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Banks Venture into New Territory

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Financial modernization legislation passed in 1999 allows banking organizations to directly invest in any type of company. This merchant banking authority gives banks greater opportunities to provide venture capital to start-up companies and later-stage equity financing to more mature firms. Kenneth Robinson examines how banks have pursued their new merchant banking powers. Robinson finds evidence that organizations that engage in merchant banking tend to be larger than those that do not. His findings are also consistent with the hypothesis that banks may be attempting to lower their average costs by combining merchant banking with other nonbank activities. Allowing banking organizations to pursue this new activity will provide them with an additional source of earnings and greater diversification opportunities and will likely increase private equity financing, which has been a vital component of economic activity.

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The Gramm–Leach–Bliley Act of 1999 (GLB) is one of the most important pieces of banking legislation in more than fifty years. In addition to allowing banking organizations to engage in securities underwriting and dealing and to offer insurance products, the bill grants them the authority to undertake merchant banking activities. Merchant banking is part of the private equity market in which firms directly invest in companies. The GLB allows financial holding companies (FHCs) to invest in any type of business, not for the purpose of engaging in that business but to seek a return on their investment.[1] These investments can include seed money to start-up companies as well as later-stage funding to more mature firms.

Venture capital financing has been important to a number of successful companies, such as Microsoft Corp., Intel Corp., Netscape Corp., and Genentech Inc. A recent study estimated that firms built with venture capital were responsible for almost 6 percent of the nation's jobs and 13 percent of U.S. gross domestic product in 2000 (National Venture Capital Association 2001). Allowing FHCs to participate in this type of financing will likely increase the flow of venture capital and later-stage funding that has proven vital to a growing economy. It also offers FHCs a new source of earnings and greater opportunities for diversification.

Because merchant banking is closely related to the mixing of banking and commerce, I begin by highlighting the key elements in the long-standing debate over allowing U.S. banks and banking organizations to own commercial firms. I then describe what FHCs are allowed to do in conducting their merchant banking business and provide some evidence on their growth and involvement in merchant banking. I follow this with an examination of some of the characteristics of FHCs that have pursued merchant banking. Because FHCs have only recently entered merchant banking, making data limited, my findings should be viewed as a preliminary look at FHCs' involvement in this new area. As more FHCs enter this arena, and more data become available, different conclusions might be reached.

My results indicate that larger organizations are more likely to engage in merchant banking. I also find some evidence that economies of scope—or the ability to achieve lower average costs by producing different products within one organization—increase the likelihood of pursuing merchant banking. Additional results suggest that the portfolio proportions of FHCs' merchant banking investments depend on institution size and capital and are positively related to variables that proxy for the presence of scope economies, such as business lending and the extent of nonbank activities.

BANKING AND COMMERCE

Separation of banking and commerce is a long-standing characteristic of the U.S. banking system. U.S. banks and bank holding companies are not allowed to own and operate nonfinancial companies. This contrasts with some other countries, such as Germany and Japan, that allow varying degrees of what are often called universal banks. The separation of

[1] Merchant banking activities must be conducted by a subsidiary of a financial holding company. Banks and bank subsidiaries may make merchant banking investments only if, five years after enactment of the GLB, the Federal Reserve Board of Governors and the Secretary of the Treasury jointly approve.

banking and commerce in the United States has its roots in English banking law (Shull 1999). This separation has endured major changes in the U.S. banking system, including the free banking era of the early to mid-1800s, the establishment of a national banking system in 1863, and the financial upheavals of the Great Depression. However, at various times banks were able to circumvent restrictions on the comingling of banking and commerce.

Bank holding companies have traditionally offered avenues for commercial banks to expand into new activities. Prior to 1933, holding companies were not restricted by federal regulations. Consequently, the holding company structure was used to combine banking and commerce.[2] Transamerica is probably the best-known example. It controlled five banks, and its nonbank subsidiaries included insurance companies, real estate and oil development companies, and a fish-packing company (Shull 1994, 261). The Bank Holding Company Act of 1956 and subsequent amendments in 1970, however, generally prohibited bank holding companies from owning or controlling almost all kinds of nonbank firms.[3]

Despite restrictions on mixing banking and commerce, banking organizations were permitted to make limited investments in nonfinancial companies even before the Gramm–Leach–Bliley Act. Under the Bank Holding Company Act of 1956, banking organizations could hold up to 5 percent of the outstanding voting shares of any company and up to 25 percent of the total equity (voting and nonvoting shares). To match competition abroad, U.S. banking organizations can also invest in foreign companies through Edge Act affiliates and subsidiaries. Under the Small Business Investment Act of 1958, banking organizations may make equity investments through what are known as small business investment corporations, which can be a subsidiary of either a bank or a bank holding company. These companies can hold up to 50 percent of a firm's outstanding shares, but such investments can only be made in firms defined as small businesses.[4]

Benefits vs. Costs

The long-standing separation of banking and commerce in this country reflects policy concerns over perceived drawbacks of a less restrictive approach. Proponents of separating banking from commercial activities point to potential costs that could arise from allowing banks or holding

[2] Banks were also able to find ways around prohibitions on securities underwriting and dealing by establishing state-chartered affiliates. See Shull (1999).

[3] Savings and loans were treated differently, however. The Savings and Loan Holding Company Act of 1968 permitted unitary thrift holding companies, or those that owned only one thrift and met a "thriftness" test (a minimum percentage of assets in mortgages and other specified securities), to engage in any activity through nonbank subsidiaries (Shull 1999, 12). The GLB narrowed this exemption from the prohibition on mixing banking and commerce. No new unitary thrift holding companies are allowed to own commercial firms. Preexisting unitary thrifts are permitted to maintain their commercial affiliations but may not engage in any new commercial activities or transfer their right to mix banking and commerce.

[4] See *Code of Federal Regulations*, Title 13, Section 121.102 for a description of how the Small Business Administration establishes its size standards. A bank's aggregate investment in the stock of a small business investment corporation is limited to 5 percent of the bank's capital and surplus. For holding companies, the aggregate investment is limited to 5 percent of the holding company's proportionate interest in the capital and surplus of its subsidiary banks.

companies to own and operate nonbanking firms. The first is the potential for an excessive concentration of economic power. The resulting lack of competition in both banking and commercial markets could be detrimental to consumers.

Conflicts of interest could stem from joint ownership of banking and commercial entities. A bank might be tempted to extend credit to a company in which it has an ownership interest regardless of the company's creditworthiness, in an attempt to assist the firm and increase its stock value. Moreover, rival firms, unaffiliated with the bank, might be offered credit only on unfavorable terms. A banking organization could purchase the debt or equity securities of a firm it owns to temporarily raise the firm's value and provide it with funds to repay its bank loans. And a banking organization might rescue a failing company by moving bad assets from its nonfinancial subsidiary to the bank, thereby endangering bank safety and soundness.

These conflicts of interest highlight one of the most important costs associated with the affiliation of banks and commercial firms—the possibility that such affiliations may increase moral-hazard incentives. These incentives arise from deposit insurance and other features of the federal safety net that may serve to increase banks' risk-taking. This could lead to an extension of the federal safety net to nonbank firms and activities, potentially increasing taxpayer exposure. Capital requirements, firewalls, and other supervisory actions can limit, but not eliminate, this possibility.

Despite these potential costs, certain benefits could also be derived from mixing banking and commerce. These include greater diversification from offering both banking and nonbanking products. There is also the possibility of exploiting both economies of scale and scope. Economies of scale are present if increasing the scale of production lowers average costs. Scope economies also lead to lower average costs by producing many products in an optimal or efficient combination. These cost savings arise from the efficient sharing of inputs across multiple outputs.

Finally, mixing banking and commerce could reduce the agency costs and information problems associated with bank lending. Commercial borrowers typically have better information about their business than the lending bank does. Banks then must expend resources evaluating and monitoring borrowers. If a banking organization has significant equity holdings in the borrowing firm, information gathering and monitoring are likely to be less expensive (Shull 1999, 27; Saunders 1994, 231).

Gramm–Leach–Bliley and the Mixing of Banking and Commerce

Policymakers remain wary of eliminating the restrictions on mixing banking and commerce but have nevertheless permitted certain forms of ownership of financial and nonfinancial firms. The GLB allows considerable expansion of banking organizations' investments in nonfinancial companies, but it does not remove the prohibition against mixing banking and commerce. In considering the merchant banking provisions, Congress recognized that some forms of commercial firm ownership by banking organizations are the functional equivalent of providing financing for start-ups and other small businesses. It was on this basis that Congress authorized banks to engage in merchant banking (Meyer 2001).

The GLB defines permissible merchant banking investments as those that meet two requirements: (1) investments may be held only long enough to enable the resale of the investment, and (2) while the investment is held, the investing banking company may not routinely operate or

manage the commercial firm except as necessary to obtain a reasonable return on the investment when sold. These requirements "further the fundamental purposes of the Bank Holding Company Act—to help maintain the separation of banking and commerce and promote safety and soundness" (*Federal Register* 2001, 8466). The GLB also limits bank funding of companies owned by the bank's parent holding company and cross-marketing activities between banks and companies owned by the same financial holding companies.

What Can Banks Do?

The GLB grants authority to make merchant banking investments only to FHCs.[5] The FHC must notify the Federal Reserve within 30 days after commencing such investments or acquiring a company that does. A banking organization may acquire any amount of ownership interest in any nonfinancial firm, or what is known as a portfolio company.

The GLB specifically authorizes the Federal Reserve and the Secretary of the Treasury to issue regulations implementing the new merchant banking authority. Final rules for the conduct of merchant banking were determined after a round of comment-seeking by the two agencies and were effective February 15, 2001 (*Federal Register* 2001).

Permissible activities under the merchant banking authority focus on the two major requirements to ensure the separation of banking and commerce. The first of these requirements concerns how long banking organizations may hold their merchant banking investments. The merchant banking rules permit a ten-year holding period for direct investments in a portfolio company and a fifteen-year holding period for investments in private equity funds.[6] The Federal Reserve may approve longer holding periods on a case-by-case basis.

The second requirement in the GLB addresses FHCs' involvement in the management of their portfolio companies. While the GLB restricts FHCs' ability to routinely operate or manage companies held under their merchant banking authority, the rules do allow some oversight. Representatives of an FHC may serve on a portfolio company's board of directors. Moreover, an FHC may enter into agreements that restrict any extraordinary actions of a portfolio company (such as sales of major assets or acquisitions of other companies) without prior approval. However, an FHC officer or employee may not be an executive of a portfolio company, and the holding company cannot restrict decisions by a portfolio company made in the ordinary course of business.

The act does allow an FHC to routinely manage a portfolio company in special circumstances. These occur when intervention is deemed necessary to protect the holding company's investment. Under these circum-

[5] A bank holding company may qualify as a financial holding company if each of its depository institutions is well managed and well capitalized. Each of the subsidiary depository institutions must also have at least a satisfactory Community Reinvestment Act rating. In addition, to conduct merchant banking activities, the financial holding company must either control a securities affiliate or be one, or must control both an insurance underwriter affiliate and an investment adviser affiliate (registered under the Investment Advisers Act of 1940) that provides investment advice to an insurance company. This requirement is relatively easy to fulfill, necessitating only notification to the Federal Reserve within 30 days of commencing these activities.

[6] Private equity funds are generally investment companies that are typically organized as limited partnerships and that pool capital from third parties to invest in shares, assets, and ownership interests in companies for resale.

stances, the holding company must notify the Federal Reserve if it routinely manages a company for more than nine months. And the holding company must, upon request, give the Federal Reserve a written record describing the holding company's involvement with management.

The final rule also contains several provisions designed to encourage the safe and sound conduct of merchant banking activities. FHCs must establish policies, systems, and procedures to monitor and address risks associated with merchant banking. In addition, holding companies must retain sufficient records to assess and monitor risk. The rules do allow FHCs significant discretion in formulating policies and keeping records that best fit their management style and the extent of their individual merchant banking activities.

Capital Requirements

The amount of capital to allocate to merchant banking is controversial. Originally, in March 2000, a 50 percent capital charge was proposed. After more than 130 comments were received, a revised proposal was submitted for comment in January 2001 (Federal Reserve Board and Office of the Comptroller of the Currency 2001). Under this proposal, the capital charge would increase in steps as an FHC's merchant banking activity increased relative to its Tier 1 capital. Banking companies would be required to hold 8 cents for every dollar in equity investments up to 15 percent of Tier 1 capital and 12 cents for every additional dollar of equity investments up to 25 percent of capital. For merchant banking investments that exceed 25 percent of Tier 1 capital, the charge would be 25 cents per dollar of equity investments. This series of marginal capital charges is intended to reflect that as a banking organization devotes more of its resources to a potentially risky activity such as merchant banking, its capital must also increase more than proportionately to ensure safety and soundness. After reviewing approximately sixty comments, the federal bank agencies adopted a final rule substantially similar to the revised proposal (*Federal Register* 2002). The final capital rule became effective April 1, 2002.

MERCHANT BANKING ACTIVITIES

Private Equity

Financial holding companies' merchant banking activity mostly takes place in the private equity market. In this market, transactions occur largely in unregistered shares in both private and public companies. In return for their investment, investors receive an interest in the company, generally through common or preferred stock. Because their interest is subordinated to that of any debt holders, investors face potentially greater risk, but returns can also be substantial.

Much activity in private equity markets occurs in unregulated venues, so data on market size are difficult to obtain. However, estimates suggest that the private equity market expanded rapidly throughout the 1990s. In 1991, private equity firms raised $8 billion for their investments. Private equity firms are estimated to have raised $95.5 billion by 1999 (Asset Alternatives 2001). And recent estimates put the amount of private equity outstanding at approximately $400 billion (Meyer 2000).[7]

[7] For more on the private equity market, see Fenn, Liang, and Prowse (1997).

Several venues exist for private equity investing. Until the late 1970s, such investments were mostly undertaken by wealthy individuals, financial institutions, and industrial corporations investing directly in the securities of issuing firms. Since the early 1980s, most private equity investments flow through specialized intermediaries, and most of these are organized as limited partnerships (Prowse 1998). The best known are the venture capital firm Kleiner, Perkins, Caufield, and Byers and the buyout group Kohlberg, Kravis, Roberts and Co. Other professional private equity managers include affiliates of insurance companies and investment banks (Fenn, Liang, and Prowse 1997). By investing through a partnership rather than directly in the issuing firms, investors are delegating the labor-intensive responsibilities of selecting, structuring, managing, and eventually liquidating private equity investments.

Private equity transactions also occur in less-organized markets, including the informal private equity market and the angel capital market. In the informal private equity market, unregistered shares are sold to institutional investors and accredited individuals. This market also includes Small Corporate Offering Registrations issued by small firms directly to the public. These issues are exempt from registration with the SEC.

Angel capital consists of investments in small, closely held companies by wealthy individuals who often have experience operating similar companies. Angel finance differs from most other categories of external finance in that generally, this market is not intermediated. Instead, individuals invest directly in small companies through an equity contract (Berger and Udell 1998, 630). According to a survey in Prowse (1998, 788), angels' investments can be as low as $50,000 and as high as $1 million. Angel investors generally demand less control and oversight of their investments than most venture capitalists (Berger and Udell 1998).

Venture Capital

One particularly important component of the private equity market is the venture capital segment. Venture capital investments carry the greatest risk (and potential return) in the private equity market. Such investments often focus on high-growth, evolving industries, including information technology, communications, and biotechnology.[8]

Venture capitalists are active investors in that they monitor their firms' progress, sit on their boards, and allocate financing. Hellmann and Puri (2002) present evidence that venture capitalists provide support in building up the internal organization in such areas as human resources policies and the hiring of senior-level executives. Venture capitalists tend to specialize in a narrow set of industries in which they can develop expertise, and they often control concentrated equity positions in the companies they finance (Barry et al. 1990). Typically, start-up funds are not provided all at once but are dispersed in rounds based on the achievement of certain milestones. Venture capitalists usually exit their successful investments by taking them public (Gompers and Lerner 2000). In short, venture capitalists play an important role in shaping and governing new firms (Barry et al. 1990).

[8] Gompers and Lerner (1999) provide a comprehensive overview of the venture capital industry.

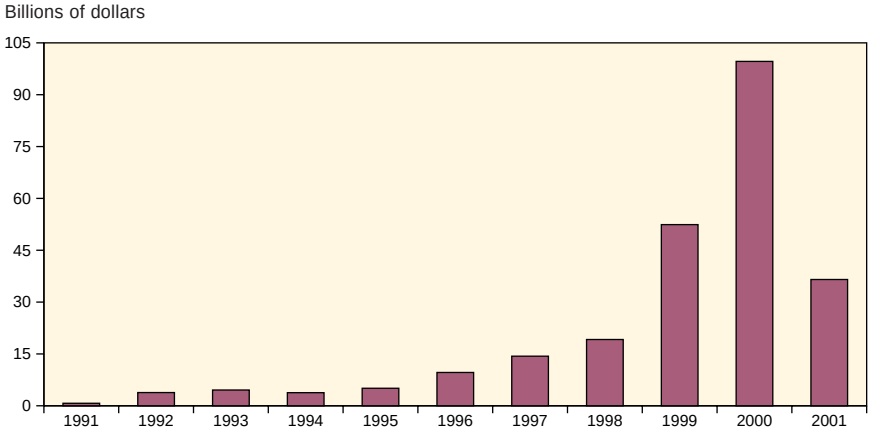
Figure 1 shows the amount of venture capital investments in U.S. companies from 1991 through 2001. These investments expanded rapidly in the late 1990s. Mirroring the overall slowdown in equity markets generally, venture capital fund-raising declined in 2001.

FHCs AND MERCHANT BANKING ACTIVITY SO FAR

Presence

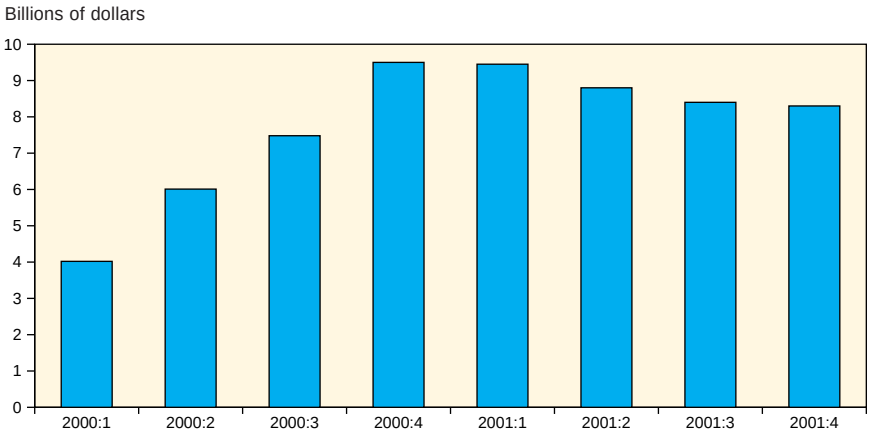
As of March 2000, FHCs report the total carrying amount of assets held under the merchant banking authority of the GLB. These data do not distinguish between venture capital investments and other private equity market activity. Figure 2 shows that FHCs' merchant banking investments increased steadily in 2000 before declining a bit in 2001. Also, banking organizations are not yet substantial players in the private equity market. Currently, only twenty-four of 565 financial holding companies report merchant banking activities. And FHCs' outstanding merchant banking invest-

Figure 1
Venture Capital Investments in U.S. Companies



SOURCE: PricewaterhouseCoopers/Venture Economics/NVCA.

Figure 2
Assets Held Under Merchant Banking Authority



SOURCE: Federal Reserve Board, *Supplement to the Consolidated Financial Statements for Bank Holding Companies*, FR Y-9CS.

ments total $8.2 billion compared with private equity outstanding that is estimated to exceed $400 billion.

Characteristics

To investigate the characteristics of banking organizations that have decided to pursue merchant banking activity, I estimate a statistical model to explain the possible factors behind this decision. The sample consists of all financial holding companies that filed the FR Y-9CS, *Supplement to the Consolidated Financial Statements for Bank Holding Companies*, in fourth quarter 2001.[9] This form includes an entry for merchant banking investments.

Several variables are used to test various hypotheses about why FHCs decided to pursue merchant banking activity. The first is *SIZE*, defined as the log of the FHC's consolidated assets. The hypothesized effect of this variable is positive, indicating that larger organizations are more likely to pursue merchant banking activities.[10] This reflects the additional capital requirements associated with merchant banking plus the need to devote extra resources to managing the investments held under the merchant banking authority. These requirements may be easier to fulfill for larger organizations.

There are also possibilities for exploiting economies of scope in pursuing merchant banking. FHCs' lending to small and intermediate-sized businesses allows them to have contact with a large number of firms in which they might make equity investments (Fenn, Liang, and Prowse 1997). Such a large customer base could reduce average search and monitoring costs associated with pursuing merchant banking. Therefore, I consider *LOANS*, which is total consolidated loans expressed as a percentage of total consolidated assets, and *C&ILOANS*, defined as the ratio of commercial and industrial loans to total loans on a consolidated basis. These variables are intended to reflect the possibility of synergies between banking organizations' lending activity and the decision to pursue merchant banking. If scope economies are present from these synergies, then I expect a positive effect from these variables on the decision to pursue merchant banking.

To account further for the possibilities of scope economies, I include *NONBANK*, the combined nonbank, nonthrift assets of nonbank subsidiaries of the FHC, less merchant banking assets, expressed as a proportion of consolidated assets. The greater the proportion of these nonbank assets, the greater the potential for exploiting scope economies. Therefore, a positive effect of this variable on the decision to engage in merchant banking would be consistent with holding companies attempting to pursue scope economies with their merchant banking activities. However, this variable could also proxy for the overall complexity of the banking organization. More complex organizations could be more likely to engage in new powers irrespective of the ability to exploit economies of

[9] U.S. bank holding companies that have submitted a declaration to become a financial holding company and whose declaration has been determined to be effective as of the reporting period must file the FR Y-9CS.

[10] Some analysts argue, though, that small FHCs may be expected to pursue merchant banking activities in the future, especially by investing in local companies in which they already have relationships. See Agosta (2001).

scope. Thus, *NONBANK* is only meant to serve as a potential indicator of economies of scope as a factor behind merchant banking.

Finally, to control for both regulatory factors and financial condition, I include *CAPITAL*, the ratio of equity capital to assets. A positive influence from this variable would indicate that institutions with more capital are more likely to engage in merchant banking activities.

Table 1 contains summary statistics for the variables used in this analysis for FHCs with and without merchant banking activities. These statistics include the mean of each variable; the median; and the standard deviation, which is a measure of dispersion. The last column provides a statistical test—the *t* statistic—indicating whether the means from the two groups are statistically different.

Based on the sample means, the average *SIZE* of FHCs in merchant banking is substantially larger than the average *SIZE* of those not reporting any merchant banking, as expected.[11] Organizations pursuing merchant banking report a smaller average proportion of *LOANS* but a higher proportion of *C&ILOANS*. Merchant banking FHCs have significantly greater mean proportions of *NONBANK* assets than those without merchant banking activities, as expected. The mean *CAPITAL* ratios between these two sets of banking organizations are quite close. FHCs with merchant banking report a slightly higher capital ratio, but this difference is not statistically significant.

A similar pattern is found for the median values of these variables. The only exception is with *CAPITAL*. The median capital-to-asset ratio is higher at FHCs with no merchant banking activity.

Calculating means and medians can be informative, but it does not allow for interaction among these related variables. Therefore, I also conduct more formal statistical tests that can estimate simultaneously the marginal effect of each individual variable on the decision to pursue mer-

Table 1
Summary Statistics

	FHCs reporting merchant banking activities			FHCs reporting no merchant banking activities			
Variable	Mean	Median	Standard deviation	Mean	Median	Standard deviation	*t* statistic
SIZE	$189.5	$80.7	$262.1	$2.8	$0.272	$14.7	16.28***
LOANS	44.52	49.21	20.75	61.88	63.89	13.5	5.99***
C&ILOANS	30.36	31.28	11.33	18.31	16.3	11.15	5.17***
NONBANK	27.94	14.36	30.35	1.43	.01	7.23	13.56***
CAPITAL	12.19	7.8	16.69	11.76	9.75	5.84	.31

*** statistical significance at the .01 level.

NOTES: *SIZE* is in billions of dollars; all other data are percentages. *t* statistic is the test statistic for a difference in means test. Data for merchant banking activities are from the Federal Reserve System, *Supplement to the Consolidated Financial Statements for Bank Holding Companies*—FR Y-9CS. *NONBANK* is from the Federal Reserve, *Parent Company Only Financial Statements for Large Bank Holding Companies*—FR Y-9LP, or the Federal Reserve, *Parent Company Only Financial Statements for Small Bank Holding Companies*—FR Y-9SP. Remaining data are from the Federal Reserve, *Consolidated Financial Statements for Bank Holding Companies*—FR Y-9C, where available. The consolidated data for non-Y-9C filers were obtained by summing bank, nonbank, and parent-only data. All data are from fourth quarter 2001.

[11] For ease of exposition, *SIZE* is expressed in dollar rather than logarithmic terms in Table 1.

chant banking, holding the other variables constant. Three specifications, or statistical models, are estimated. Each of these specifications includes *SIZE*, *NONBANK*, and *CAPITAL*. The first of the three models includes *LOANS*, the second includes *C&ILOANS*, and the third includes both of these lending variables. The results from estimating these models are found in Table 2.

In all three models, *SIZE* is positive and statistically significant, as expected, meaning that larger FHCs are more likely to pursue merchant banking, after accounting for other variables in the model. *NONBANK* is positive and significant in the specification including *C&ILOANS* and marginally significant (at the .10 level) in the model that includes both measures of lending. When considering the lending variables, only *C&ILOANS* is statistically significant, and the sign is positive, as expected. Organizations with greater proportions of *C&ILOANS* and *NONBANK* are more likely to pursue merchant banking activities. This could reflect that greater amounts of business lending and other nonbank activities—such as securities underwriting and dealing—may be combined with merchant banking activities to lower average costs. If so, these results provide evidence consistent with the hypothesis that the possibility of exploiting

Table 2
Probit Models of Merchant Banking Activities

Variables	(1)	(2)	(3)
CONSTANT	−7.961***	−8.448***	−7.987***
	(1.334)	(1.136)	(1.377)
SIZE	.435***	.400***	.396***
	(.068)	(.071)	(.071)
LOANS	−.007		−.006
	(.009)		(.010)
C&ILOANS		.024**	.023**
		(.009)	(.009)
NONBANK	.008	.017**	.015*
	(.007)	(.007)	(.008)
CAPITAL	.020	.013	.011
	(.014)	(.014)	(.015)
Log likelihood	−45.191	−42.788	−42.623
Observations with dependent variable equal to 0	541	541	541
Observations with dependent variable equal to 1	24	24	24

*** statistical significance at the .01 level.
** statistical significance at the .05 level.
* statistical significance at the .10 level.

NOTES: Standard errors are in parentheses. A probit regression is estimated where the dependent variable equals one if a financial holding company reported merchant banking assets, zero otherwise. See Greene (1993, 636–42). Data for merchant banking activities are from the Federal Reserve, *Supplement to the Consolidated Financial Statements for Bank Holding Companies*—FR Y-9CS. *NONBANK* is from the Federal Reserve, *Parent Company Only Financial Statements for Large Bank Holding Companies*—FR Y-9LP, or the Federal Reserve, *Parent Company Only Financial Statements for Small Bank Holding Companies*—FR Y-9SP. Remaining data are from the Federal Reserve, *Consolidated Financial Statements for Bank Holding Companies*—FR Y-9C, where available. The consolidated data for non-Y-9C filers were obtained by summing bank, nonbank, and parent-only data. All data are from fourth quarter 2001.

scope economies increases the likelihood of an FHC engaging in merchant banking.

Portfolio Proportions

To identify whether these same factors explain the proportion of merchant banking investments found in an FHC's portfolio, I estimate another statistical model employing the same variables. Now, though, the focus is on explaining the amount of an FHC's merchant banking investments expressed as a proportion of consolidated assets rather than just the decision whether to pursue merchant banking.

Table 3 shows the results from estimating this model using the same three specifications found in Table 2. Once again, *SIZE* is positive and statistically significant in the three specifications. Larger FHCs have greater portfolio proportions of merchant banking investments. Now, though, *CAPITAL* is also positive and significant, indicating that FHCs with greater amounts of capital relative to assets report higher proportions of merchant banking assets. The significance of the capital variable in explaining the amount of merchant banking investments could reflect the capital charge associated with this activity.

Table 3
Tobit Models of the Proportion of Merchant Banking Activities in FHCs' Portfolios

Variables	(1)	(2)	(3)
CONSTANT	−38.571***	−38.163***	−36.809***
	(11.997)	(11.468)	(11.620)
SIZE	1.799**	1.499**	1.489**
	(.725)	(.699)	(.693)
LOANS	−.028		−.018
	(.053)		(.048)
C&ILOANS		.123*	.121*
		(.067)	(.069)
NONBANK	.062	.086*	.078
	(.047)	(.049)	(.051)
CAPITAL	.255***	.230***	.221***
	(.055)	(.064)	(.072)
Log likelihood	−102.188	−99.523	−99.466
Left censored observations	541	541	541
Uncensored observations	24	24	24

*** statistical significance at the .01 level.
** statistical significance at the .05 level.
* statistical significance at the .10 level.

NOTES: Standard errors are in parentheses. The dependent variable is the amount of merchant banking investments, expressed as a percent of consolidated assets. A Tobit model is estimated because a large number of financial holding companies report no merchant banking activity. See Greene (1993, 694–706). Data for merchant banking activities are from the Federal Reserve, *Supplement to the Consolidated Financial Statements for Bank Holding Companies*—FR Y-9CS. *NONBANK* is from the Federal Reserve, *Parent Company Only Financial Statements for Large Bank Holding Companies*—FR Y-9LP, or the Federal Reserve, *Parent Company Only Financial Statements for Small Bank Holding Companies*—FR Y-9SP. Remaining data are from the Federal Reserve, *Consolidated Financial Statements for Bank Holding Companies*—FR Y-9C, where available. The consolidated data for non-Y-9C filers were obtained by summing bank, nonbank, and parent-only data. All data are from fourth quarter 2001.

LOANS is not statistically significant, similar to the models attempting to explain the decision to pursue merchant banking. *C&ILOANS* is positive and marginally significant both in the model that includes only this measure of lending and in the model that uses both measures. *NONBANK* is also positive and marginally significant in the model using *C&ILOANS*. FHCs that report greater proportions of *C&ILOANS* and those for which *NONBANK* activities are more important report greater proportions of merchant banking activities. This result is similar to that of the decision models and suggests a role for scope economies in explaining the portfolio proportions of merchant banking activities.

CONCLUSIONS AND POLICY IMPLICATIONS

U.S. banking organizations have been prohibited from participating in the private equity market except on a limited basis. Recent legislation now allows financial holding companies to take unlimited ownership interests in any type of nonfinancial firm. Results presented here indicate that FHCs that have chosen to pursue merchant banking tend to be larger and are possibly enjoying economies of scope from such activities. When examining the amount of merchant banking activity undertaken, size is again an important factor and so is the level of capital in the banking organization. In addition, variables that proxy for economies of scope—especially the proportion of business loans and nonbank assets—are of some importance in explaining the portfolio proportions of merchant banking activities.

The private equity market has been an important source of financing for some of the most successful firms in recent history. Allowing financial holding companies to participate in this market gives rise to some potentially beneficial outcomes. However, a concern of policymakers is the possible extension of the safety net to cover more activities. While greater capital requirements, firewalls, and enhanced supervision can mitigate this potential extension, it is impossible to contain completely. Overall, though, this deregulation of U.S. financial markets will likely increase the flow of private equity financing and offer financial holding companies greater diversification and earnings opportunities. The result will be a stronger financial system with more avenues for financing entrepreneurial enterprises.

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