Risk Management, Capital Structure and Capital Budgeting in Financial Institutions

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Abstract

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I. Introduction

Banking is a tough juggling act. As we move into the new century and the new regulatory and economic environment, it certainly feels like the number of balls in the air is increasing. By its very nature, banking is an attempt to manage multiple and seemingly opposing needs. Banks stand ready to provide liquidity on demand to depositors through the checking account and to extend credit as well as liquidity to their borrowers through lines of credit (Kashyap, Rajan, and Stein, 1999). Because of these fundamental roles, banks have always been concerned with both solvency and liquidity. Traditionally, banks held capital as a buffer against insolvency, and they held liquid assets – cash and securities – to guard against unexpected withdrawals by depositors or draw downs by borrowers (Saidenberg and Strahan, 1999).

In recent years, risk management at banks has come under increasing scrutiny. Banks and consultants have attempted to sell sophisticated credit risk management systems that can account for borrower risk (e.g. rating) as well as correlations across borrowers in a large portfolio. Regulators have also begun to consider using banks' internal credit models to devise capital adequacy standards (see Basel 1999 Consultative Proposal).

Why do banks bother? In a Modigliani –Miller world, firms generally should not waste resources managing risks because shareholders can do so more efficiently by holding a well-diversified portfolio. Banks (intermediaries) would not exist in such a world, however. Financial market frictions such as moral hazard and adverse selection problems require banks to invest in private information that makes bank loans illiquid (Diamond, 1984). Since these loans are illiquid and thus costly to trade, and since bank

failure itself is costly when their loans incorporate private information, banks have an incentive to avoid failure through a variety of means, including holding a capital buffer of sufficient size, holding enough liquid assets, and engaging in risk management. Froot, Scharfstein and Stein (1993) present a rigorous theoretical analysis of how these frictions can affect banks' capital budgeting decisions. According to their model, active risk management can allow banks to hold less capital and to invest more aggressively in risky and illiquid loans.

In this paper, we test how risk management affects bank capital structure and capital budgeting decisions. Hedging activities in the form of derivatives trading and swap activities - activities that allow banks to manage their market risks - have been shown to influence firm performance and risk (e.g. Brewer, Minton, and Moser, 1999). Our approach is to test whether banks that are better able to trade *credit* risks in the loan sales market experience significant benefits. We find clear evidence that they do. In particular, banks that purchase and sell their loans conserve on capital (per dollar of assets) and hold a smaller buffer of liquid assets. Moreover, banks that are on *both* sides of the loan sales market also experience larger declines in both capital and liquid assets than banks that only sell loans but don't buy them. This is important because it suggests that active rebalancing of credit risk – buying and selling – allows banks to alter their capital structure. Are key results are therefore not driven by reverse causality whereby banks looking to increase their capital and liquidity go out and sell loans.

Consistent with Froot, Scharfstein and Stein (1993), we also find that credit risk management through active loan purchase and sales activity affects capital budgeting. Banks that purchase and sell loans hold more risky loans (C&I loans and commercial real

estate loans), both as a percentage of the balance sheet and as a percentage of the loan portfolio; they also experience higher profits. Again, these results are especially striking because banks that manage their credit risk (buy and sell) experience greater increases in risky lending and profits than banks that merely sell their loans (but don't buy them).

In the next section, we discuss previous studies of risk management and capital budgeting. We then explain our empirical methods and results in Section III. We conclude in Section IV with implications for the likely effects of recent innovations in bank risk management for the availability of bank credit.

II. What We Know about Risk Management

While a significant amount of work has gone into analyzing risk management in banking, the issues are not specific to financial institutions. Non-financial firms also manage their risk exposures extensively, and this in turn affects their capital budgeting decisions, profitability, and value. Allayannis and Weston (1999), for example, examine the use of foreign currency derivatives in a sample of large U.S. nonfinancial firms and report that there is a positive relation between firm value and the use of foreign currency derivatives. Their evidence suggests that hedging raises firm value. Minton and Schrand (1999) use a sample of non-financial firms in 37 industries and find that cash flow volatility leads to internal cash flow shortfalls, which in turn lead to higher costs of capital and forgone investments. Firms able to minimize cash flow volatility seem to be able to invest more.

In contrast to our work, extant studies of bank loan sales have not emphasized the links between risk management, capital structure and capital budgeting. Recent papers

have rather viewed loan sales as a response to regulatory costs (Benveniste and Berger, 1987), as a source of nonlocal bank capital to support local investments (Carlstrom and Samolyk 1995, Pennacchi 1988), as a function of funding costs and risks (Gorton and Pennacchi, 1995), and possibly as a way to diversify (Demsetz 1999).[1]

In a recent paper, Dahiya, Puri, and Saunders (2000) test whether loan sales announcements provide a negative signal about the prospects of the borrower whose loan is sold by a bank. They also examine, in a small sample (19 institutions), the characteristics of loan sellers. They find that stock prices fall at the announcement of a loan sale and that many of the firms whose loans have been sold subsequently go bankrupt. This evidence provides further support for the idea that banks hold private information about their borrowers that makes loan sales difficult due to adverse selection.

Another strand of the banking literature emphasizes the link between the internal capital markets and bank lending is more closely related to our study. For instance, Houston, James, and Marcus (1997) report that lending at banks owned by multi-bank bank holding companies (BHCs) is less subject to changes in cash flow and capital. Jayaratne and Morgan (1999) find that shifts in deposit supply affects lending most at small, unaffiliated banks that do not have access to large internal capital markets. Bank size also seems to allow banks to operate with less capital and, at the same time, engage in more lending. Demsetz and Strahan (1997) show that larger BHCs manage to hold less capital and are able to pursue higher-risk activities, particularly C&I lending. Ackavein, Berger and Humphrey (1997) find that large banks following mergers tend to decrease their capital and increase their lending. There also appears to be evidence that off-balance sheet activities in general and loan sales in particular help banking firms

[1] For a review, See Berger and Udell (1987).

lower their capital levels to avoid regulatory taxes and improve their risk tolerance (Gorton and Haubrich 1990).

The contribution of this paper is to go beyond the internal capital market, as measured by both bank size and access to a multi-bank BHC, and ask whether access to an external capital market – the loan sales market – acts in a complementary way. If banks with access to bigger internal capital markets, big banks and banks in BHCs, hold less capital and lend more, then the same ought to be true for banks with better access to the external market. We test this idea by estimating whether banks that buy and sell loans hold less capital and engage in more risky lending, even after controlling for their size and holding company affiliation as proxies for the effectiveness of the internal capital market. Our empirical model can be viewed as a simple test of Froot, Scharfstein, and Stein's model of risk management in which hedging activities add value by allowing the bank to conserve on costly capital, and by ensuring that sufficient internal funds are available to take advantage of attractive investment opportunities.

III. Empirical Methods and Results

A. Methods and Data

Decision making in banking is not and should not be compartmentalized. Actions that affect capital structure, investment decisions, and portfolio risks are not taken in isolation. It is quite the norm that a single action or trading decision affects all of the above. A bank loan is not purely an investment; this decision also affects risk-based capital requirements, as well as firm risk (through multiple layers of credit, interest rate and other risks). Detailed loan-level data for a broad cross-section of banks is not

available to the researcher. Thus, one cannot observe how a particular loan decision affects the make up of the overall portfolio or its risk and capital implications. We are therefore left to infer implications from aggregate data and aggregate actions.

Our data come from the year-end Reports of Income and Condition (the "Call Report") for all domestic commercial banks in the United States. Data on purchases and sales of C&I loans are only available from 1988 to 1993, so we are forced to restrict our analysis to the period 1989-1993 (1988 is not included since we use lagged values of loan sales/purchases).

As noted above, our purpose is to test how risk management, as proxied by loan sales and purchases, affects a financial institution's capital structure, capital budgeting and profits. We estimate a series of cross-sectional, reduced form regressions that relate measures of capital structure, investments in risky loans, and profits to control variables (designed to capture the extent of a bank's access to an internal capital market) and to measures of the bank's use of the loan sales market to foster risk management. Our dependent variables are the following:

Capital Structure Variables

Capital/Assets ratio = Book value of equity / Assets

Liquidity ratio = Cash + Federal Funds Sold + Securities / Assets

Capital Budgeting Variables

Commercial & Industrial Loans / Assets

Commercial Real Estate Loans / Assets

Commercial & Industrial Loans / Total Loans

Commercial Real Estate Loans / Total Loans

Profit Variable

Return on Equity (ROE) = Net Income / Book value of Equity

To capture the effect of internal capital markets (Jayaratne and Morgan 1999, Demsetz and Strahan 1997, Houston, James and Marcus 1997), we include as regressors indicator variables for banks owned by multi-bank holding companies and multi-state bank holding companies. We also create indicators to capture the effect of firm size based on the bank's total assets. Following Demsetz (1999), we avoid imposing a linear (or log-linear) relationship between size and our dependent variables. Instead, we include indicators for eight asset classes, with firms in asset size greater than $10 billion acting as the omitted category.[2]

We need to be careful to isolate risk management activities in the loan sales market from other reasons why banks might buy or sell loans. For instance, banks may sell (buy) in response to relatively strong (weak) loan demand conditions. Similarly, unusually strong or weak funding conditions may induce loan sales activity. To do this, we create three indicator variables to reflect a bank's activities in the loan sales market: these indicate whether a bank only sells loans, whether it only buys loans, or whether it buys and sells loans, where those firms that do not participate are omitted. We focus our attention on the last category, where demand and funding condition are unlikely to be driving the results.

[2] All of our explanatory variables are predetermined in the sense that they are measured at the end of the year *before* the dependent variables are measured.

In a second set of specifications, we replace the indicator variables with the ratio of lagged *gross* sales (sales + purchases) of loans to total C&I loans, and the ratio of lagged net purchases (purchases - sales) of loans to total C&I loans. The net purchases variable is included to control for loan demand or funding supply effects. The gross loan sales ratio measures how aggressively a bank manages or rebalances its loan portfolio. Our theory suggests that banks that engage more actively in risk management in this way will be able to conserve on capital and operate with fewer liquid assets. At the same time, it will be able to take advantage of more risky lending opportunities without unduly increasing its credit risk.

B. Results

Table 1 provides the descriptive statistics for the data. The sample contains about 60,000 bank/year observations. We dropped observations that contained obviously incorrect data. For example, we dropped observations where the balance sheet ratios exceed 1. In addition, we dropped the profit variable (ROE) when book value of equity was negative. We also deleted large outliers. For the loan sales variables, we dropped cases where the net sales ratio fell outside the range of +1/-1 and where the gross sales ratio fell outside the range 0/1. (These observations are not dropped in the indicator variable specification.) We also dropped banks with ROE above 20% or below –20%.

We also report mean characteristics in Table 1 for banks that buy loans, sell loans, buy and sell loans, or do neither. These simple comparisons suggest that banks that buy and sell loans have the lowest capital-asset and liquid assets ratios and the highest levels of risky loans, either as a percentage of the balance sheet or as a percentage of total loans. They also have the highest profits. On its face, these comparisons support the idea that

active risk management via the external loan sales market adds value to the banks by allowing them to conserve on capital and liquid assets and engage more in the activity that generates value – risky lending. Of course, the banks that buy and sell loans are also larger and more likely to affiliate with multi-bank and multi-state BHCs than the other banks. Thus, these banks also seem to have access to a better (or at least bigger) internal capital market. We now control for this effect in our regressions.

Table 2 reports our regression results for the capital-to-assets ratio. Both BHC affiliation and increasing bank size seem to decrease the capital-asset ratio, suggesting that larger internal capital markets do allow banks to operate with a smaller cushion against insolvency. In contrast, and somewhat to our surprise, however, banks affiliated with multi-state BHCs do not seem to hold less capital. Our two measures of risk management both suggest that banks can conserve on capital by actively managing their credit risk through loan sales. The Buy-Sell variables are significant (both economically and statistically) in all years; they suggest that banks that manage their credit risk by both buying and selling loans have capital-asset ratios 1.5 to 1.9 percentage points lower than banks that do not participate at all in the market. Perhaps more important, the banks that appear to rebalance their risk through both purchase and sale have capital-asset ratios about 0.3 to 0.4 percentage points lower than banks that just sell loans.

In our second specification, we find that the gross loan sales variable enters the regression with a negative and significant coefficient in all years, lending further support to our earlier results with the indicator variables. Banks that rebalance their loan portfolios by both buying and selling loans aggresively have lower capital. We can draw this inference because we hold constant the *net* loans purchased in the regression. The

coefficients suggest that a one standard deviation increase in the gross loan sales variable is associated with a decline in the capital-asset ratio of about 0.4 percentage points.

The results for the cash+securities-to-assets ratio provide further support to our expectations that firms that engage in loan trading can afford to reduce their buffer of liquid assets. Once again, as shown in Table 3, control variables perform as expected -- large banks affiliated with BHCs (especially multi-state BHCs) hold fewer liquid assets. Moreoever, we again find that banks that both buy and sell loans hold the lowest level of liquid assets, although the contrast between these banks and the sell-only banks is less striking than in the capital equation. In the specification using gross loan sales, however, we see clearly that banks with higher gross sales hold lower levels of liquid assets on the balance sheet. For instance, a one standard deviation increase in gross loan sales leads to a decline in cash+securities-to-assets of about 1.3 percentage points.

Overall, Tables 2 and 3 suggest that risk management via the loan sales market affects banks capital structure decisions. In Tables 4-7, we show that credit risk management also affects capital budgeting decisions -- banks that use the loan sales market to manage credit risk invest more. In Tables 4 and 5, we use the ratio of C&I loans and commercial real estate loans to total assets, and in Tables 6 and 7 we scale the two categories of risky loans by total loans. The results, after controlling for size and BHC affiliation, provide resounding support for our hypothesis.

Looking closely at Table 4 (C&I loans per dollar of assets), we find that, at a minimum, C&I loans-to-assets is three percentage points higher on average at banks that buy and sell loans compared to banks that do not participate in the loan sales market. Moreover, the buy and sell banks hold C&I loans-to-assets ratio about 1 to 1.5 percentage

points higher than the banks that sell only, and about 2 to 3 percentage points higher than banks that buy only. The specifications with gross loan sales suggest in every year that banks doing more rebalancing of their loan portfolio invest more. In particular, a one standard deviation increase in gross loan sales is associated with an increase in the C&I loans-to-assets ratio of 0.2 to 0.5 percentage points.

Tables 6 and 7 report the loan portfolio implications, and the results are even more dramatic. In the case of C&I loans, we observe as low as 3.6% and as high as 6.3% increases in holdings as compared to the absence of loan sales group. Comparing the loan sellers with the buy and sell group, we find the latter banks hold 0.8% to 1.5% higher levels of C&I loans. These results are echoed by the gross sales ratio regressions. Overall, these results suggest that increased risk management allows banks to invest more aggressively in risky lending.

C. If Risk Management is so good, why doesn't everyone do it?

We have shown that banks that manage their risks appear better off. They can operate with less capital and hold fewer liquid assets on their balance sheet. Both of these effects should raise profits. We have also shown that banks with more active risk management engage in more risky lending – lending to business – rather than safe lending (consumer and residential real estate).

What explains the banks that don't manage their risks through the loan sales market? One explanation is that loans with private information are hard to sell at arm's length unless a bank has established a strong reputation over time in this market. In fact, the recent results by Dahiya, Puri, and Saunders are consistent with this view. Alternatively, there may be poorly managed banks that have been able to persist in the

U.S. due to regulations that reduce competitive pressures and government subsidies (see Jayaratne and Strahan, 1998 and Berger, Kashyap and Scalise, 1995).

To test whether risk management really is a good thing, our last set of regressions looks at the relationship between loan sales and bank profits (Table 8). Consistent with all of the previous results, we find that the risk managers – the banks that both buy and sell loans or the banks that generate a greater gross volume of loans sales and purchases – have higher profits. The buy and sell group, for example, earn 2.8 to 3.1 percentage points higher ROE than banks that do not participate in loan sales at all. In addition, in every year the buy and sell banks earn more than either the sell only or buy only banks. In the gross loan sales specification, we find that a standard deviation increase in gross sales leads to an increase in ROE of 0.6 to 1.2 percentage points.

IV. Conclusion

We have long been intrigued by the mechanisms through which banks seem to cater to many and opposing needs. Liquidity, profitability, and solvency goals seem to cross paths and by and large contradict one another. The extant empirical literature for non-financial firms indicates that active risk management provides a way to manage liquidity and cash flow and achieve higher investment.

We have considered the case of the loan sales market as one tool (that we can measure empirically) which banks use to align their risk management, capital budgeting and capital structure goals. The focus in the banking literature has been on how banks use their internal capital markets. Our results support these studies, since we find that bigger banks affiliated with BHCs enjoy lower capital ratios and higher lending. We

extend these results by showing that access and aggresive use of an external capital market – the loan sales market – leads to the same effects. Loan sales activity allows a bank to hold less capital, invest less in low-yield high-liquidity assets, while at the same time increase its holdings of higher-risk higher-return assets. The results are particularly strong for those banks that actively buy and sell loans. We also find profitability increases as loan sales and purchases are conducted at a bank.

We conclude that the banks that engage in both buying and selling of loans are better able to take advantage of positive NPV investment opportunities, as they are able to increase their C&I and CRE loans, are better able to manage with less liquidity and less capital. The buying and selling of loans at the same time seems to allow banks to be more flexible and more aggressive. The flexibility reduces the burden of carrying more capital, and lower yield higher liquidity assets; and the aggressiveness allows them to increase their higher risk and higher yield assets. Clearly there is more to risk management than loan sales. In recent years we have seen banks trade credit risks using credit derivatives, and we have seen the emergence of sophisticated credit risk measurement systems that take account of correlations across borrowers in different industries, countries and market segments. Our results suggest that these developments are healthy ones that will increase the availability of bank credit. Rigorous testing of the effects of these new technologies will have to wait, however, for more time to pass and more data to be collected.

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Table 1
Summary Statistics

		Full Sample Statistics		***Buy Only***	***Sell Only***	***Buy and Sell***	***Neither Buy nor Sell***
Variable	*Obs.*	*Mean*	*Std. Dev.*	*Mean*	*Mean*	*Mean*	*Mean*
Capital / Assets	60,126	0.092	0.038	0.092	0.088	0.082	0.102
Securities / Assets	60,622	0.429	0.163	0.462	0.405	0.391	0.471
C&I Loans / Assets	60,549	0.101	0.089	0.089	0.105	0.121	0.077
CRE / Assets	60,623	0.090	0.084	0.084	0.095	0.106	0.070
C&I Loans / Total Loans	59,838	0.185	0.139	0.177	0.185	0.210	0.156
CRE / Total Loans	60,181	0.159	0.129	0.159	0.161	0.180	0.134
ROE	59,039	0.056	0.045	0.055	0.051	0.056	0.051
Total Assets (Millions of $s)	60,624	278	2,669	114	143	559	101
In a Multi-bank Holding Company?	60,624	0.313	-	0.346	0.219	0.473	0.174
In a Multi-state Holding Company?	60,624	0.124	-	0.113	0.091	0.182	0.081
Sell loans?	59,868	0.188	-				
Buy loans?	59,868	0.117	-				
Buy and sell loans?	59,868	0.370	-				
Ratio of lagged gross sales to C&I loans	51,366	0.175	0.238				
Ratio of lagged net purchases to C&I Loans	53,851	-0.014	0.248				

Table 2
Dependant Variable: Capital to Asset Ratio

	1989		1990		1991		1992		1993	
	Indicator	Gross sales	Indicator	Gross sales	Indicator	Gross sales	Indicator	Gross sales	Indicator	Gross sales
Constant	0.077**	0.070**	0.072**	0.066**	0.076**	0.069**	0.079**	0.075**	0.087**	0.081**
	(0.002)	(0.002)	(0.002)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Multi-bank holding company	-0.006**	-0.007**	-0.005**	-0.006**	-0.005**	-0.006**	-0.005**	-0.006**	-0.004**	-0.005**
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Multi-state bank holding company	0.001	1.85e-4	0.003**	0.001	0.003*	0.001	0.004**	0.001	0.003*	3.08e-4
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Assets < $10 mil	0.044**	0.044**	0.050**	0.048**	0.042**	0.040**	0.043**	0.038**	0.042**	0.041**
	(0.003)	(0.004)	(0.003)	(0.004)	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)	(0.005)
$10 mil < Assets < $25 mil	0.028**	0.028**	0.033**	0.033**	0.030**	0.030**	0.027**	0.025**	0.023**	0.023**
	(0.002)	(0.002)	(0.002)	(0.003)	(0.002)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)
$25 mil < Assets < $50 mil	0.024**	0.025**	0.029**	0.029**	0.026**	0.026**	0.024**	0.022**	0.021**	0.021**
	(0.002)	(0.002)	(0.002)	(0.003)	(0.002)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)
$50 mil < Assets < $100 mil	0.022**	0.022**	0.026**	0.025**	0.022**	0.023**	0.020**	0.019**	0.018**	0.018**
	(0.002)	(0.002)	(0.002)	(0.003)	(0.002)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)
$100 mil < Assets < $500 mil	0.017**	0.015**	0.021**	0.019**	0.017**	0.016**	0.015**	0.013**	0.012**	0.012**
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
$500 mil < Assets < $1 bil	0.011**	0.008**	0.015**	0.012**	0.012**	0.009**	0.010**	0.006**	0.006**	0.004*
	(0.002)	(0.002)	(0.002)	(0.003)	(0.002)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)
$1 bil < Assets < $5 bil	0.009**	0.006*	0.013**	0.010**	0.011**	0.008*	0.009**	0.007*	0.009**	0.008**
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.002)	(0.003)
$5 bil < Assets < $10 bil	0.007**	0.003	0.008**	0.006*	0.005*	0.003	0.009**	0.005	0.008*	0.007
	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)
Sell loans	-0.015**	-	-0.014**	-	-0.013**	-	-0.010**	-	-0.012*	-
	(0.001)		(0.001)		(0.001)		(0.001)		(0.001)	
Buy loans	-0.008**	-	-0.009**	-	-0.008**	-	-0.007**	-	-0.009**	-
	(0.001)		(0.001)		(0.001)		(0.001)		(0.001)	
Buy and sell loans	-0.019**	-	-0.018**	-	-0.016**	-	-0.014**	-	-0.015**	-
	(0.001)		(0.001)		(0.001)		(0.001)		(0.001)	

Ratio of lagged net purchases to C&I loans	-	0.005** (0.001)	-	0.004** (0.001)	-	0.004** (0.001)	-	1.70e-4 (0.005)	-	0.004** (0.001)
Ratio of lagged gross sales to C&I loans	-	-0.017** (0.001)	-	-0.017** (0.001)	-	-0.014** (0.001)	-	-0.013** (0.004)	-	-0.013** (0.001)
R^2	0.121	0.082	0.116	0.084	0.098	0.074	0.088	0.064	0.089	0.068
N	12,654	11,059	12,277	10,677	11,932	10,302	11,536	9,927	11,092	9,350

**Significant at the 1% level * Significant at the 5% level . Assets above $10 billion is the omitted category for the size indicator variables. Banks that neither buy nor sell loans constitute the omitted category for the sell and buy indicator variables.

Table 3
Dependant Variable: Ratio of Securities to Assets

	1989		1990		1991		1992		1993	
	Indicator	Gross sales	Indicator	Gross sales	Indicator	Gross sales	Indicator	Gross sales	Indicator	Gross sales
Constant	0.275**	0.266**	0.289**	0.276**	0.293**	0.287**	0.322**	0.312**	0.345**	0.330**
	(0.017)	(0.022)	(0.016)	(0.020)	(0.017)	(0.020)	(0.018)	(0.019)	(0.018)	(0.021)
Multi-bank holding company	0.001	-0.009*	0.004	-0.004	0.005	-0.006	0.002	-0.009*	0.001	-0.008
	(0.003)	(0.004)	(0.003)	(0.004)	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Multi-state bank holding company	-0.031**	-0.035**	-0.036**	-0.038**	-0.023**	-0.026**	-0.023**	-0.030**	-0.017**	-0.023**
	(0.005)	(0.005)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Assets < $10 mil	0.247**	0.229**	0.247**	0.230**	0.257**	0.226**	0.234**	0.212**	0.221**	0.209**
	(0.018)	(0.023)	(0.018)	(0.022)	(0.019)	(0.022)	(0.020)	(0.022)	(0.020)	(0.025)
$10 mil < Assets < $25 mil	0.212**	0.202**	0.199**	0.197**	0.201**	0.188**	0.174**	0.169**	0.158**	0.162**
	(0.017)	(0.022)	(0.017)	(0.020)	(0.017)	(0.020)	(0.018)	(0.019)	(0.018)	(0.022)
$25 mil < Assets < $50 mil	0.192**	0.182**	0.181**	0.177**	0.180**	0.167**	0.155**	0.149**	0.138**	0.140**
	(0.017)	(0.022)	(0.016)	(0.020)	(0.017)	(0.020)	(0.018)	(0.019)	(0.018)	(0.021)
$50 mil < Assets < $100 mil	0.179**	0.170**	0.169**	0.164**	0.175**	0.159**	0.152**	0.143**	0.129**	0.127**
	(0.017)	(0.022)	(0.016)	(0.020)	(0.016)	(0.020)	(0.018)	(0.019)	(0.018)	(0.021)
$100 mil < Assets < $500 mil	0.139**	0.131**	0.129**	0.124**	0.137**	0.122**	0.120**	0.113**	0.107**	0.105**
	(0.016)	(0.022)	(0.016)	(0.020)	(0.017)	(0.020)	(0.017)	(0.019)	(0.017)	(0.021)
$500 mil < Assets < $1 bil	0.077**	0.067**	0.068**	0.062**	0.086**	0.066**	0.087**	0.073**	0.070**	0.074**
	(0.019)	(0.023)	(0.018)	(0.021)	(0.019)	(0.021)	(0.019)	(0.020)	(0.020)	(0.023)
$1 bil < Assets < $5 bil	0.066**	0.050*	0.062**	0.045*	0.073**	0.051*	0.081**	0.063**	0.065**	0.061
	(0.018)	(0.023)	(0.018)	(0.021)	(0.019)	(0.021)	(0.020)	(0.020)	(0.020)	(0.023)
$5 bil < Assets < $10 bil	0.009	-0.007	0.006	-0.017	0.002	-0.018	0.009	0.005	-0.012	-0.007
	(0.020)	(0.024)	(0.021)	(0.024)	(0.021)	(0.024)	(0.023)	(0.024)	(0.025)	(0.027)
Sell loans	-0.056**	-	-0.060**	-	-0.065**	-	-0.060**	-	-0.060**	-
	(0.004)		(0.004)		(0.004)		(0.004)		(0.004)	
Buy loans	-0.002	-	0.001	-	-0.004	-	-0.004	-	-0.009	-
	(0.005)		(0.005)		(0.005)		(0.005)		(0.005)	
Buy and sell loans	-0.063**	-	-0.057**	-	-0.066**	-	-0.064**	-	-0.069**	-
	(0.003)		(0.004)		(0.004)		(0.004)		(0.004)	

Ratio of lagged net purchases to C&I loans	-	0. 076** (0.006)	-	0.087** (0.006)	-	0.067** (0.007)	-	0.056** (0.007)	-	0.060** (0.007)
Ratio of lagged gross sales to C&I loans	-	-0.053** (0.006)	-	-0.047** (0.006)	-	-0.057** (0.006)	-	-0.056** (0.006)	-	-0.068** (0.006)
R^2	0.125	0.110	0.124	0.111	0.115	0.091	0.094	0.073	0.092	0.072
N	12,722	11,070	12,348	10,686	12,009	10,311	11,617	9,937	11,170	9,362

**Significant at the 1% level * Significant at the 5% level . Assets above $10 billion is the omitted category for the size indicator variables. Banks that neither buy nor sell loans constitute the omitted category for the sell and buy indicator variables.

Table 4
Dependant Variable: Ratio of C&I Loans to Assets

	1989		1990		1991		1992		1993	
	Indicator	Gross sales	Indicator	Gross sales	Indicator	Gross sales	Indicator	Gross sales	Indicator	Gross sales
Constant	0.186**	0.205**	0.187**	0.193**	0.176**	0.191**	0.173**	0.197**	0.149**	0.170**
	(0.017)	(0.022)	(0.015)	(0.016)	(0.013)	(0.016)	(0.017)	(0.019)	(0.013)	(0.016)
Multi-bank holding company	-0.004*	0.005	-0.005*	0.006	-0.007**	0.004	-0.006**	0.003	-0.005**	0.003
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Multi-state bank holding company	-0.007*	-0.005**	-0.004	-0.005	-2.97e-4	-0.001	-0.002	-0.005	-0.003	-0.004
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Assets < $10 mil	-0.121**	-0.114**	-0.129**	-0.113**	-0.129**	-0.115**	-0.130**	-0.134**	-0.108**	-0.109**
	(0.017)	(0.022)	(0.015)	(0.017)	(0.014)	(0.017)	(0.017)	(0.019)	(0.014)	(0.017)
$10 mil < Assets < $25 mil	-0.108**	-0.106**	-0.111**	-0.099**	-0.110**	-0.106**	-0.113**	-0.121**	-0.091**	-0.095**
	(0.017)	(0.022)	(0.015)	(0.016)	(0.013)	(0.016)	(0.017)	(0.019)	(0.013)	(0.016)
$25 mil < Assets < $50 mil	-0.096**	-0.096**	-0.102**	-0.092**	-0.101**	-0.098**	-0.102**	-0.111**	-0.080**	-0.086**
	(0.017)	(0.022)	(0.015)	(0.016)	(0.013)	(0.016)	(0.017)	(0.019)	(0.013)	(0.016)
$50 mil < Assets < $100 mil	-0.090**	-0.091**	-0.099**	-0.089**	-0.098**	-0.096**	-0.099**	-0.110**	-0.078**	-0.084**
	(0.017)	(0.022)	(0.015)	(0.016)	(0.013)	(0.016)	(0.017)	(0.019)	(0.013)	(0.016)
$100 mil < Assets < $500 mil	-0.074**	-0.070**	-0.084**	-0.071**	-0.084**	-0.079**	-0.085**	-0.093**	-0.067**	-0.073**
	(0.017)	(0.022)	(0.015)	(0.016)	(0.013)	(0.016)	(0.017)	(0.019)	(0.013)	(0.016)
$500 mil < Assets < $1 bil	-0.041*	-0.039	-0.063**	-0.044*	-0.069**	-0.060**	-0.069**	-0.074**	-0.053**	-0.055**
	(0.019)	(0.023)	(0.016)	(0.017)	(0.014)	(0.017)	(0.018)	(0.020)	(0.014)	(0.017)
$1 bil < Assets < $5 bil	-0.036*	-0.022	-0.047**	-0.030	-0.049**	-0.035*	-0.053**	-0.045*	-0.040**	-0.041*
	(0.018)	(0.023)	(0.016)	(0.017)	(0.015)	(0.017)	(0.018)	(0.020)	(0.015)	(0.018)
$5 bil < Assets < $10 bil	-0.011	0.010	-0.036	-0.018	-0.039*	-0.015	-0.045*	-0.051*	-0.029	-0.031
	(0.023)	(0.027)	(0.020)	(0.021)	(0.017)	(0.019)	(0.020)	(0.022)	(0.017)	(0.019)
Sell loans	0.029**	-	0.024**	-	0.027**	-	0.025**	-	0.023**	-
	(0.002)		(0.002)		(0.002)		(0.002)		(0.002)	
Buy loans	0.009**	-	0.007**	-	0.016**	-	0.013**	-	0.009**	-
	(0.003)		(0.002)		(0.002)		(0.002)		(0.002)	
Buy and sell loans	0.045**	-	0.039**	-	0.042**	-	0.036**	-	0.031**	-
	(0.002)		(0.002)		(0.002)		(0.002)		(0.002)	

Ratio of lagged net purchases to C&I loans	-	-0.023** (0.004)	-	-0.026** (0.003)	-	-0.019** (0.004)	-	-0.018** (0.004)	-	-0.017** (0.003)
Ratio of lagged gross sales to C&I loans	-	0.018** (0.004)	-	0.015** (0.003)	-	0.018** (0.003)	-	0.022** (0.003)	-	0.009** (0.003)
R^2	0.084	0.048	0.076	0.042	0.086	0.045	0.085	0.054	0.066	0.033
N	12,706	11,057	12,341	10,680	12,003	10,307	11,612	9,933	11,165	9,357

**Significant at the 1% level * Significant at the 5% level . Assets above $10 billion is the omitted category for the size indicator variables. Banks that neither buy nor sell loans constitute the omitted category for the sell and buy indicator variables.

Table 5
Dependant Variable: Ratio of CRE to Assets

	1989		1990		1991		1992		1993	
	Indicator	Gross sales	Indicator	Gross sales	Indicator	Gross sales	Indicator	Gross sales	Indicator	Gross sales
Constant	0.082**	0.092**	0.101**	0.120**	0.085**	0.101**	0.077**	0.095**	0.071**	0.089**
	(0.010)	(0.014)	(0.010)	(0.013)	(0.009)	(0.012)	(0.008)	(0.009)	(0.007)	(0.008)
Multi-bank holding company	1.71e-4	-1.28e-4	-0.004*	-0.004*	-0.007**	-0.005*	-0.008**	-0.004*	-0.008**	-0.005*
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Multi-state bank holding company	-0.001	0.004	-0.001	0.003	2.37E-4	-3.64e-4	-0.003	-0.001	-0.008**	-0.008**
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Assets < $10 mil	-0.058**	-0.061**	-0.082**	-0.094**	-0.070**	-0.077**	-0.061**	-0.069**	-0.055**	-0.061**
	(0.010)	(0.014)	(0.010)	(0.013)	(0.009)	(0.012)	(0.008)	(0.009)	(0.007)	(0.009)
$10 mil < Assets < $25 mil	-0.040**	-0.043**	-0.058**	-0.070**	-0.044**	-0.052**	-0.036**	-0.044**	-0.032**	-0.041**
	(0.010)	(0.014)	(0.010)	(0.013)	(0.009)	(0.012)	(0.008)	(0.009)	(0.007)	(0.008)
$25 mil < Assets < $50 mil	-0.017	-0.020	-0.035**	-0.047**	-0.017	-0.024*	-0.007	-0.015	4.01e-4	-0.008
	(0.010)	(0.014)	(0.010)	(0.013)	(0.009)	(0.012)	(0.008)	(0.009)	(0.007)	(0.008)
$50 mil < Assets < $100 mil	0.004	1.24e-4	-0.014	-0.027*	0.003	-0.005	0.014	0.006	0.022	0.015
	(0.010)	(0.014)	(0.010)	(0.013)	(0.009)	(0.012)	(0.008)	(0.009)	(0.007)	(0.008)
$100 mil < Assets < $500 mil	0.023*	0.023	0.010	0.001	0.026**	0.020	0.036**	0.029**	0.043**	0.037**
	(0.010)	(0.014)	(0.010)	(0.013)	(0.009)	(0.012)	(0.008)	(0.009)	(0.007)	(0.008)
$500 mil < Assets < $1 bil	0.045**	0.045**	0.025*	0.022	0.042**	0.046**	0.046**	0.047**	0.046**	0.050**
	(0.012)	(0.015)	(0.011)	(0.014)	(0.010)	(0.013)	(0.009)	(0.010s)	(0.008)	(0.009)
$1 bil < Assets < $5 bil	0.028**	0.037**	0.016	0.016	0.026*	0.031*	0.027**	0.030**	0.034**	0.035**
	(0.011)	(0.014)	(0.011)	(0.013)	(0.010)	(0.013)	(0.009)	(0.010)	(0.008)	(0.009)
$5 bil < Assets < $10 bil	0.020	0.029	-0.005	-0.009**	0.015	0.027	0.024	0.028	0.027*	0.034*
	(0.013)	(0.016)	(0.013)	(0.016)	(0.013)	(0.015)	(0.014)	(0.016)	(0.013)	(0.015)
Sell loans	0.018**	-	0.020**	-	0.022**	-	0.021**	-	0.028**	-
	(0.002)		(0.002)		(0.002)		(0.002)		(0.002)	
Buy loans	0.004*	-	0.007**	-	0.010**	-	0.016**	-	0.016**	-
	(0.002)		(0.002)		(0.002)		(0.003)		(0.003)	
Buy and sell loans	0.029**	-	0.028**	-	0.029**	-	0.030**	-	0.031**	-
	(0.002)		(0.002)		(0.002)		(0.002)		(0.002)	
Ratio of lagged net purchases to C&I loans	-	-0.016**	-	-0.022*	-	-0.014**	-	-0.013**	-	-0.015**
		(0.003)		(0.004)		(0.004)		(0.004)		(0.004)

Ratio of lagged gross sales to C&I loans	-	0.034** (0.003)	-	0.036** (0.003)	-	0.030** (0.003)	-	0.025** (0.004)	-	0.029** (0.004)
R^2	0.147	0.141	0.148	0.146	0.147	0.134	0.132	0.122	0.131	0.121
N	12,722	11,070	12,348	10,686	12,009	10,311	11,618	9,937	11,170	9,362

**Significant at the 1% level * Significant at the 5% level . Assets above $10 billion is the omitted category for the size indicator variables. Banks that neither buy nor sell loans constitute the omitted category for the sell and buy indicator variables.

Table 6
Dependant Variable: Ratio of C&I Loans To Total Loans

	1989		1990		1991		1992		1993	
	Indicator	Gross sales	Indicator	Gross sales	Indicator	Gross sales	Indicator	Gross sales	Indicator	Gross sales
Constant	0.314**	0.340**	0.321**	0.328**	0.307**	0.325**	0.319**	0.349**	0.279**	0.307**
	(0.024)	(0.031)	(0.025)	(0.025)	(0.020)	(0.022)	(0.026)	(0.027)	(0.022)	(0.026)
Multi-bank holding company	-0.005	0.008*	-0.006	0.010**	-0.012**	0.003	-0.009**	0.004	-0.010**	0.002
	(0.003)	(0.004)	(0.003)	(0.004)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)
Multi-state bank holding company	-0.022**	-0.020**	-0.011*	-0.018**	-0.005	-0.009	-0.011*	-0.019**	-0.007	-0.011*
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Assets < $10 mil	-0.172**	-0.160**	-0.185**	-0.163**	-0.197**	-0.174**	-0.205**	-0.205**	-0.166**	-0.163**
	(0.025)	(0.032)	(0.026)	(0.026)	(0.020)	(0.023)	(0.026)	(0.028)	(0.022)	(0.027)
$10 mil < Assets < $25 mil	-0.156**	-0.150**	-0.164**	-0.146**	-0.168**	-0.157**	-0.188**	-0.192**	-0.154**	-0.154**
	(0.024)	(0.032)	(0.025)	(0.026)	(0.020)	(0.022)	(0.026)	(0.028)	(0.022)	(0.026)
$25 mil < Assets < $50 mil	-0.139**	-0.137**	-0.153**	-0.138**	-0.155**	-0.146**	-0.175**	-0.181**	-0.138**	-0.142**
	(0.024)	(0.032)	(0.025)	(0.025)	(0.020)	(0.022)	(0.026)	(0.027)	(0.022)	(0.026)
$50 mil < Assets < $100 mil	-0.131**	-0.131**	-0.149**	-0.136**	-0.150**	-0.143**	-0.167**	-0.177**	-0.135**	-0.141**
	(0.024)	(0.031)	(0.025)	(0.025)	(0.020)	(0.022)	(0.026)	(0.027)	(0.022)	(0.026)
$100 mil < Assets < $500 mil	-0.114**	-0.106**	-0.132**	-0.113**	-0.134**	-0.122**	-0.148**	-0.154**	-0.118**	-0.124**
	(0.024)	(0.031)	(0.025)	(0.025)	(0.020)	(0.022)	(0.025)	(0.027)	(0.021)	(0.026)
$500 mil < Assets < $1 bil	-0.098**	-0.089**	-0.111**	-0.087**	-0.120**	-0.103**	-0.120**	-0.128**	-0.096**	-0.096**
	(0.026)	(0.033)	(0.027)	(0.027)	(0.021)	(0.023)	(0.028)	(0.029)	(0.023)	(0.027)
$1 bil < Assets < $5 bil	-0.075**	-0.054	-0.092**	-0.069*	-0.091**	-0.066**	-0.102**	-0.086**	-0.083**	-0.081**
	(0.026)	(0.033)	(0.026)	(0.027)	(0.022)	(0.024)	(0.027)	(0.029)	(0.023)	(0.028)
$5 bil < Assets < $10 bil	-0.049	-0.015	-0.075*	-0.049	-0.068*	-0.025	-0.094**	-0.095**	-0.059	-0.055
	(0.032)	(0.037)	(0.032)	(0.033)	(0.029)	(0.031)	(0.031)	(0.032)	(0.030)	(0.034)
Sell loans	0.035**	-	0.022**	-	0.031**	-	0.027**	-	0.027**	-
	(0.004)		(0.004)		(0.004)		(0.003)		(0.004)	
Buy loans	0.022**	-	0.015**	-	0.030**	-	0.023**	-	0.017**	-
	(0.004)		(0.004)		(0.004)		(0.004)		(0.004)	
Buy and sell loans	0.063**	-	0.051**	-	0.055**	-	0.045**	-	0.036**	-
	(0.003)		(0.003)		(0.003)		(0.003)		(0.003)	

Ratio of lagged net purchases to C&I loans	-	-0.010 (0.006)	-	-0.016** (0.006)	-	-0.015* (0.006)	-	-0.011 (0.006)	-	-0.009 (0.006)
Ratio of lagged gross sales to C&I loans	-	0.019** (0.006)	-	0.014* (0.006)	-	0.015** (0.005)	-	0.024** (0.006)	-	0.001 (0.005)
R^2	0.055	0.024	0.045	0.020	0.054	0.025	0.051	0.032	0.037	0.019
N	12,594	11,016	12,232	10,645	11,903	10,287	11,506	9,917	11,051	9,330

**Significant at the 1% level * Significant at the 5% level . Assets above $10 billion is the omitted category for the size indicator variables. Banks that neither buy nor sell loans constitute the omitted category for the sell and buy indicator variables.

Table 7
Dependant Variable: Ratio of CRE To Total Loans

	1989		1990		1991		1992		1993	
	Indicator	Gross sales	Indicator	Gross sales	Indicator	Gross sales	Indicator	Gross sales	Indicator	Gross sales
Constant	0.139**	0.154**	0.169**	0.197**	0.146**	0.170**	0.142**	0.168**	0.138**	0.162**
	(0.013)	(0.018)	(0.013)	(0.017)	(0.013)	(0.016)	(0.012)	(0.012)	(0.010)	(0.011)
Multi-bank holding company	0.005	0.002	-0.002	-0.004	-0.006*	-0.006	-0.011**	-0.007*	-0.012**	-0.010**
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)
Multi-state bank holding company	-0.014**	-0.008	-0.014**	-0.009*	-0.008	-0.010*	-0.013**	-0.011*	-0.023**	-0.023**
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.005)	(0.004)	(0.005)
Assets < $10 mil	-0.084**	-0.092**	-0.124**	-0.144**	-0.102**	-0.115**	-0.098**	-0.111**	-0.093**	-0.104**
	(0.014)	(0.018)	(0.013)	(0.017)	(0.013)	(0.017)	(0.012)	(0.013)	(0.011)	(0.013)
$10 mil < Assets < $25 mil	-0.055**	-0.062**	-0.081**	-0.101**	-0.061**	-0.075**	-0.056**	-0.069**	-0.055**	-0.066**
	(0.013)	(0.018)	(0.013)	(0.017)	(0.013)	(0.016)	(0.012)	(0.013)	(0.010)	(0.012)
$25 mil < Assets < $50 mil	-0.018	-0.024	-0.044**	-0.064**	-0.015	-0.028	-0.006	-0.018	0.002	-0.008
	(0.013)	(0.018)	(0.013)	(0.017)	(0.013)	(0.016)	(0.012)	(0.013)	(0.010)	(0.012)
$50 mil < Assets < $100 mil	0.017	0.010	-0.008	-0.029	0.019	0.004	0.031**	0.019	0.040**	0.031**
	(0.013)	(0.018)	(0.013)	(0.017)	(0.013)	(0.016)	(0.011)	(0.013)	(0.010)	(0.012)
$100 mil < Assets < $500 mil	0.040**	0.039*	0.023	0.008	0.050**	0.040*	0.063**	0.053**	0.075**	0.068**
	(0.013)	(0.018)	(0.013)	(0.017)	(0.013)	(0.016)	(0.012)	(0.012)	(0.010)	(0.011)
$500 mil < Assets < $1 bil	0.056**	0.057**	0.030*	0.025	0.065**	0.069**	0.078**	0.077**	0.078**	0.088**
	(0.015)	(0.019)	(0.015)	(0.018)	(0.014)	(0.018)	(0.014)	(0.014)	(0.012)	(0.013)
$1 bil < Assets < $5 bil	0.036*	0.048*	0.020	0.017	0.041**	0.048**	0.046**	0.049**	0.058**	0.062**
	(0.014)	(0.019)	(0.014)	(0.017)	(0.014)	(0.017)	(0.013)	(0.013)	(0.011)	(0.013)
$5 bil < Assets < $10 bil	0.021	0.034	-0.012	-0.021	0.022	0.036	0.032	0.036	0.032	0.043*
	(0.018)	(0.022)	(0.018)	(0.021)	(0.017)	(0.021)	(0.018)	(0.020)	(0.017)	(0.018)
Sell loans	0.019**	-	0.019**	-	0.021**	-	0.021**	-	0.032**	-
	(0.003)		(0.003)		(0.003)		(0.003)		(0.004)	
Buy loans	0.011**	-	0.013**	-	0.018**	-	0.029**	-	0.029**	-
	(0.003)		(0.004)		(0.004)		(0.004)		(0.004)	
Buy and sell loans	0.038**	-	0.036**	-	0.035**	-	0.037**	-	0.037**	-
	(0.003)		(0.003)		(0.003)		(0.003)		(0.003)	

Ratio of lagged net purchases to C&I loans	-	-0.004 (0.005)	-	-0.011 (0.006)	-	-0.006 (0.006)	-	-0.005 (0.006)	-	-0.064 (0.006)
Ratio of lagged gross sales to C&I loans	-	0.047** (0.005)	-	0.048** (0.005)	-	0.037** (0.005)	-	0.029** (0.005)	-	0.033** (0.006)
R^2	0.134	0.131	0.139	0.139	0.139	0.134	0.137	0.131	0.137	0.134
N	12,654	11,069	12,273	10,682	11,932	10,310	11,529	9,931	11,087	9,358

**Significant at the 1% level * Significant at the 5% level . Assets above $10 billion is the omitted category for the size indicator variables. Banks that neither buy nor sell loans constitute the omitted category for the sell and buy indicator variables.

Table 8
Dependant Variable: Ratio of Net Income To Equity

	1989		1990		1991		1992		1993	
	Indicator	Gross sales	Indicator	Gross sales	Indicator	Gross sales	Indicator	Gross sales	Indicator	Gross sales
Constant	0.079**	0.077**	0.039**	0.028	0.045**	0.050**	0.066**	0.069**	0.069**	0.069**
	(0.006)	(0.007)	(0.013)	(0.015)	(0.009)	(0.012)	(0.006)	(0.006)	(0.005)	(0.006)
Multi-bank holding company	0.002*	0.003**	0.006**	0.006**	0.007**	0.007**	0.008**	0.008**	0.008**	0.007**
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Multi-state bank holding company	0.004**	0.006**	0.001	0.002	-0.003	-0.003	-0.005**	-0.004*	-0.002	-0.001
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Assets < $10 mil	-0.039**	-0.037**	-0.002	0.010	-0.012	-0.018	-0.020**	-0.024**	-0.026**	-0.026**
	(0.006)	(0.008)	(0.013)	(0.016)	(0.010)	(0.013)	(0.006)	(0.007)	(0.005)	(0.007)
$10 mil < Assets < $25 mil	-0.032**	-0.029**	4.99e-5	0.011	-0.005	-0.010	-0.010	-0.012	-0.012*	-0.011
	(0.006)	(0.007)	(0.013)	(0.015)	(0.009)	(0.012)	(0.006)	(0.006)	(0.005)	(0.006)
$25 mil < Assets < $50 mil	-0.026**	-0.024**	0.009	0.020	-3.42e-4	-0.005	-0.006	-0.009	-0.007	-0.006
	(0.006)	(0.007)	(0.013)	(0.015)	(0.009)	(0.012)	(0.006)	(0.006)	(0.005)	(0.006)
$50 mil < Assets < $100 mil	-0.021**	-0.019*	0.013	0.025	0.004	-0.001	-0.004	-0.007	-0.003	-0.003
	(0.006)	(0.007)	(0.013)	(0.015)	(0.009)	(0.012)	(0.006)	(0.006)	(0.005)	(0.006)
$100 mil < Assets < $500 mil	-0.014*	-0.012	0.018	0.029	0.007	0.003	-0.003	-0.006	2.18e-4	2.47e-4
	(0.006)	(0.007)	(0.013)	(0.015)	(0.009)	(0.012)	(0.006)	(0.006)	(0.005)	(0.006)
$500 mil < Assets < $1 bil	-0.013*	-0.011	0.015	0.030	0.003	-0.003	-0.005	-0.009	-3.13e-4	-0.001
	(0.006)	(0.008)	(0.013)	(0.016)	(0.010)	(0.013)	(0.006)	(0.007)	(0.005)	(0.007)
$1 bil < Assets < $5 bil	-0.013*	-0.011	0.005	0.016	-0.003	-0.007	-0.009	-0.012	-0.004	-0.003
	(0.006)	(0.008)	(0.013)	(0.016)	(0.010)	(0.013)	(0.006)	(0.007)	(0.005)	(0.007)
$5 bil < Assets < $10 bil	-0.015	-0.016	0.002	0.018	0.007	-2.52e-4	0.004	0.003	0.008	0.003
	(0.008)	(0.009)	(0.015)	(0.018)	(0.012)	(0.014)	(0.008)	(0.009)	(0.008)	(0.009)
Sell loans	0.002*	-	0.003*	-	0.002	-	-0.002	-	-3.65e-4	-
	(0.001)		(0.001)		(0.001)		(0.001)		(0.001)	
Buy loans	-0.001**	-	0.002	-	0.003*	-	7.13e-4	-	3.21e-4	-
	(0.001)		(0.001)		(0.001)		(0.001)		(0.001)	
Buy and sell loans	0.037**	-	0.003**	-	0.003**	-	0.002	-	0.003**	-
	(0.001)		(0.001)		(0.001)		(0.001)		(0.001)	

Ratio of lagged net purchases to C&I loans	-	-0.002 (0.002)	-	-0.001 (0.002)	-	0.007** (0.002)	-	0.005* (0.002)	-	3.10e-4 (0.002)
Ratio of lagged gross sales to C&I loans	-	0.004* (0.002)	-	0.006** (0.002)	-	0.005** (0.002)	-	0.001 (0.002)	-	0.003 (0.002)
R^2	0.040	0.041	0.034	0.036	0.022	0.023	0.017	0.014	0.034	0.029
N	12,273	10,700	11,977	10,376	11,684	10,051	11,412	9,776	10,963	9,214

**Significant at the 1% level * Significant at the 5% level . Assets above $10 billion is the omitted category for the size indicator variables. Banks that neither buy nor sell loans constitute the omitted category for the sell and buy indicator variables.