# A CONTRACTING-THEORY INTERPRETATION OF THE ORIGINS OF FEDERAL DEPOSIT INSURANCE

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## ABSTRACT

Conventional wisdom holds that the enactment of federal deposit insurance helped small rural banks at the expense of large urban institutions. This paper uses asymmetric information, agency-cost paradigms from corporate finance theory and data on bank stock prices to show how deposit insurance could and did help stockholders of large banks. The broadening stockholder distribution of large banks during the stock market bubble of the late 1920s undermined the efficiency of double liability provisions in controlling incentive conflict among large bank stakeholders. Federal deposit insurance restored depositor confidence by asking government officials to take over and bond the task of monitoring managerial performance and solvency at U.S. banks.

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# A CONTRACTING-THEORY INTERPRETATION OF THE ORIGINS OF FEDERAL DEPOSIT INSURANCE

When Congress enacted federal deposit insurance in 1933, scholars understood it to be a tool for helping small banks and for restoring the liquidity of bank deposits. Still, Calomiris and White (1994, p. 164) note that by late 1931, representatives of urban constituencies in "eastern states that had not supported deposit insurance for decades introduced federal deposit insurance bills." These authors argue that the severity of losses experienced in the early 1930s caused this switch, energizing small depositors into a political force strong enough to overcome unvarying large-bank opposition to deposit insurance. In their view, "small, rural banks and lower-income individuals (with small deposit accounts) were clear winners, while large, big-city banks, wealthy depositors and depositors in failed banks were losers."

It was of course recognized at the outset that deposit insurance could also have incentive effects. In particular, Emerson (1934) explained that deposit insurance would intensify risk-taking incentives at banks unless it was properly priced and principles of sound banking were consistently enforced. In the late 1960s, scholars began to argue that deposit insurance was mispriced (Scott and Mayer, 1971) and had in fact fueled a massive reduction in stockholder-contributed bank capital (Pelzman, 1970). But it was not until the onset of the 1989 FSLIC debacle that the profession came to appreciate the many and perverse ways that this substitution of subsidized government guarantees for stockholder-contributed capital at insured institutions shifted risks from owners to taxpayers.

This paper shows that the rebalancing of Congressional support in the 1930s may have been assisted by changes in the funding-cost benefits that deposit insurance could offer stockholders in a substantial number of large urban banks. The analysis uses theories of regulatory competition and financial contracting under information asymmetry to

explain these benefits and to challenge the Calomiris-White characterization of the initial beneficiaries of federal deposit insurance.

Evidence of stockholder benefits at large banks was first developed in Wilson and Kane (1997). Wilson and Kane show that at large national banks the longstanding contracting protocol in which stockholders attached contingent personal guarantees to bank debt began to unravel in the late 1920s. This protocol dictated wind-up rules for insolvent banks that --at national banks and at banks chartered by all but ten states-- extended the liability of shareholders for bank debt beyond the value of the assets owned by the firm.

The predominant wind-up rule divided stockholder-contributed capital into separate par and surplus accounts. Par capital (sometimes called "legal capital") is the minimum amount of capital (PAR) that the jurisdiction chartering a bank dictates that the stockholders maintain as on-balance-sheet equity. Surplus capital (SUR) is the sum of additional paid-in capital and undistributed profits that have not been allocated to the par account. Stockholder in national banks and in state-chartered banks in most extended-liability states were subject to "double liability" on the par value of their stock. Double liability means that, to cover a liquidating bank's unpaid debts, the receiver could personally assess each stockholder for an amount up to its pro rata share of the bank's par capital. For stock held in a "street name," the nominee would be assessed and incur the cost of collecting the reimbursement it was due from the ultimate owner.

Winton (1993) analyzes the agency costs that extended-liability shareholders and corporate creditors face when there is asymmetric information about shareholders' wealth. His model clarifies that contingent liability would affect investor incentives to own and trade bank stock and would influence stockholders' incentive to monitor bank managers. These incentives vary over time with five factors: the condition of the bank , the level of shareholder wealth, the shareholder's proportionate position in the bank, the probity of controlling interests, and the degree of asymmetry in information about shareholder wealth. In turn, the value of stock shares in a double-liability bank should rise and fall with the strength of monitoring incentives.

Winton's model implies that, if we could observe agency costs, variation in these costs would prove more important at large banks than at small ones. First, other things equal, a large bank's asset base may be expected to be more complex and therefore harder for outsiders to value. Second, other things equal, a large bank may be expected to have a more diffuse stockholder list than a smaller bank. At small banks during the days of double liability, loan business tended to be local, ownership tended to be highly concentrated, and bank stock could not be traded anonymously.

Winton's analysis supports the hypothesis that, as the stockholder distribution and geographic reach of large U.S. banks broadened during the stock-market bubble of the 1920s, double liability might have ceased to be an efficient way to control incentive conflict among large-bank stakeholders. A web of empirical evidence is woven in this paper that buttresses this inference.

Standard explanations of the banking crisis of the 1930s focus on pressure generated by customer deposit runs. As a byproduct, this paper serves to rationalize customer runs at large banks by portraying them in part as a response to a prior silent run by large-block shareholders from bank stock.

Winton's model lets one interpret the banking crisis of the 1930s as evidencing a loss of customer confidence in the value of the services stockholders performed in monitoring managerial performance and solvency at large banks. This interpretation in no way challenges Friedman and Schwartz' (1963) conclusion that the Federal Reserve ought to have used its discount window more aggressively or the idea that deposit insurance enhanced bank liquidity. Our contracting-theory perspective similarly complements Gorton's (1988) argument that timid Federal Reserve lending could not substitute effectively for the triage activities performed by private bank clearinghouses during the 1863-1914 National Banking era. Besides adding liquidity to the economy, aggressive Federal Reserve lending would have imposed extensive monitoring and triage duties on Fed officials in order to exercise the due diligence implicit in any responsible lending decision.

The contracting-theory perspective also clarifies that the discount window and federal deposit-insurance guarantees are not redundant policy instruments. The discount

window serves to guarantee the liquidity of deposits only at economically solvent banks. Deposit insurance serves to bond the contractual performance even of the rest of the banking system. It does this by imposing a credible and nonlinear penalty structure on the government for failures in monitoring bank safety and soundness (Black, Miller and Posner, 1978).

## I. Contracting Perspectives on the Nature of Banking

Recent banking research has injected asymmetric-information contracting-theory perspectives into theories of managing repeat-business customer relationships (Hodgman, 1963; Kane and Malkiel, 1965), delegated monitoring (Diamond, 1984), and deposit insurance (Merton and Bodie, 1994; Kane, 1995). The result has been to fashion an asymmetric-information contracting theory of banking and banking policy.

The guiding principle of principal-agent contracting theory is that banks and regulators are drawn to contracts that give all counterparties an incentive to use scarce information and resources efficiently (Jensen and Meckling, 1975). An important application of the theory is to explain how over time and space the character of the contracting protocols used by banks and other financial institutions adapt to variation in informational transparency, managerial and financial technology, and regulation. The penetration of contracting perspectives into banking theory helps to explain why and how risk-based regulatory restraints on capital structure have come to displace liquidity requirements as the central policy tools for controlling bank risk.

Traditional banking theory saw a bank simply as a financial intermediary (Gurley and Shaw, 1960). Contracting theory portrays bank activities far more generally. A bank becomes an ever-adapting exercise in financial engineering: an amorphous information and deal-making factory.

In their back offices, banking factories collect information, verify information, store information, process information, manage information, and transmit information for their own and customer accounts over various internal and external communications networks. Middle-office personnel use the warehoused information to design and price a

series of incentive-compatible contracting protocols. Each protocol records the fact that the bank and customer agree on the explicit terms of a financial deal and assigns specific and enforceable rights and duties to the counterparties. Finally, front-office personnel negotiate deals and exchange contracts and services with customers.

Corporate-finance theory emphasizes that every contract establishes a principal-agent relationship between the counterparties. Agency costs are costs that arise whenever a contractual agent does not fully share the objectives of its principal. Agency costs have three components:

1. costs that agent incurs to bond its willingness to perform its duties under the contract;
2. costs that the principal incurs to monitor and enforce contractual performance;
3. residual opportunities for nonperformance that are not controlled by the contract.

The central proposition in agency theory is that counterparties have an incentive to minimize agency costs. These costs are minimized when the marginal costs of the bonding, monitoring, and enforcement controls put in place equal the marginal benefit of the residual nonperformance opportunities that these controls rein in.

In banking activities, principal-agent relationships and resulting agency costs are thickly layered. When a bank is acting simply as a financial intermediary, it simultaneously agrees to act as an agent in deposit contracts and to act as a principal in requiring its borrowers to repay their loans. When a bank securitizes a pool of loans which it continues to service, it enters into a three-way contract. It becomes an agent both for the investors in the pool and for the borrowers whose payments it collects. Similarly, when a bank enhances the credit of a bond issuer, it incurs an agency obligation to the bondholders and becomes a principal to the issuer.

Capital contributed by stockholders bonds a wider range of a bank's agency obligations than is expressly covered by federal deposit-insurance guarantees. But conjectural implicit federal guarantees pass through an indirect blessing to most of an insured bank's other contractual obligations. The value of an institution's conjectural guarantees grows with its regional or national economic importance and with its political

clout. This is because authorities have strong incentives to go slow in disciplining or closing an important bank. The productivity of a bank's efforts to sidetrack disciplinary action allows a bank's counterparties to count on having time to unwind at low cost their uninsured positions in a troubled bank.

To reduce the agency costs occasioned by implicit guarantees was a principal objective of the FDIC Improvement Act of 1991. This Act imposes specific duties of prompt corrective action and least-cost insolvency regulation on federal banking regulators.

## II. Regression Evidence of Long-Lasting Contracting-Theory Disequilibrium in the 1930s

Winton's model clarifies that extended liability imposes contingent obligations that bond the obligation of large-block shareholders to monitor bank managers on behalf of other stakeholders. The net value of the extended liability bond (E) to stockholders may be interpreted as the difference between compensation paid for their monitoring and loss-control services and the costs they incur in performing and bonding these services. The gross compensation declines whenever creditors perceive stockholder monitoring services to decline in quality or reliability. The net compensation also varies with anything that affects the costs engendered by the contract.

Increases in stockholder distribution make it harder for other stakeholders to assess the value of contingent stockholder support. An increase in the breadth of stockholder distribution makes it more costly for all stakeholders to use a bank's stockholder list to monitor the wealth or stock trading of the bank's owners. Monitoring costs are increased because ownership becomes less concentrated and stock trading becomes more anonymous. On the other hand, maintaining narrow ownership to enhance stock-trading transparency and stockholder incentives to monitor managerial activity imposes costs on bank shareholders and may decrease a bank's intangible assets by limiting the bank's ability to pursue its growth opportunities.

It would be a mistake to assume that market forces require E to equal zero at all times. As long as stockholders were legally forced to post the double-liability bond, the costs to stockholders of supporting the bond could rise above the benefits to depositors.

On the other hand, the premium paid for monitoring services could exceed stockholder performance and bonding costs for two reasons. Large-block shareholders could develop private information and they could bond their monitoring performance with highly illiquid assets that they knew wouldn't have to be liquidated or borrowed against unless the bank became distressed. Research by Calomiris and Kahn (1991) shows how the issuance of demandable debt would reinforce large-block stockholders' monitoring incentives by making it easy for depositors to penalize these stockholders nonlinearly as soon as customers began to lose confidence in the bank or its policies.

Using quarterly data and the statistical market-value accounting model, Wilson and Kane (1997) have estimated the average net monitoring premium E that stockholders earned through the contingent-liability bond at double-liability banks during 1927-1933.

Charts 1 and 2 summarize the outcome of their chief regression experiment. At each date, the model regresses the value of the bank's market capitalization against the reported values of par capital, surplus capital, and lagged market capitalization. The underlying intuition is that markets price stock using accounting data and unspecified other information. The influence of nonaccounting information is proxied by the lagged value of the endogenous variable. Using this model, the t-value of the difference between the regression coefficients for the predetermined variables PAR and SUR serves to establish whether E differs significantly from zero.

The data set is cross-classified by size and wind-up rules. Banks are partitioned into two size classes, then subdivided into three contracting-theory environments: limited-liability state banks (LLSB) as a control group, extended-liability state banks (DLSB), and double-liability national banks (DLNB). The data are assembled from the William B. Dana Company's Bank and Quotation Record.

The authors find that, for all classes, the sign and statistical significance of the net monitoring premium fluctuated greatly from quarter to quarter. The Charts display results for a partition in which the threshold between large and small banks is set at $2 million in the book value of equity. However, the qualitative difference in the sign and statistical significance of E proved robust to substantial increases and decreases in the size threshold.

The time series of cross-section regression coefficients indicates that double liability seldom offered statistically significant net benefits or burdens to stockholders of small banks at any time during 1927-1933. This implies that depositors felt that they could readily monitor stockholders and managers of small banks. Through 1930.2, similar results emerge even for large state-chartered banks.

But large national banks showed a different pattern. From 1927.2 through 1929.2, stockholders at large national banks earned a positive average monitoring premium. During the next four quarters, the premium declined to insignificance. Then, from mid-1930 on, the estimated monitoring premium became predominantly negative at large banks in all extended-liability jurisdictions. The frequency and significance of negative values proved greater for large national banks than for large institutions chartered in extended-liability states.

Contracting theory suggests that we may interpret these estimates as follows. During the late 1920s, large-block stockholders at most institutions earned only a normal return on their bonding services; however, stockholders at large national banks were able to extract an expected net premium for bonding their monitoring services. As the depression and the banking crisis of the 1930s unfolded, the inherited extended-liability contracting structure became inefficient. In this period of reduced stockholder concentration, increased bank transparency, and continuing negative shocks to shareholder wealth, the benefits of double liability declined sharply at many banks. The gross monitoring premium offered could no longer cover the costs to bank stockholders of maintaining the bond. These costs consisted of limitations on acceptable sources of capital that reduced profit growth and constraints on share liquidity. Both of these costs were functions of trading restrictions that served to protect creditors and wealthy shareholders from being victimized by transactions that transferred stock to persons who could not be expected to cover their share of contingent obligations.

## III. Supporting Evidence

This paper subjects the contracting-theory explanation for deposit-insurance enactment to three sensitivity tests. The first and second tests are event studies. These

tests seek to ascertain whether and how federal banking legislation enacted in 1927 and 1933 affected stock-price appreciation at a sample of New York City banks. Because both pieces of legislation contained provisions that promised to impact other channels of projected bank profitability, our tests partition the samples in ways that could identify a putative legislative effect on the size of the net double-liability premium.

A major aim of the Banking Act of 1933 was to compartmentalize commercial banking from investment banking. Its relevance for the double liability premium is that the Act established the Federal Deposit Insurance Corporation (FDIC) and initiated a process of phasing out double liability for national banks.

The major effect of the Banking Act of 1927 was to constrain interstate banking to the detriment of large banks. This legislation promised to affect the double liability premium by removing a longstanding $100 floor on the par value of national-bank stock shares. This provision authorized national banks to split their stock to increase share liquidity and to broaden the distribution of ownership by making shares in the bank more affordable to smaller investors.

The Dana Company's Bank and Quotation Record is the principal source of the data analyzed in Charts 1 and 2. This source collected dealer bid and asked prices on bank stock once a month. The time aggregation entailed in using monthly data undermines our ability to isolate the effects of specific information flows. In intervals as rich in economic surprises and policy proposals as Franklin Roosevelt's first few months in office, it is unreasonable to suppose that we can disentangle from monthly movements in bank-stock prices much information about the benefits of a single piece of legislation.

To confront this difficulty, we focus our event-study tests on weekly data reported in the Commercial and Financial Chronicle used by Calomiris and Wilson (1996). This source gives weekly stock quotes for 51 New York City (NYC) banks. The sample includes 9 large and 9 small national banks and 22 large and 11 small banks chartered by the double-liability state of New York.

A third branch of our analysis directly examines the evolution of shareholder concentration at NYC banks during 1927-1933. We begin by confirming that many of the banks in our 1933 NYC sample previously pursued the opportunity to lower their par

value by undertaking a stock split. We next analyze, in event time, the price behavior these stocks show before and after they split. We show that each bank's event-week response in 1933 correlates positively with the percentage change in its stockholder distribution. We also use an ad hoc regression model to test hypotheses about potential determinants of the breadth of stockholder distribution in the NYC bank sample.

Controlling for four other influences (charter status, surplus capital, the number of shares outstanding, and a positive time trend), our regression estimates show that the number of shareholders increased substantially with the par capital of a bank. This finding indicates that ownership concentration and the reliability of stockholder monitoring services declined most sharply at the particular banks whose shareholders faced the largest aggregate contingent liability. The greater increase in stockholder distribution at large banks is consistent with the hypothesis of a "silent run" by informed large-block stockholders. Far from using their place in the governance process to discipline bank managers on behalf of other stakeholders, informed bank stockholders took advantage of the increased liquidity and anonymity of trading in their lower-priced stock shares to reduce their personal exposure to what they may have projected to be liquidation losses.

A. Event-Study Analysis of the Impact of the Banking Act of 1933

We begin by conducting event-study tests of the effects that the enactment of the Banking Act of 1933 had on the stocks of different classes of national and state banks. These tests --which use weekly data for New York City Banks-- produce results consistent with the hypothesis that stockholders of large national banks benefited more from the passage of the Act than shareholders of either small national banks or institutions chartered by New York State. It is not unreasonable to interpret this pattern of benefits as giving evidence about the value of jettisoning double liability for large-bank stockholders. This is because rational investors should expect that the capitalized value of benefits conveyed by the Act's prohibition on explicit interest on interbank and corporate demand-deposit balances at large banks to be short-lived (i.e., eaten away over time by competitive pressure to provide implicit interest) and more than offset by the capitalized value of opportunity losses rooted in the restrictions that the Act placed on the investment-banking activities these banks could undertake.

Table I reports event-study experiments using bank stock-price data covering the 51 weeks that the stock exchanges were open in 1933. Although the evidential value of the experiment reported in Panel A is reduced by a low $R^2$, the result supports the hypothesis that the elimination of double liability benefited stockholders in large national banks and in double-liability state banks. The model fitted in this panel introduces cross-sectional and event-time dummies into the standard two-parameter market model:

$$R_{it} = a + bR_{Mt} + u_{it}^{R}. \qquad (1)$$

In this model, a and b represent the market-model intercept and slope, respectively. Other symbols are defined as follows:

$R_{it}$: the percentage price appreciation observed in time interval t for the average of the bid and asked prices quoted for bank i's stock;

$R_{Mt}$: the percentage price appreciation recorded in time interval t for the Dow Jones industrial average;

$u_{it}^{R}$: the residual return on bank i's stock in time interval t.

Inference focuses on the significance of coefficients $c_{jk}$ found for the product of particular bank-classification dummy variables ($D_{jk}$) and a zero-one event-time dummy ($D_T$). The bank-classification dummies are zero except that they become unity when a bank's "size index" is j and its "charter index" is k. Index j is either L (large) or S (small). The charter index k takes on either the value N (for national banks) or DL (for banks chartered by the double-liability state of to New York. The event-time dummy $D_T$ is zero except that it assumes the value of unity for observations occurring in the week that includes June 12, 1933 --the date on which Franklin Roosevelt signed the Banking Act into law.

Coefficient estimates support our contention that the Act benefited large national banks more than other banks. The coefficients of $D_{LN}\cdot D_w$ and $D_{LS}\cdot D_w$ --$c_{LNw}$ and $c_{LSw}$-- are positive and significant. This supports the lobbying-pressure hypothesis that such banking reform legislation could not pass unless it offered sufficient benefits to win the support of large banks. Also, $c_{LNw}$ is greater than $c_{LSw}$, and both values are well above the coefficients for smaller banks. The smaller coefficients for small banks have mixed signs and do not differ significantly from zero.

We interpret $c_{LSw}$ as benchmarking the value conferred on large double-liability banks by federal deposit insurance and deposit-rate restrictions minus the value of investment-banking opportunities surrendered (see Kroszner and Rajan, 1997) plus the value to state-chartered large banks of whatever pressure the Act generated on authorities in New York State to jettison double liability. Assuming that the capitalized value of deposit-rate restrictions did not exceed the value of lost opportunities for investment-banking, the difference ($c_{LNw}$ - $c_{LSw}$) represents a conservative estimate of the incremental value stockholders of large national banks received from enacting an end to double liability. The standard error of this difference is 4.83 percent, which implies a t-value of 1.65.

Panel B reports coefficients found for the event-week dummy at individual banks when a seemingly unrelated regression (SUR) representation of equation (1) is fitted to individual banks. To allow error-covariance estimation to occur without deleting the weeks that any bank has missing data, it seemed appropriate to restrict the SUR run to banks that reported stock prices for all 51 trading weeks. Software limitations dictated our fitting the SUR model separately for large banks and small banks. Estimates of event-week responses differ greatly between the two size classes. In the large-bank subsample, only one institution failed to show a positive event-week response. More than half of these positive responses were statistically significant at large banks. On the other hand, only two small banks showed a substantial event-week effect and no small bank showed a statistically significant effect at all.

B. Event-Study Analysis of the Impact of the Banking Act of 1927

A 1924 report of the House banking committee (U.S. Congress, 1924) described the legislative push behind the bill that evolved into the 1927 Act. The goal was to "put new life into the national banking system (p. 4)" by responding to regulatory competition from state banking legislatures:

> ... legislation is urgently needed at this time ... to permit national banks effectively to carry on the banking business and ... to protect them in so far as Congress can from the inroads of competition from State member banks of the Federal Reserve System which are operating under charter powers granted by the State legislatures (p. 1).

Table II investigates the hypothesis that the Banking Act of 1927 significantly changed the return-generating process for both national and state banks in our NYC sample. In 1927, more individual NYC banks existed than in 1933. Our experiments introduce time-varying coefficients into the two-parameter market model (1). We divide the 51 observable weeks of 1927 into three segments: the pre-event weeks, t=1, ..., 12; the event week in which the McFadden Act was passed, t=13; and the post-event weeks, t=14, ..., 51. We define the following dummy variables:

$D_{(-)}$ = unity for t=1, ..., 12 and is zero otherwise;

$D_{(0)}$= unity in the event week 13 and is zero otherwise;

$D_{(+)}$= unity for t=14, ..., 51 and is zero otherwise.

Table II fits the following model:

$$R_{it} = a_{(-)}D_{(-)}+a_{(+)}D_{(+)}+[c_{LN}D_{LNi}+c_{LS}D_{LSi}+c_{SN}D_{SNi}+c_{SS}D_{SSi}]D_{(0)}+[b_{(-)}D_{(-)}+b_{(+)}(D_{(+)}+D_{(0)})]R_{Mt}+v_{it}^{R}. \quad (2)$$

Coefficient estimates for $a_{(-)}$and $a_{(+)}$ and $b_{(-)}$ and $b_{(+)}$ indicate that the market-model parameters increased following the passage of the McFadden Act. However, only the shift in a is statistically significant. The deflection of returns in the event week itself proves insignificant. The c coefficients measure the average event-week effects experienced by banks in different size-charter classes. Event-week benefits prove positive for small state banks, while benefits are negative for the other three combinations of charter and size. However, the t-values for size-charter effects are insignificant and so are coefficient differences across these classes.

Although the $R^2$ is low, the significant increase in the market-model intercept implies that the Banking Act of 1927 supported an increase in expected weekly returns on bank stock. The increase in market-model slope, though insignificant, intimates that the Act may have increased the sensitivity of bank stock to market movements. As long as the stock market promised to expand, increased sensitivity would be beneficial for bank stockholders.

Tests using the SUR model found a significant event-week response (positive) for only one of 20 large national banks: Garfield National Bank. SUR runs for 31 large state banks showed no significant responses and a preponderance of negative values.

Because the Banking Act of 1927 contains many provisions, these event-study results cannot be directly nor predominantly attributed to the value of national banks' newfound freedom to split their stock shares. It is, however, possible to test three imbedded hypotheses. If the freedom was valuable, we would expect inside shareholders in national banks valuable to use this freedom. The other hypotheses are that splitting a bank's stock would widen a stock's distribution and importantly affect the post-event trajectory of a split stock's price. We test these hypotheses in the next section.

C. Analysis of Post-1927 Stock Splits at NYC Banks

Table III shows that 28 of the 51 members of the 1933 NYC sample went on to split their stock. All but four of the splits occurred in 1929. Only three splits occurred after the October 1929 stock-market crash. The Times Square Bank is the only split that occurs during the 1930s. This 1930 split is also the only case where the quoted or market stock price does not lie well above the pre-split par value.

Some banks allowed their stockholders to trade at both the old and the new par values during a transition period. Table IV uses one such case to clarify that dealer spreads on the two classes of stocks were not equivalent. Spreads prove proportionately much wider on the lower-par class. The considerable widening of spreads on split shares is a consistent and intriguing phenomenon in the 1933 NYC sample. We intend to investigate this phenomenon in another paper. We believe that it reflects dealer concern that insiders might have been selling on adverse information.

The price range in which a stock trades is believed to influence the mix of investors holding the stock. in particular, lowering the range is expected to make it easier for low-wealth investors to trade round lots, increasing: (1) trading liquidity, (2) the number of stockholders overall (Lamoreux and Poon, 1987) and (3) the ratio of household to institutional investors (McNichols and Dravid, 1990).

Although subject to survival bias, our data can test the hypothesis of increased distribution directly. We presume that increased distribution lowers the size of large-block holdings and the wealth of the average shareholder. On this presumption, affirming this increased-distribution hypothesis adds to the case for inferring a breakdown of the double-liability contracting protocol at large banks. Signaling theorists (Grinblatt, Masulis, and

Titman, 1984) hypothesize that splits convey a positive signal about insiders' private information in which the size of the split ratio conveys favorable information about future earnings. Our data prove inconsistent with this view.

Chart 3A plots the cumulative average appreciation in bid and asked prices during an event-time window that starts 30 weeks before, and ends 30 weeks after the NYC-sample stock splits. To control for market movements, Chart 3B uses each bank's 61-week market-model beta to calculate a beta-adjusted cumulative deviation from the price appreciation recorded for the Dow-Jones Average during each week of the event window. Chart 3C cumulates the appreciation relative to the Dow-Jones Average itself. All three charts show a marked decline in stock performance after a split.

Insiders were selling to dealers at the bid and outsiders were buying at the asked. This pattern of results indicates selling pressure. On average, the inside information that motivated the 1928-30 NYC bank splits was negative rather than positive in character.

This finding suggests the hypothesis that the 1928-30 splits in bank stock may be usefully interpreted as initial public offerings (IPOs) of closely held firms. Although an IPO might be motivated simply by large-block shareholders' desire to diversify an inefficient exposure to a concentrated set of risks, insider concern about this exposure is bound to be stronger when they possess adverse private information. A corporation's stock is typically found to perform poorly after an IPO (Ritter, 1991) or secondary offering (Lee, 1997). However, for double-liability banks, Winton's model adds a second reinforcing explanation for the stock price decline. After a split, the value of stockholder monitoring services to other stakeholders (which is imbedded in bank stock price) would fall for two reasons. First, Winton shows that, when large-block shareholders reduce their position, the probability that managers are effectively monitored and the quality of managerial performance would both decline. Second, as owners become more numerous and less wealthy on average, the cost of monitoring their wealth and trading activity rises and creditors encounter a fall in the expected value of the aggregate assets being posted as a bond.

Table V compares the frequency in 1926 and 1930 of the par values chosen by a panel of banks in different size-charter classes. The panel includes all banks in "major"

cities (listed in our Appendix) for which the Bank and Quotation Record reported a par value throughout the period 1926-1933. The average par value continued to decline in each category during 1930-33, but post-1930 effects on relative frequencies are negligible.

In 1926, three points stand out. First, a number of national banks enjoyed an exemption from the $100 minimum value. Exemptions prove much more frequent for small banks than for large ones. It is reasonable to presume that exemptions could be negotiated for state banks that were seeking to convert to a national charter and perhaps also for banks that were specifically organized to serve a small market. Second, within size classes, national banks have a smaller mean par value than state banks do. The difference turns on the different relative frequencies of $50 and $100 observations. Third, the tails of the relative-frequency distributions for large banks with different charters differ much more than those for small ones. All three points support the hypothesis that the $100 minimum was a more burdensome restraint for large national banks in 1926 than it was for smaller ones.

Between yearend 1926 and 1930, the frequency of very low par values increased for all classes of banks. This lowered the mean par value and raised the standard deviation observed for each category. Mann-Whitney and Kolmogov-Smirnov tests show that the 1926 and 1930 distributions differ significantly. The greater frequency of the $50 value for state banks suggests that a $50 minimum remained a charter requirement in several states. In both charter classes, a higher percentage of large banks moves away from the $100 par value than small banks. Within size categories, more national banks than state-chartered banks moved off the $100 par value.

Data on the number of shares (NSHARES) and number of individual shareholders (NINDIV) were collected from Moody's Banking and Finance Manuals bank by bank and year by year. Table VI reports regression estimates of a triangular model of the yearend levels of NSHARES and NINDIV. These equations introduce the control variable $(\text{SHARE PRICE})_{it}$ which equals the yearend market price of a single share on bank i. Table IV fits the following two equations to an irregularly reporting panel of the 1933 sample of NYC banks:

$$NINDIV_{it}=a_0+a_1(t-1926)+a_2D_{N,i}+a_3(SHARE\ PRICE_{it})+a_4SUR_{it}+a_5PAR_{it}+a_6(NSHARES_{it})+V_{it}^{I}. \quad (3)$$

$$NSHARES_{it}=b_0+b_1(t-1926)+b_2D_{N,1}+b_3(SHARE\ PRICE_{it})+b_4SUR_{it}+b_5PAR_{it}+V_{it}^{S}. \quad (4)$$

Panel data are incomplete because the number of shareholders is not reported by each bank in every year. The usable sample averages about 32 banks per year.

The regression estimates show that increases in stockholder distribution are driven chiefly by the size of the bank's surplus and par capital and (reflecting the influence of stock splits) by the number of outstanding shares. The number of shares and the number of stockholders each increase with a bank's par capital (PAR) and fall with the surplus position (SUR).

The significance of the difference in the PAR and SUR coefficients may be clarified by a thought experiment. When a bank's SUR grows while its PAR does not, it is building capital through retained earnings and may have little need to raise outside capital. When a bank's PAR grows, it has decided to build capital by issuing additional shares of stock. Coefficient differences imply that, whenever PAR and the double-liability bond grow while holding the value of book-value equity fixed, large-block shareholders would prefer to enlist new shareholders. The regressions estimate that the direct and indirect increase in shareholders attributable to a $1 million reallocation of capital from surplus to the par account would exceed 900.

A complementary way to investigate the interaction of par, size, and regulatory competition in broadening stockholder distribution is to contrast the behavior of splitting banks with another sample of banks matched in size and charter status. Although we could not find good size matches for most of the largest members of each charter class, the largest state banks split their stock at least as frequently as national banks did.

Perhaps our most persuasive evidence is found in Chart 4. This chart plots SUR estimates of the 1933 event-week responses for each large bank displayed in Table I against the observed 1927-33 change in the bank's stockholder distribution. The positive correlation between the event-week responses and the observed broadening in stockholder ownership is striking. The scatter diagram firmly supports our contracting-theory

explanation for the softening of large-bank opposition to the enactment of federal deposit insurance that Calomiris and White found during the 1930s.

## IV. Summary and Policy Implications

Winton's contracting theory (1993) explains how and why a broadening of stockholder distribution at large banks could render double liability an unconvincing way for stockholders to bond their monitoring services. This paper clarifies that the pressure of regulatory competition led Congress to grant national banks permission in 1927 to broaden their stockholder distribution. It also shows that the legislation that granted this permission changed the return-generating process for bank stock and that stockholder distribution at large banks expanded greatly between yearend 1926 and yearend 1930. We show that, after a split, stockholder returns decline markedly.

Charts 1 and 2 show that the net monitoring premiums offered to large national-bank stockholders were significantly positive from mid-1927 through mid-1929 when most stock splits were unfolding. During the next year, the net monitoring premium was negligible. From mid-1930 through 1933, our estimate of the net premium at large national and double-liability state banks was often significantly negative and usually more negative than at the control group of limited-liability state banks. Finally, we cite event-study evidence that is consistent with the hypotheses that 1933 legislation that dictated the phase-out of double-liability benefited stockholders at large banks more than stockholders of small ones and that this legislation had a greater effect on large double-liability banks than on large limited-liability institutions.

The strength of our case lies not in the persuasiveness of any particular piece of evidence, but in how comfortably the various pieces fit together. Like a mosaic, each piece reinforces the effect of the others in supporting a contracting-theory interpretation of the pattern of changes observed in double-liability monitoring premiums during 1926-1933.

We believe that our research offers a useful policy suggestion for banking supervisors in developing countries. In these countries, private bank stock is usually closely held and efforts to establish accounting transparency are often fiercely resisted. In

similar circumstances in U.S. history, insolvency-driven penalties for stockholders imposed by contingent double liability succeeded in controlling depositor losses and even in engendering voluntary bank liquidations at troubled institutions (Macey and Miller, 1992). Instituting extended liability for closely held bank stock can strengthen supervisory protections in developing countries and penalize in timely fashion ministerial efforts to foist unwise credit-allocation schemes on a country's private banking sector.

**Table I**

**1933 EVENT-STUDY EXPERIMENTS**
**($R_{it}$ Denotes the Weekly Percentage Price Appreciation on stocks in NYC Banks in 1933)**

Panel A: Ordinary Least-Squares Regression Model

$$R_{it} = a + bR_{Mt} + c_{LNT}D_{LNi}\cdot D_T + c_{LST}D_{LNi}\cdot D_T + c_{SNT}D_{SNi}\cdot D_T + c_{SST}D_{SSi}\cdot D_T + u_{it}^{R}.$$

| Parameter | Parameter Estimate | t-value |
|---|---|---|
| a | -.53 | -2.30 |
| b | .23 | 5.72 |
| $c_{LNT}$ | 17.28 | 4.10 |
| $c_{LST}$ | 9.33 | 3.90 |
| $c_{SNT}$ | -.58 | -.15 |
| $c_{SST}$ | 4.10 | 1.10 |
| $R^2$ | .029 | |
| standard error | 11.13 | |
| N | 2,391 | |

Panel B: Seemingly Unrelated Regression Models for Price Appreciation at Subsamples of Large and Small NYC Banks Recording A Stock Price in Each Trading Week of 1933

| **1. Large Banks** | **SUR Estimate of Event-Week Response (in percent)** | **t-value** |
|---|---|---|
| • *National Banks* | | |
| Chase NB | 27.39 | 4.57 |
| N City B | 21.20 | 7.44 |
| Commercial NB&TC | 4.67 | 0.89 |
| N Exchange B&TC | 7.51 | 1.23 |
| First NB | 6.33 | 1.29 |
| Public NB | 16.30 | 2.65 |
| Sterling NB&TC | 32.84 | 5.40 |
| **Subsample Average:** | **16.61** | |
| • *State-Chartered Banks* | | |
| Bankers TC | 10.47 | 2.00 |
| B of NY & TC | 6.09 | 1.51 |
| Bronx County TC | 25.92 | 2.79 |
| Banca Commerciale Italiano TC | -0.11 | -0.19 |
| Brooklyn TC | 18.86 | 2.56 |
| B di Sicilia TC | 0.83 | 0.27 |
| Central Hanover TC | 6.13 | 1.19 |
| Chemical B TC | 7.64 | 1.53 |
| Continental B | 10.89 | 1.82 |
| Corn Exchange B | 13.08 | 2.25 |
| Empire TC | 18.94 | 4.66 |
| Fifth Avenue B | 0.87 | 0.45 |
| Fulton TC | 8.20 | 4.17 |
| Guaranty TC | 9.72 | 1.56 |
| Irving TC | 16.70 | 3.12 |
| Kings County TC | 0.13 | 0.15 |
| B of the Manhattan Co | 41.81 | 7.14 |
| Manufacturers TC | 25.77 | 3.07 |
| New York TC | 16.21 | 2.75 |

| | | |
|---|---|---|
| Title Guarantee & TC | 4.28 | 0.27 |
| US TC of NY | 6.41 | 3.00 |
| Underwriters TC | -13.77 | -0.82 |
| **Subsample Average:** | **10.69** | |

Panel B: continued

| **2. Small Banks** | **SUR Estimate of Event-Week Response (in percent)** | **t-value** |
|---|---|---|
| • *National Banks* | | |
| Bensonhurst NB | 0.12 | 0.06 |
| Bronx NB | 0.22 | 0.06 |
| Flatbush NB | 0.73 | 0.09 |
| Fort Greene NB | 0.79 | 0.12 |
| Kingsboro NB | 0.21 | 0.07 |
| Lafayette NB | -1.67 | -0.05 |
| Peoples NB - Brooklyn | 0.36 | 0.11 |
| N Safety B&TC | 6.96 | 0.87 |
| NB of Yorkville | 0.68 | 0.19 |
| **Subsample Average:** | **0.93** | |
| • *State-Chartered Banks* | | |
| Citizens B - Brooklyn | 0.13 | 0.19 |
| Clinton B | -1.07 | -0.15 |
| Clinton TC | 8.41 | 1.39 |
| Pennsylvania Exchange B | -0.24 | -0.04 |
| Trade B of NY | 0.51 | 0.09 |
| B of Yorktown | -0.54 | -0.11 |
| **Subsample Average:** | **1.20** | |

Notes: B = Bank; N = National; TC = Trust Company.

Data Source: Commercial and Financial Chronicle

**TABLE II:**

**1927 EVENT-STUDY EXPERIMENT**
**($R_{it}$ Denotes the Weekly Price Appreciation on NYC Bank Stock in 1927 in percent)**

$$R_{it} = a_{(-)}D_{(-)}+a_{(+)}D_{(+)}+[c_{LN}D_{LNi}+c_{LS}D_{LSi}+c_{SN}D_{SNi}+c_{SS}D_{SSi}]D_{(0)}+[b_{(-)}D_{(-)}+b_{(+)}(D_{(+)}+D_{(0)})]R_{Mt}+v_{it}^{R}.$$

| Coefficient | Regression Estimate | t-value |
|---|---|---|
| $a_{(-)}$ | -0.21 | -0.13 |
| $a_{(+)}$ | .619 | 6.66 |
| $b_{(-)}$ | .116 | 0.64 |
| $b_{(+)}$ | .218 | 4.61 |
| $c_{LN}$ | -.989 | -0.71 |
| $c_{LS}$ | -1.17 | -1.12 |
| $c_{SN}$ | -1.07 | -0.50 |
| $c_{SS}$ | .257 | 0.33 |
| $R^2$ | .024 | |
| standard error | 4.787% | |
| N | 3859 | |

Data Source: Commercial and Financial Chronicle

Notes: The following dummy variables partition the data across time:

$D_{(-)}$ = unity for t=1, ..., 12 and is zero otherwise;

$D_{(0)}$ = unity in the event week 13 and is zero otherwise;

$D_{(+)}$ = unity for t=14, ..., 51 and is zero otherwise.

$D_{LN}$, $D_{LS}$, $D_{SN}$, and $D_{SS}$ partition the data by bank size and charter class.

**TABLE III: STOCK SPLITS OCCURRING DURING 1927-33 IN THE WEEKLY SAMPLE OF NEW YORK CITY BANK STOCKS**

| BANK | SPLIT DATE | PAR | BID | ASK | PAR | BID | ASK |
|---|---|---|---|---|---|---|---|
| B of America NA | 4/28/28 | $100 | 1240 | 1250 | $25 | 288 | 292 |
| B of Manhattan Co | 11/2/29 | 100 | 1070 | 1090 | 20 | 195 | 215 |
| Bankers TC | 4/6/29 | 100 | 1750 | 1825 | 10 | 175 | 180 |
| Bronx County TC | 8/17/29 | 100 | 532 | 550 | 20 | 100 | 106 |
| Bryant Park B | 8/24/29 | 100 | 480 | - [1] | 20 | 65 | - [2] |
| Central Union TC | 3/2/29 | 100 | 2575 | - [3] | 20 | 492 | 500 |
| Chase NB | 7/6/29 | 100 | 955 | 965 | 20 | 204 | 206 |
| Chatham Phenix | 9/21/29 | 100 | 775 | 790 | 20 | 165 | 169 |
| Chelsea Exchange B | 3/2/29 | 100 | 415 | 420 | 25 | 115 | 120 |
| Chemical NB | 5/11/29 | 100 | 1660 | 1680 | 10 | 112 | 115 |
| Continental B | 5/18/29 | 100 | 800 | 840 | 10 | 69 | 72 |
| Corn Exchange B | 5/25/29 | 100 | 1070 | 1080 | 20 | 208 | 212 |
| Empire TC | 9/7/29 | 100 | 600 | 610 | 50 | 122 | 127 |
| Equitable TC | 11/9/29 | 100 | 520 | 540 | 20 | 100 | 110 |
| Fidelity TC | 3/23/29 | 100 | 440 | 455 | 50 | 230 | 240 |
| Fidelity TC | 8/17/29 | 50 | 210 | 218 | 20 | 63 | 72 |
| Hanover NB | 1/12/29 | 100 | 1500 | 1550 | 50 | 785 | 815 |
| International Germanic TC | 8/17/29 | 100 | 203 | 211 | 50 | 104 | 108 |
| Interstate TC | 7/20/29 | 100 | 315 | 323 | 20 | 65 | 67 |
| Amer Ex Irving TC | 4/20/29 | 100 | 177 | 784 | 10 | 71 | 73 |
| Manufacturers TC | 6/2/28 | 100 | 1200 | 1220 | 20 | 297 | 302 |
| N City B | 1/19/29 | 100 | 1380 | 1390 | 20 | 278 | 281 |
| New York TC | 2/23/29 | 100 | 1150 | 1165 | 25 | 252 | 257 |
| N Park B | 5/25/29 | 100 | 1100 | 1115 | 20 | 158 | 163 |
| Port Morris B | 5/25/29 | 100 | 1250 | 1350 | 10 | 125 | 135 |
| Public NB&TC | 9/1/28 | 100 | 805 | 820 | 25 | 200 | 205 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Times Square TC | 8/10/30 | 100 | 50 | 55 | 40 | 20 | 22 |
| Title Guaranty TC | 4/27/29 | 100 | 1000 | 1020 | 20 | 194 | 199 |

Data Source: Commercial and Financial Chronicle.

Notes: * Institution is chartered as a national bank.
[1] Bid quote only was listed. Previous spread was $30.
[2] Ditto. The first post-split spread observed was $5.
[3] Ditto. The previous observed spread was $50.

**TABLE IV: BID-ASK QUOTES ON $20 AND $100 PAR SHARES OF EMPIRE TRUST COMPANY DURING A 17-WEEK PERIOD OF SIMULTANEOUS TRADING OF DUAL-PAR STOCKS**

| | QUOTES ON $20 PAR SHARES | | QUOTES ON $100 PAR SHARES | |
|---|---|---|---|---|
| **WEEK OF** | **BID** | **ASK** | **BID** | **ASK** |
| 9/7/29 | $122 | $127 | $595 | $605 |
| 9/14/29 | 121 | 125 | 590 | 600 |
| 9/21/29 | 122 | 126 | 595 | 605 |
| 9/28/29 | 123 | 127 | 600 | 610 |
| 10/5/29 | 118 | 123 | 580 | 600 |
| 10/12/29 | 118 | 123 | 590 | 598 |
| 10/19/29 | 119 | 123 | 585 | 595 |
| 10/26/29 | 115 | 119 | 540 | 560 |
| 11/2/29 | 90 | 95 | 450 | 470 |
| 11/9/29 | 75 | 85 | 320 | 420 |
| 11/16/29 | 70 | 80 | 360 | 390 |
| 11/23/29 | 80 | 90 | 400 | 420 |
| 11/30/29 | 80 | 85 | 405 | 415 |
| 12/7/29 | 82 | 86 | 417 | 426 |
| 12/14/29 | 81 | 85 | 407 | 415 |
| 12/21/29 | 80 | 85 | 385 | 395 |
| 12/28/29 | 78 | 83 | 380 | 390 |

Source: Commercial and Financial Chronicle

**TABLE V: DISTRIBUTION OF PAR VALUES AT A PANEL OF 1445 SURVIVING LARGE AND SMALL NATIONAL AND STATE BANKS IN 1926 AND 1930**

Panel A: Banks Whose Book Net Worth Exceeds $2 Million in 1926

| | Large Banks in 1926 | | Large Banks in 1930 | |
|---|---|---|---|---|
| Par Value of Stock Shares (in $) | State Charter | National Charter | State Charter | National Charter |
| 10 | 1 | 2 | 20 | 10 |
| 20 | 0 | 0 | 20 | 22 |
| 25 | 4 | 0 | 34 | 15 |
| 30 | 0 | 0 | 0 | 0 |
| 40 | 0 | 0 | 0 | 0 |
| 50 | 22 | 3 | 15 | 4 |
| 60 | 0 | 0 | 0 | 0 |
| 80 | 0 | 0 | 0 | 0 |
| 100 | 208 | 141 | 146 | 94 |
| 1,000 | 2 | 0 | 2 | 0 |
| TOTALS | 237 | 146 | 237 | 146 |

Panel B: Banks Whose Book Net Worth is Less than $2 Million in 1926

| Par Value of Stock Shares (in $) | Small Banks in 1926 | | Small Banks in 1930 | |
|---|---|---|---|---|
| | State Charter | National Charter | State Charter | National Charter |
| 10 | 6 | 1 | 22 | 11 |
| 20 | 0 | 1 | 27 | 18 |
| 25 | 15 | 5 | 42 | 18 |
| 30 | 2 | 1 | 2 | 1 |
| 40 | 0 | 2 | 0 | 1 |
| 50 | 88 | 17 | 75 | 15 |
| 60 | 2 | 1 | 2 | 1 |
| 80 | 1 | 0 | 1 | 0 |
| 100 | 592 | 328 | 535 | 291 |
| 1,000 | 0 | 0 | 2 | 0 |
| TOTALS | 706 | 356 | 706 | 356 |

Data Source: Bank and Quotation Record

Note: Sample consists of all banks in "major" cities that reported a par value throughout 1926-1933.

**TABLE VI: REGRESSION ESTIMATES OF TRIANGULAR MODEL (3) AND (4) OF YEAREND SHAREHOLDER DISTRIBUTION AT IRREGULARLY REPORTING MEMBERS OF THE 1933 NYC BANK SAMPLE, 1926-1933**

| | NINDIV [Model (3)] | | NSHARES [Model (4)] | |
|---|---|---|---|---|
| | Regression Coefficient | t-value | Regression Coefficient | t-value |
| intercept | -1,026.47 | 1.35 | 48,195 | 0.46 |
| (t–1926) | 336.79 | 1.95 | 31,705 | 1.32 |
| $D_N$ | -354.71 | -0.56 | -10,315 | -0.12 |
| SHARE PRICE | 1.47 | 1.64 | -344 | -2.78 |
| SUR (in $ mil.) | -896.23 | 8.82 | -10,807 | -5.02 |
| PAR (in $ mil.) | 293.65 | -5.54 | 55,636 | 18.09 |
| NSHARES | .008 | 17.56 | ... | |
| $R^2$ | .923 | | .786 | |
| standard error | 4,269.83 | | 645,932 | |
| no. of observations | 261 | | 261 | |

Data Source: Moody's Bank and Finance Manuals and Dana Co.'s Commercial and Financial Chronicle

**CHART 1: PLOT OF QUARTER-BY-QUARTER t-STATISTICS FOR E AT BANKS WITH MORE THAN $2 MILLION IN BOOK NET WORTH, 1927-1933**

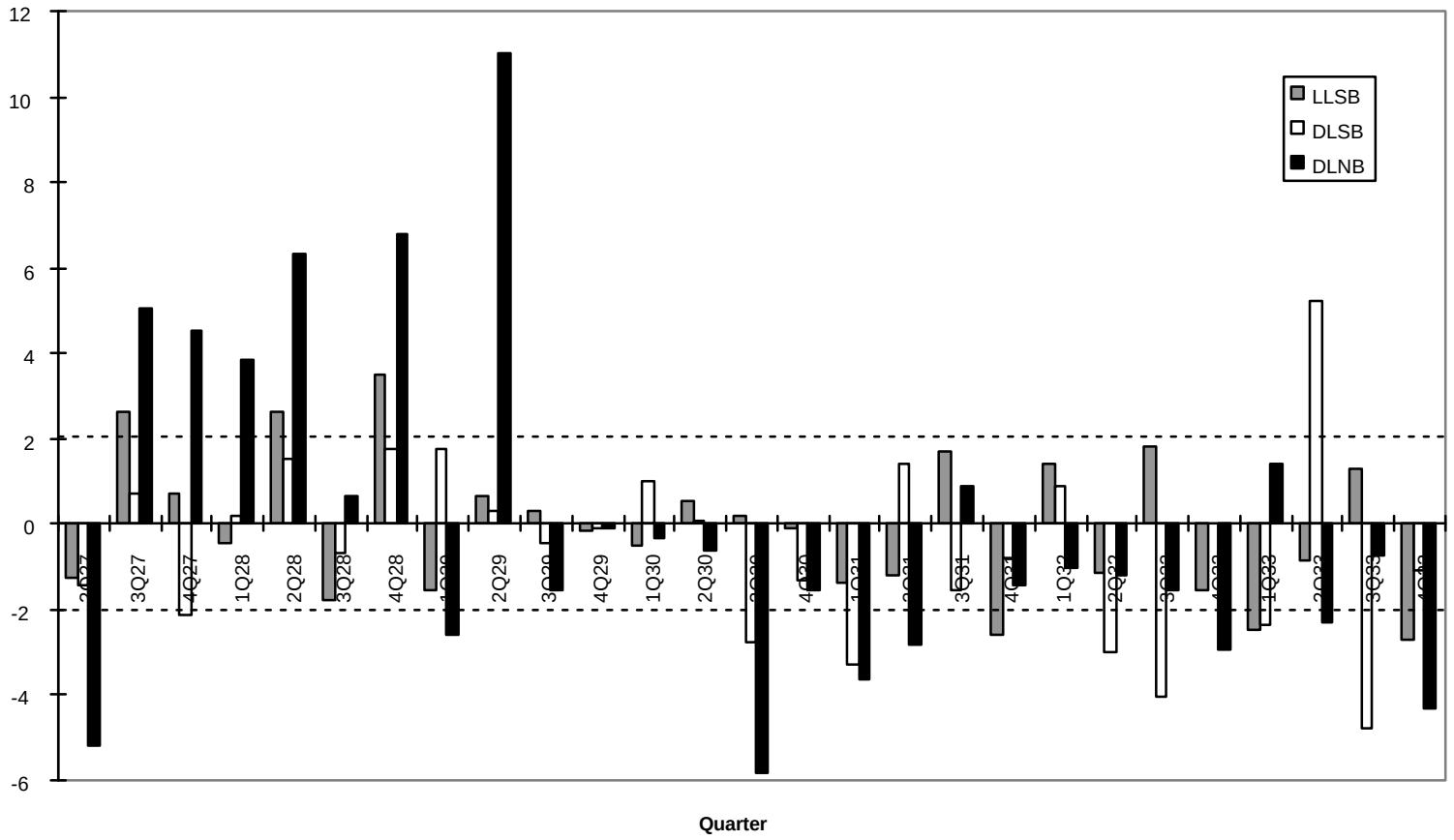

**CHART 2: PLOT OF QUARTER-BY-QUARTER CROSS-SECTIONAL t-STATISTICS FOR E AT BANKS WITH LESS THAN $2 MILLION IN BOOK NET WORTH, 1927-1933**

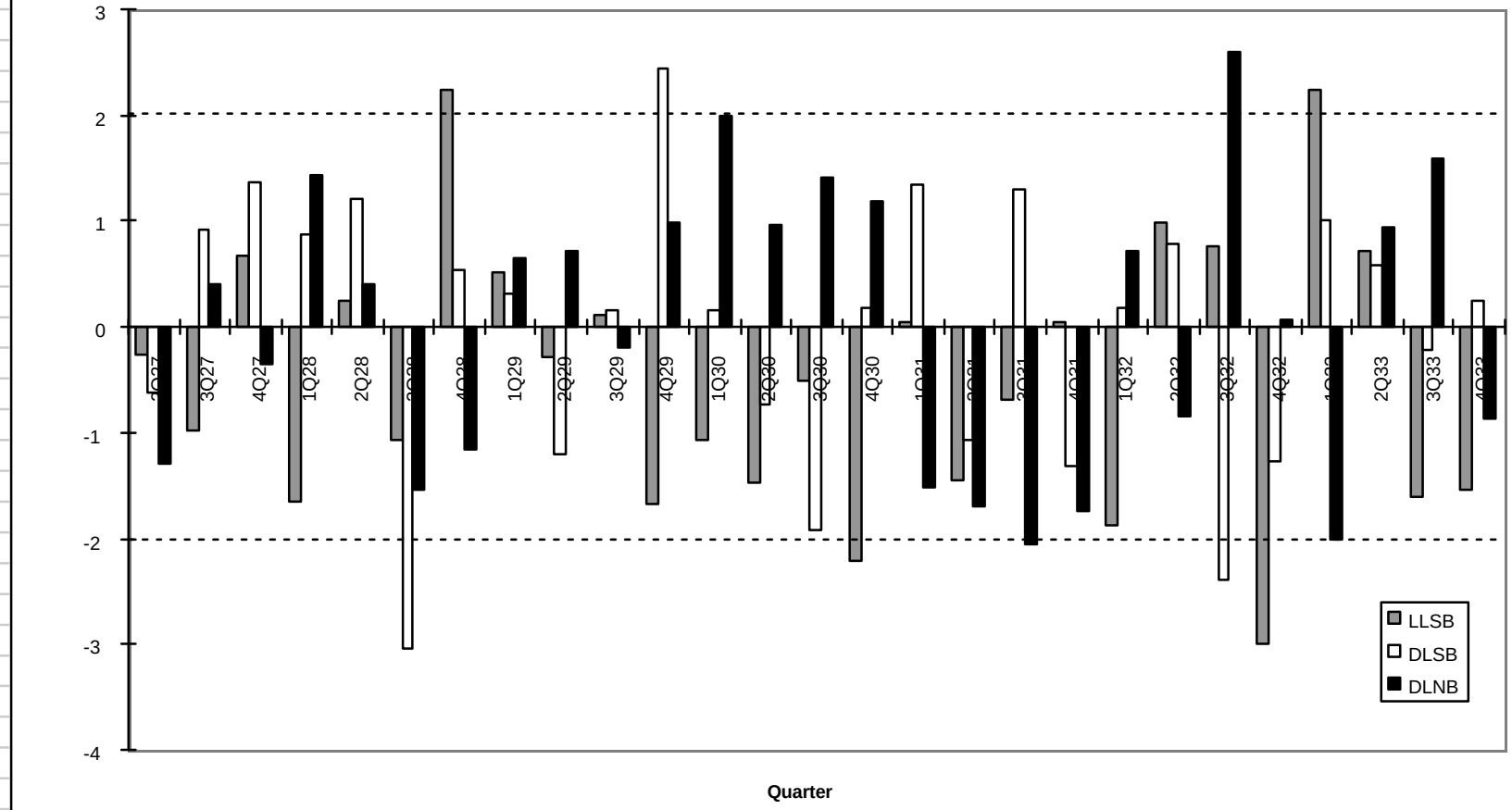

CHART 3A: UNADJUSTED (BETA = 0) CUMULATIVE PRICE APPRECIATION BEFORE AND AFTER STOCK SPLITS FOR NYC SAMPLE

CHART 3B: BETA-ADJUSTED CUMULATIVE PRICE APPRECIATION BEFORE AND AFTER STOCK SPLITS FOR NYC SAMPLE

CHART 3C: MARKET-ADJUSTED (BETA = 1) CUMULATIVE PRICE APPRECIATION BEFORE AND AFTER STOCK SPLITS FOR NYC SAMPLE

CHART 4: RELATIONSHIP BETWEEN SUR ESTIMATES OF THE 1933 EVENT-WEEK RESPONSE AND THE 1927-1933 INCREASE IN THE NUMBER OF SHAREHOLDERS AT LARGE NYC BANKS

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## APPENDIX TABLE

## LIST OF CITIES COVERED IN THE TABLE V SAMPLE

| | |
|---|---|
| Birmingham | AL |
| Mobile | AL |
| Montgomery | AL |
| Selma | AL |
| Fresno | CA |
| Los Angeles | CA |
| Oakland | CA |
| Pasadena | CA |
| Sacramento | CA |
| San Bernardino | CA |
| San Diego | CA |
| San Francisco | CA |
| San Jose | CA |
| Stockton | CA |
| Bridgeport | CT |
| Hartford | CT |
| New Haven | CT |
| Norwich | CT |
| Waterbury | CT |
| Wilmington | DE |
| Washington | DC |
| Atlanta | GA |
| Chicago | IL |
| Indianapolis | IN |
| Louisville | KY |
| New Orleans | LA |
| Shreveport | LA |
| Baltimore | MD |
| Beverly | MA |
| Boston | MA |
| Brockton | MA |
| Cambridge | MA |
| East Cambridge | MA |
| Fall River | MA |
| Fitchburg | MA |
| Gloucester | MA |
| Haverhill | MA |
| Holyoke | MA |
| Lawrence | MA |
| Lowell | MA |
| Lynn | MA |
| New Bedford | MA |
| Peabody | MA |
| Salem | MA |
| Springfield | MA |
| Taunton | MA |
| Worcester | MA |
| Detroit | MI |
| Grand Rapids | MI |
| Minneapolis | MN |
| St. Louis | MO |
| Kansas City | MO |
| St. Joseph | MO |
| Omaha | NE |
| Atlantic City | NJ |
| Asbury Park | NJ |
| Bayonne | NJ |
| Bridgeton | NJ |
| Camden | NJ |
| East Orange | NJ |
| Elizabeth | NJ |
| Hoboken | NJ |
| Jersey City | NJ |
| Long Branch | NJ |
| Morristown | NJ |
| Mt. Holly | NJ |
| Newark | NJ |
| New Brunswick | NJ |
| Passaic | NJ |
| Plainfield | NJ |
| Paterson | NJ |
| Trenton | NJ |
| Union City | NJ |
| Woodbury | NJ |
| Binghamton | NY |
| Brooklyn | NY |
| Buffalo | NY |
| Elmira | NY |
| Jamaica | NY |
| Jamestown | NY |
| New Rochelle | NY |
| NYC | NY |
| Port Chester | NY |
| Rochester | NY |
| Syracuse | NY |
| Yonkers | NY |
| Raleigh | NC |
| Winston-Salem | NC |
| Cincinnati | OH |
| Cleveland | OH |
| Columbus | OH |
| Youngstown | OH |
| Portland | OR |
| Allentown | PA |
| Erie | PA |
| Philadelphia | PA |
| Pittsburgh | PA |
| Scranton | PA |
| Wilkes-Barre | PA |
| Providence | RI |
| Newport | RI |
| Woonsocket | RI |
| Greenville | SC |
| Spartanburg | SC |
| Knoxville | TN |
| Memphis | TN |
| Nashville | TN |

| | |
|---|---|
| Dallas | TX |
| Houston | TX |
| Houston | TX |
| | |
| Salt Lake City | UT |
| | |
| Barre | VT |
| Burlington | VT |
| Montpelier | VT |
| Rutland | VT |
| | |
| Lynchburg | VA |
| Norfolk | VA |
| Petersburg | VA |
| Portsmouth | VA |
| Richmond | VA |
| Roanoke | VA |
| | |
| Seattle | WA |
| Spokane | WA |
| | |
| Milwaukee | WI |