief literature review of the empirical evidence.

TABLE 1
Section 20 Subsidiaries

Banking organizations authorized to underwrite and deal in certain municipal revenue bonds, mortgage-related securities, commercial paper, and asset-backed securities as of March 31, 1996, listed by Federal Reserve District.

	Date of Initial Board Order Authorization		Date of Initial Board Order Authorization
Boston District		Cleveland District	
Fleet Financial Group	10/88	(continued)	
New York District		National City Corp. ^a	2/94
Banco Santander, S.A. ^a	3/95	PNC Bank Corp.	7/87
The Bank of Nova Scotia ^a	4/90	Richmond District	
Bankers Trust N.Y. Corp. ^a	4/87	First Union Corp. ^a	8/89
Barclays Bank PLC ^b	1/90	NationsBank Corp. ^a	5/89
Canadian Imperial Bank of Commerce ^a	1/90	Atlanta District	
Chase Manhattan Corp. ^a	5/87	Barnett Banks, Inc. ^c	1/89
Citicorp ^a	4/87	SouthTrust Corp.	7/89
Deutsche Bank AG ^a	12/92	SunTrust Banks, Inc.	8/94
HSBC Holdings PLC ^a	2/96	Synovus Financial Corp.	9/91
The Long-Term Credit Bank of Japan, Ltd.	5/90	Chicago District	
J.P. Morgan & Co. ^a	4/87	ABN AMRO Bank N.V. ^{a, d}	6/90
The Royal Bank of Canada ^a	1/90	The Bank of Montreal ^a	5/88
Saban/Republic New York Corp. ^a	1/94	First of America Bank Corp. ^b	10/94
Swiss Bank Corp. ^a	12/94	First Chicago NBD Corp. ^b	8/88
The Toronto-Dominion Bank ^a	5/90	Minneapolis District	
Philadelphia District		Norwest Corp.	12/89
Dauphin Deposit Corp. ^a	6/91	San Francisco District	
Cleveland District		BankAmerica Corp. ^a	3/92
Bank One Corp.	7/90	Dai-Ichi Kangyo Bank Ltd.	1/91
Huntington Bancshares, Inc.	12/92	The Sanwa Bank, Ltd.	5/90
KeyCorp	2/96		
Mellon Bank Corp.	4/95		

^aAlso has corporate debt and equity securities powers.

^bAlso has corporate debt securities powers.

^cAs of June 30, 1995, the Section 20 subsidiary was dormant.

^dHas two Section 20 subsidiaries.

Source: Various issues of the *Federal Reserve Bulletin*.

banking. For example, credit evaluation is important in both. Loan syndication, which is permitted for commercial banks, is very similar to underwriting. And banks are already experienced at underwriting eligible securities. There may be scope economies from reusing information from the credit evaluation of a borrower who subsequently wants to issue debt.⁹ Commercial banks obtain valuable (inside) information on their customers from monitoring their loans: they see the firms' payment history and cash flows. So when the issuing firm is a customer of a commercial bank, the information this bank would have if it were to underwrite the issue is likely to be more accurate than the information an investment bank underwriter would have. Thus, it might be more efficient having commercial banks engage in underwriting than having specialized investment banks do it—if so, society would gain.

Arguments Against Repeal. These potential benefits have to be weighed against the potential costs stemming from possible conflicts of interest between commercial banking and underwriting.¹⁰ (If there are no costs, one could argue for repeal even if potential benefits are meager.) Some of these conflicts were raised during the Pecora hearings. A commercial bank might promote the securities it underwrites and misrepresent the quality of these securities to its depositors instead of offering them disinterested investment advice. Or the bank might induce a troubled loan customer to issue new securities to repay the loan. This imposes costs. If investors in these securities are naive, they are penalized: they purchase poor quality securities thinking they are good. If, however, investors are not naive, they know such a con-

flict of interest might exist and will, therefore, adjust down the price they are willing to pay for such securities. In this case, the issuing firms that use commercial bank underwriters bear the cost: they receive less funding than they would like, so there is underinvestment.¹¹ The economy is worse off, since some good investments go unfunded. A cost is also imposed on commercial banks that want to develop reputations for good underwritings.

These potential costs from a possible conflict of interest have to be weighed against the potential benefits of allowing commercial banks to underwrite. There is a trade-off: a commercial bank may obtain needed information more efficiently than an investment bank, but it may misrepresent this information to the market. An investment bank doesn't have ties to the issuer, so it has less incentive to misrepresent the information, but its information may not be as accurate. Whether the information cost savings of a commercial bank underwriter outweigh the costs imposed by the potential conflict of interest is an empirical question.

EMPIRICAL EVIDENCE ON CONFLICTS OF INTEREST

If conflicts of interest presented problems, such problems should have manifested them-

¹¹While the underwriter bears the cost if it guarantees a high price to the issuer and can obtain only a low price when selling the securities to investors, a smart commercial bank underwriter would take into account the smart investors' downward price adjustment and not guarantee a high price to the issuer. Hence, it's the issuer that bears this cost, and society, since some good investment projects go unfunded.

To the extent that a firm could switch to an investment bank underwriter, this underinvestment problem would go away. But switching might be difficult because the market might not be able to determine whether a firm was switching to avoid the underpricing problem or because its commercial bank refused to underwrite the firm's securities because they were not of high enough quality (see Rajan, 1996). The underinvestment problem could also be avoided if firms used only investment banks to underwrite their securities.

⁹But, again, there is some empirical evidence that suggests this may not be the case. See Mester (1992b).

¹⁰Saunders (1985), Saunders and Walter (1994), and Walter (1985) also discuss conflict-of-interest arguments against repeal of Glass-Steagall.

selves in the period before Glass-Steagall was enacted. Yet empirical studies that examine the 1920s and early 1930s suggest that conflicts were not generally a problem, and a study of the modern securities activities of commercial banks suggests they still aren't.¹² (Note, however, that finding no conflict of interest is not the same thing as finding benefits to allowing commercial banks into underwriting.)

Actual Performance. If banks systematically underwrote poorer quality security issues and passed them off to their depositors, the issues underwritten by commercial banks would probably have performed worse than similar issues underwritten by investment banks over the same period—that is, the measures of actual performance would differ according to the underwriter. Also, if the public had been taken advantage of in this way, it probably would have been easier to do with issues of low-quality and lesser-known firms, about which little public information was circulating. But three interesting studies all found evidence that securities underwritten by commercial banks actually outperformed those underwritten by investment banks in the pre-Glass-Steagall period.

Manju Puri (1994) studied the default performance and mortality rates (default rates adjusted for the ages of the issues) of a sample of securities issued over the period January 1927 to September 1929, when national as well as state banks were authorized to underwrite bonds (Table 2). In comparing the default performance of the issues she not only distin-

guishes between issues underwritten by commercial banks and investment banks (which she calls nonbanks), but also issues underwritten by National City Company and Chase Securities Corporation. These so-called rogue banks were accused of abuses and investigated by Congress in hearings surrounding Glass-Steagall. She also considers the type of security underwritten and whether the issue was investment or noninvestment grade.

Puri generally finds that the mortality rates for issues underwritten by commercial banks are significantly lower (in a statistical sense) than those underwritten by investment banks. For example, she finds that seven years after issue, about 25 percent of the industrial bonds underwritten by commercial banks had defaulted, while almost 40 percent of those underwritten by investment banks had defaulted. She finds statistically significant differences for these bonds three years and five years after issue as well, and significant differences even when the bonds were divided into investment and noninvestment grade issues. For preferred stock, the results are a bit weaker, perhaps because the sample size is smaller. Puri did not find a significant difference in mortality for foreign bond issues taken as a group, but she did find one for the noninvestment grade subgroup. Perhaps not surprisingly, she finds that issues underwritten by the rogue banks generally defaulted more than issues underwritten by the other banks. She didn't report a statistical test, but her estimates suggest that, at least for the older issues, rogue bank issues defaulted more than investment bank issues.

James Ang and Terry Richardson (1994) studied a sample of 669 domestic and foreign corporate and foreign government bonds underwritten from 1926-34 and obtained results similar to those of Puri. They studied the default experience of these issues from the time of issue until 1939 and found that commercial bank underwritings significantly outperformed those of investment banks: about 40 percent

¹²Bank of United States is often cited as an example of a bank that failed because of its affiliates' abusive practices. But as Benston (1996) notes, only one of these affiliates dealt in securities, and it was engaged in purchasing the bank's stock, not in underwriting other firms' securities. The rest were involved in real estate. Benston cites rapid expansion and misappropriation of funds by the bank's owners as the chief reasons for the bank's failure.

TABLE 2
Empirical Studies

Study	Time Period	Sample	Selected Results
Puri (1994)	January 1927 to September 1929	Samples ranged in size from 365 to 382 issues. Default experience over the seven years after issue was available for 181 industrial bonds, 81 preferred stock issues, and 103 government bonds. Default experience over the year after issue was available for 182 industrial bonds, 95 preferred stock issues, and 105 foreign government bonds. In the larger sample, 134 issues were underwritten by commercial banks and 248 were underwritten by investment banks.	Issues underwritten by commercial banks defaulted less often than issues underwritten by investment banks.
Puri (1996)	Same as above.	Same as above.	Issues underwritten by commercial banks had lower initial yields than issues underwritten by investment banks. Compared to issues underwritten by investment banks, issues underwritten by commercial bank affiliates had similar initial yields while issues underwritten directly by commercial banks had lower initial yields.
Ang and Richardson (1994)	1926-34	669 domestic and foreign corporate bonds and foreign government bonds. 121 were underwritten by commercial banks, 451 were underwritten by investment banks, and 97 were underwritten by Kuhn, Loeb and Co. or J.P. Morgan.	Issues underwritten by commercial banks defaulted less often and had lower initial yields than issues underwritten by investment banks.
Kroszner and Rajan (1994)	First quarters 1921-29	462 industrial bonds. 133 were underwritten by commercial banks and 329 were underwritten by investment banks. Used to form 121 matched pairs.	Issues underwritten by commercial banks defaulted less often and had lower initial yields than issues underwritten by investment banks. Commercial banks were more likely to underwrite issues of larger, older, and less leveraged firms, firms listed on the stock exchange, and senior securities.
Kroszner and Rajan (1995)	1925-29	906 issues of common and preferred stock and corporate and government bonds underwritten by commercial banks. 580 were underwritten by commercial bank affiliates and 326 were underwritten directly by commercial banks.	Initial yields on issues underwritten by commercial bank affiliates were lower than initial yields on issues underwritten directly by commercial banks.
Gande, Puri, Saunders, and Walter (1995)	January 1, 1993 to March 31, 1995	670 fixed-rate, nonconvertible debt issues of nonfinancial corporations. 80 were underwritten by Section 20 affiliates of commercial banks and 590 were underwritten by investment banks.	Initial yields on issues underwritten by Section 20 subsidiaries of commercial banks and by investment banks were generally the same, but initial yields on issues with low credit ratings whose proceeds were not being used to repay issuer's bank loans were lower when underwritten by Section 20 subsidiaries.

defaults compared with more than 48 percent defaults for the investment bank issues; commercial bank issues outperformed investment bank issues for each type of security examined. They also found that the issues underwritten by Kuhn, Loeb and Co. and J.P. Morgan, institutions that were difficult to classify as either commercial or investment banks, outperformed both commercial and investment bank issues, with a default rate of only 30 percent. But even including these two institutions among investment banks does not change the result that commercial bank underwritings defaulted less often than investment bank underwritings. In their study, National City and Chase did worse than other commercial banks, but they seem to have been on a par with investment banks.

Randall Kroszner and Raghuram Rajan (1994) conducted a matched-sample test of 121 pairs of industrial bonds underwritten during the first quarters of 1921-29. The bonds in each pair were matched in terms of their initial rating, time when issued, maturity, size, and type of conversion provisions, but one bond in the pair was underwritten by a commercial bank while the other was underwritten by an investment bank.¹³ Again, their results agree with those of the other studies: they find that at the end of every year after 1924, fewer cumulative defaults occurred among the issues underwritten by commercial banks than among those underwritten by investment banks. By 1940, 32 percent of investment-bank underwritings had defaulted compared with 23 percent of

commercial bank underwritings. Thus, these three studies of the performance of issues found no evidence that commercial banks were foisting off low-quality securities on investors.

Expected Performance. While the actual performance of these issues is important, so is the expected performance. Only if, on average, default of the issues was *greater than expected* can one conclude that investors were being duped by the underwriter. Evidence on this can be garnered by looking at the pricing of the issues. Studies by Ang and Richardson (1994) and Puri (1996) found that securities underwritten by commercial banks were priced higher (that is, their yields were lower) at the time of issue than securities underwritten by investment banks, meaning that investors did not require that a high risk premium be built into the yield to induce them to buy commercial bank issues.

For example, Ang and Richardson found that over 1926-30 the initial yield on issues underwritten by commercial banks averaged about 26 basis points lower than the yield on issues underwritten by investment banks.¹⁴ Apparently investors did not perceive that issues underwritten by commercial banks were necessarily more risky than those underwritten by investment banks. The study also found that the actual yield performance (that is, the return over the life of the issue) of the issues underwritten by commercial banks was better than that of investment bank issues, which is consistent with the default rate results discussed above.

Moreover, Ang and Richardson also performed a statistical test to shed some light on whether investors were *rationally* assessing the value of the issues. If they were, the yield at the time of issue should be a good predictor of the realized yield of the issue. Ang and

¹³Their definition of a commercial-bank-underwritten issue was broader than Puri's. An issue was classified as a commercial bank underwriting if a commercial bank was a member of the group of institutions, that is, the syndicate—either as a lead or subordinate member—that underwrote the issue. Puri classified an issue as a commercial bank underwriting only if a commercial bank was the sole underwriter or the lead underwriter, arguing that subordinate members of a syndicate could exert only a limited amount of influence on other members.

¹⁴A basis point is 1/100th of a percent.

Richardson found no evidence that the market mispriced issues underwritten by commercial banks and no evidence that the predictive power of the issue price for realized yield was different for commercial-bank-underwritten issues than for investment-bank-underwritten issues. Hence, they found no evidence that investors were behaving irrationally when they accepted lower yields for the commercial bank issues.

Examining the same sample of issues as in her previous study, Puri (1996) also found that investors were willing to pay higher prices (that is, accept lower yields) for securities underwritten by commercial banks than investment banks, after controlling for other factors that would have affected prices.¹⁵ This result held for both industrial bonds, where the yield at the time of issue on commercial bank underwritings averaged between 8 and 13 basis points lower than that on similar investment bank underwritings (depending on the statistical methodology used), and for preferred stock issues, where the difference was between 22 and 37 basis points.¹⁶

One interpretation of this result is that investors assessed that the commercial bank's potential information advantage over the investment bank outweighed any potential con-

flict-of-interest problem in the commercial bank. Hence, they were willing to pay higher prices for issues underwritten by commercial banks. If so, issuers did not bear the costs of potential conflicts of interest. Consistent with this interpretation is Puri's finding that the difference in yields for commercial and investment bank issues was greater for new issues (that is, issues different from the type, either bonds or preferred stock, that the firm had outstanding in the market) than for seasoned issues (that is, issues that were similar in type to ones the firm had outstanding in the market). Typically there is less public information available on new issues, so any private information a commercial bank has should be more valuable for new issues than for seasoned issues. So if the market believes the commercial bank has an information advantage over the investment bank in underwriting, and this influences the prices it is willing to pay for securities, one would expect to see a larger price difference between commercial bank underwritings and investment bank underwritings for new issues than for seasoned issues, which is what Puri found. She also found no yield differential in foreign bond underwritings. Since prior lending relationships were not important in gaining customers in this market, there was little reason to believe a commercial bank's information was superior to that of an investment bank underwriter.

Types of Issues. The default and price results are based on a comparison of issues underwritten by commercial and investment banks that are similar in other respects so that any differences found can be attributed to underwriter type. For example, the studies compare securities of similar types, with the same maturities, size, and so on. But the studies also found that the general types of securities underwritten by commercial and investment banks differed. Puri (1996) found that commercial banks were more likely to underwrite corporate bonds than preferred stock, and of the

¹⁵These factors included whether the issue was investment grade, the size of the issue, the size of the underwriting syndicate, whether the issue was traded on an exchange, the firm's age, and whether the firm had issues of the same type (either bonds or preferred stock) outstanding in the market. Puri used this last factor to define whether the issue was a new or seasoned issue, since it was not possible from the available data to determine whether an issue was the firm's first ever issue of a bond or preferred stock.

¹⁶Given that commercial bank underwriters appear to have been able to generate higher prices for their issuers, there is a question as to why any issuer would have chosen an investment bank as underwriter. Puri (1996) suggests that one reason might be that investment banks charged lower fees (although she has no data on fees to confirm this conjecture).

corporate bond issues, they were more likely to underwrite seasoned issues, those of older firms, those with less underlying collateral securing the issue, and those with a larger number of underwriters in the syndicate. Kroszner and Rajan (1994) found that commercial banks were more likely to underwrite larger and older firms, firms listed on the stock exchange, less leveraged firms, and senior securities such as debt rather than stock. These characteristics are generally consistent with higher quality issues. Moreover, they found that these differences were more pronounced for smaller banks than for larger ones.

Kroszner and Rajan argue that one explanation for their findings is that commercial banks were deliberately choosing to underwrite high-quality issues, which involve less insider information, and so have lower potential conflicts of interest. That is, commercial banks wanted to indicate to the market that they were credible underwriters, so they focused on the types of issues that minimized the risk of conflicts of interest. Since small banks, as relative unknowns, likely need to do more to build their reputations, Kroszner and Rajan's result showing that small banks focused even more on high-quality issues than large banks did is consistent with this explanation.

However, other plausible explanations have little to do with conflicts of interest. For example, it could be that commercial banks focused on debt securities rather than equities because they had more expertise with these types of securities. Recall that this was the type of security they were first authorized to underwrite, and debt securities are more like commercial bank loans.¹⁷

Recent Experience. I know of only one study of the underwriting experience of commercial banks since the Federal Reserve permitted limited underwriting of ineligible securities.

It is still too early to determine the default experience of recent issues, but Amar Gande, Manju Puri, Anthony Saunders, and Ingo Walter (1995) were able to examine the pricing of issues underwritten by the top 20 underwriters (in terms of the dollar volume of their underwritings) of fixed-rate, nonconvertible debt issues of nonfinancial corporations over the period January 1, 1993, to March 31, 1995. This sample included four underwriters that are Section 20 subsidiaries of commercial bank holding companies: J.P. Morgan, Citicorp, Bankers Trust, and Chase.

In addition to isolating a commercial bank's corporate debt and equity underwriting activities in a separate affiliate of the commercial bank within the holding company, regulators impose firewalls that limit the financial and information flows between the securities and commercial bank subsidiaries. Firewalls are intended to stop the conflict-of-interest problem, but at the same time, they restrict the ability of commercial banks to take advantage of any informational edge they may have in underwriting as a result of their lending activity.

Gande, Puri, Saunders, and Walter studied the effectiveness of these firewalls by comparing the pricing of similar issues underwritten by Section 20 subsidiaries and investment banks, while controlling for the lending relationship between the commercial bank underwriter and the issuer. That is, the study goes a step further at getting at the conflict-of-interest problem by controlling for the volume of loans an issuer has gotten from the commercial bank affiliate of its Section 20 underwriter. (Recall that the potential conflict-of-interest problem should be worse when a commercial bank underwriter has also extended loans to the issuer.) If firewalls have successfully prevented conflicts of interest *and* have precluded the commercial bank from taking advantage of any informational edge it might have over the investment bank underwriter, one would expect to see no difference in the initial yields of similar

¹⁷See Puri (1996) for further discussion.

Section 20 and investment bank underwritings. One would also expect to see no yield difference if there weren't any conflicts of interest or informational advantages in the first place, or if the conflicts of interest just offset the informational advantages, regardless of the effectiveness of firewalls. On the other hand, if the market assesses that the informational advantages of the commercial bank underwriter outweigh any conflicts of interest and that the firewalls are not fully effective at isolating the underwriting function from the commercial banking function, yields on issues underwritten by Section 20 subsidiaries should be lower than those on investment bank underwritings.

Similarly, if the market assesses that the potential conflict-of-interest problem outweighs any potential informational advantage commercial banks have in underwriting and that the firewalls are not fully successful in controlling conflicts of interest, the market should require a higher risk premium to take on commercial bank underwritings. Thus, initial yields on Section 20 subsidiary underwritings should be greater than initial yields on investment bank underwritings.

The authors found no statistically significant difference, on average, in the yields of issues underwritten by Section 20 subsidiaries and similar issues underwritten by investment banks.¹⁸ Thus, it appears that, on average, either firewalls have been effective at isolating the underwriting and commercial bank functions or that any informational advantages just offset any conflicts of interest. However, they also found that when a Section 20 subsidiary underwrites issues whose proceeds are not intended to repay the issuer's bank loans and the issue has a low credit rating, the yield at the time of issue is significantly lower than if an

investment bank underwrites the issue. These issues are likely to present the fewest conflict-of-interest problems, since the proceeds of the issue are not being used to repay a loan and thereby shift the risk out of the bank underwriter's loan portfolio on to those who purchase the underwritten issues. And any informational advantage that a commercial bank underwriter has is likely to be most valuable with lower rated issues. The fact that the market accepts a lower yield suggests that *for this type of security issue* the market believes that the commercial bank's information advantage outweighs the cost from any conflict of interest and that firewalls are not fully isolating the underwriting function from the commercial banking function.¹⁹ It is too early to tell whether these beliefs are rational, since it depends on the actual default experience of the issues.

EMPIRICAL EVIDENCE ON ORGANIZATIONAL STRUCTURE

While the empirical studies have been consistent in suggesting that conflicts of interest have not been a major problem that should preclude commercial banks from participating in securities activities, they provide mixed evidence on the way these activities should be organized. The version of the repeal legislation that Congress has been considering in its current session would allow commercial banks into securities activities through a holding company structure, the same structure that has been used since the Federal Reserve permitted limited securities activities in 1987. That is, rather than the commercial bank's engaging in the securities activities directly, the securities and commercial banking activities would be in separate subsidiaries of a financial service holding company. The separate affiliates would be

¹⁸While they found that, on average, yields on Section 20 underwritings were lower than yields on investment bank underwritings, the difference was not statistically significant.

¹⁹The authors also find no evidence of the conflict-of-interest problem in those issues where one might expect the problem to be severe, namely, in issues whose proceeds are being used to repay bank loans.

further protected by a system of firewalls.

This organizational structure with firewalls provides a benefit in lowering the potential for conflicts of interest and so lowers the costs commercial banks and issuers must incur to assure investors their issues are high quality. But it also imposes a cost by making the information-sharing between the lending and underwriting functions more difficult. The study by Gande, Puri, Saunders, and Walter indicates that, recently, firewalls haven't always been effective in totally separating the commercial bank and securities affiliates, but it also indicates that conflicts of interest haven't been a problem.

Two other studies that examined issues directly underwritten by commercial banks and those underwritten by an affiliate of a commercial bank in the pre-Glass-Steagall period came up with conflicting conclusions as to which organizational structure is preferable. Kroszner and Rajan (1995) found that firewalls appear to have been valuable in helping commercial bank underwriters convince the market they were not trying to foist off poor-quality issues. They studied 906 issues underwritten by commercial banks between 1925 and 1929 and found that yields on issues underwritten directly by banks averaged 13 basis points higher than yields on similar issues underwritten by affiliates. This indicates that the market assessed that potential conflicts of interest were higher with direct underwriting. They also found that, over the 1920s, banks increasingly organized their securities activities in affiliates rather than keeping them in-house. It seems sensible that the market would have evolved this way, since the affiliates appeared able to guarantee higher prices to their issuing customers.

But Puri (1996) concluded that direct underwritings by commercial banks did not lead to greater conflicts of interest than underwriting via affiliates. With her sample of underwritings over the period of January 1927

to September 1929, she found that the yields at the time of issue on corporate debt issues underwritten by affiliates did not differ significantly from the yields on similar issues underwritten by investment banks, but that the yields of direct underwritings were significantly less (from 9 to 23 basis points lower, depending on the method of estimation) than those on investment bank underwritings. Similar results hold for preferred stock issues. While a test that directly compares the yields on issues underwritten in-house with those on issues underwritten by an affiliate would be more definitive, Puri's results do suggest that yields would be lower on in-house than on affiliate underwritings, given their respective relationships to yields on investment bank underwritings. This is consistent with the market's not believing that direct underwritings were subject to greater conflicts of interest than affiliate underwritings; otherwise, purchasers would have demanded higher yields on direct underwritings, not lower ones.

Since Puri's conclusions differ from those of Kroszner and Rajan, perhaps because different samples of security issues were studied, a definitive answer on the issue of organizational form awaits further study.

CONCLUSIONS

Congress has been debating whether to repeal the Glass-Steagall Act, which was passed in 1933 in the aftermath of the large number of bank failures that occurred during the Great Depression. One of the problems the act sought to address was the potential conflict of interest when a commercial bank that lends to a firm also underwrites that firm's securities.

Empirical evidence based on the pre-Glass-Steagall days and on commercial banks' recent experience in debt underwriting suggests that, on balance, conflicts of interest have not been a problem: the data support the repeal of Glass-Steagall.

APPENDIX:

A Time Line of Permissible Securities Activities

1986

1987

1988

1989

June 1988

The Fed allowed subsidiaries of commercial banks to underwrite commercial paper, municipal revenue bonds, mortgage-backed securities (as long as they weren't mortgages of an affiliated bank), and securities backed by unaffiliated banks' consumer-related receivables, subject to the revenue restriction.

December 1986

The Federal Reserve issued a policy stating that government securities subsidiaries of bank holding companies may underwrite certain "bank ineligible" securities without violating Section 20 of the Glass-Steagall Act as long as the underwriting revenues from ineligible securities did not exceed 5 percent of the subsidiaries' gross revenues, since this would indicate that the subsidiary was not "engaged principally" in underwriting ineligible securities. The revenue test had to be met on an eight-quarter moving average basis. Note that even though banks were always permitted to directly underwrite U.S. government securities, if a bank wanted to underwrite ineligible securities in an affiliate, it made sense to move the underwriting of government securities to the affiliate as well, since this would increase the gross revenues of the affiliate and, therefore, the volume of ineligible securities the bank's affiliate could underwrite. To limit the possibility of conflicts of interest, the Fed included several "firewalls" (see Mester (1992a) for a discussion of these firewalls and their limitations):

1. Securities activities had to be in a subsidiary of the holding company that was separate from the commercial bank. These subsidiaries are called Section 20 subsidiaries.
2. Transactions between the affiliated bank and securities subsidiary were limited.
3. The securities and commercial bank subsidiaries could have no officers, directors, or employees in common.
4. The commercial bank subsidiary was restricted in extending loans to issuers of commercial paper placed by the securities affiliate.
5. The commercial bank subsidiary could not purchase or recommend that its customers purchase securities placed by its securities affiliate.
6. The securities subsidiary could have only limited access to customer records of the commercial bank subsidiary and could not underwrite securities issued by affiliates.