



## **Banking Industry IPO Returns: A Test of the Informational Asymmetry Hypothesis**

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### **Abstract**

*This study examines IPO returns for commercial banks and savings banks over the period 1975 to 1994. These financial firms have traditionally been eliminated from IPO studies due to the regulatory nature of the industry. Logue's (1973) justification for excluding these firms is that they would create a downward bias in any IPO study as a result of the market's more accurate pricing of these issues. The results indicate that positive abnormal returns exist, but are considerably less than in other non-financial industries. One possible explanation is that banking assets are generally easier to price due to their marketability.*

### **I. Introduction and Literature Review**

Positive abnormal returns for initial public offerings (IPOs) clearly exist according to a number of academic studies conducted throughout the years. Neuberger and La Chapelle (1983), McDonald and Fisher (1972), Neuberger and Hammond (1974), Reilly (1977), Logue (1973), Ibbotson (1975), Ibbotson and Jaffe (1975), Ritter (1984), Miller and Reilly (1987), and Ibbotson, Sindelar and Ritter (1988) all provide evidence of initial price volatility in IPOs. However, after some period, this price volatility tends to level off. These studies indicate that average IPO returns were as high as 41.7% during the late 1960's.

Most of these studies, including Neuberger and La Chapelle (1983), Logue (1973), and Friend (1967), intentionally eliminate certain stock offerings. Logue (1973) states that secondary issues create a downward pricing bias. Friend (1967) refers to mutual funds and Real Estate Investment Trusts (REITS) as repackaged assets with previous market valuations. The motivation for eliminating banking industry IPOs stems from the fact that IPO underpricing is typically attributed to informational asymmetries not normally associated with the banking industry or other highly regulated industries. Logue's (1973) justification for excluding banks is that they would create a downward bias in any IPO study as a result of the market's more accurate pricing of these issues. Therefore, one might conclude that banking industry IPOs should be more efficient and thus have low or insignificant positive abnormal returns.

A recent paper by Hebb (2002) focused on the IPO underwriting activity of commercial banks since the passage of the Financial Services Reform Act of 2002. Commercial bank underwritten offerings were found to be significantly less underpriced than investment banker underwritten offerings. The author concludes the smaller premium is due to the positive market perception of commercial bank underwritten offerings. A logical extension of this finding would be to investigate commercial bank IPO returns and see if the market perception of safety and quality extends to these returns, and not just IPO returns underwritten by firms in this industry.

Another study by Rahman and Yung (1999) focused on returns of insurance industry IPOs. Since both the banking and insurance industries provide regulated financial services, the pricing expectations are similar. Information transparency in a regulated industry should reduce the amount of IPO underpricing and lend credibility to the theory that most IPO underpricing is due to information asymmetry. However, the authors find significantly positive abnormal short run returns even in the insurance industry.

The purpose of this study is to examine the efficiency of another regulated industry and test for IPO underpricing. Using banking industry IPOs, we look at the one-day, five-day and one-month abnormal returns for commercial bank IPOs and savings bank IPOs from 1975 to 1994. If Logue (1973) is correct, banking industry IPOs will be more efficient than IPOs in other, less regulated industries.

Our study finds some interesting results. First, bank IPOs appear to be priced “better” than other IPOs and thus investors should be less concerned with overpaying if they are not able to buy at the offering price. Second, banks are raising equity financing more efficiently as the offering price is more accurate than IPOs in other industries.

The remainder of the paper is organized as follows: Section II identifies the data and methodology used in the study. Section III presents the results of tests to determine whether abnormal returns are significantly different from zero. Section IV summarizes and concludes the paper.

## **II. Data and Methodology**

We examine unseasoned banking and savings bank issues from the New York Stock Exchange, the American Stock Exchange, and the NASDAQ over the time period 1975 to 1994. Price data and market return data are obtained from the CRSP tapes. There are instances where the one-month or five-day samples have fewer observations than the one-day samples due to missing data.

The sample period for this study began in 1975 and extends through 1994. This period was chosen because of the large amount of financial legislation passed (11 major Acts), with most of it targeted to banking and saving institutions. The beginning of each five-year sub-sample period coincides with some new major financial reform or extension of an earlier Act. The 1975 sample period occurs just after the Equal Credit Opportunity Act of 1974 and the Employee Retirement Income Security Act (ERISA) of 1974 that established an insurance program much like FDIC for pensions—many of which were managed by banking institutions.

In 1980, the Depository Institution Deregulation and Monetary Control Act eliminated inefficiencies that led to the first major S&L bailout (like Regulation Q). This Act also increased FDIC insurance to \$100,000. The Garn-St. Germain Depository Act of 1982 gave emergency powers to regulators to save the failing thrifts by organizing takeovers. The sample period beginning in 1985 coincided with the extension of emergency powers given by the Garn-St. Germain Act that was supposed to end in 1985. These powers were renewed with more liberal terms in 1986 (i.e., lower capitalization requirements for takeovers of failing institutions). Furthermore, the Competitive Equality Banking Act of 1987 recapitalized the FSLIC and ensured depositors that federal insurance would be used liberally to protect customers. Also, early in 1985, a court of appeals upheld the decision barring federal regulators from ending deposit insurance on brokered accounts. These “safety” measures lifted confidence in financial institution insurance at the same time the nation was in the heart of an economic boom filled with investor optimism.

The last sample period from 1990 through 1994 began right when the Financial Institutions Reform, Recovery and Enforcement Act of 1989 (FIRREA) took hold after the second major S&L bailout. This act increased supervision of thrifts and established a new insurance fund for thrifts (FDIC-SAIF) while imposing restrictions to keep S&Ls from investing in risky portfolios. Also, the Federal Deposit Insurance Corporation Improvement Act of 1991 mandated specific schedules for bank examination. This act imposed the same limits on state-chartered banks as existed on federal banks and strengthened the Federal Reserve’s authority over foreign banks operating in the United States.

**Exhibit 1: IPO Sample Sizes**

<i>Time Frame</i>	<i>Commercial Banks</i>	<i>Savings Banks</i>
1975-1994	370	280
1975-1979	26	NA
1980-1984	68	43
1985-1989	206	104
1990-1994	70	133

Exhibit 1 presents the number of IPOs for banks and savings banks during the period 1975 to 1994 as well as five-year sub-periods. There are a total of 370 commercial bank IPOs and 280 savings bank IPOs during this period. The majority of the IPOs occur after 1985.

In order to compare our results with previous researchers, we closely follow the methodology of Neuberger and La Chapelle (1983), McDonald and Fisher (1972), Neuberger and Hammond (1974), and Reilly (1977). The time periods examined for abnormal returns are: 1) one day after the issue, 2) five days after the issue, and 3) one month after the issue. These periods are consistent with those used by the previous studies. Exhibit 2 displays the results from these studies.

The stock returns for the periods specified are computed for each stock and the market proxy (value-weighted CRSP index) as follows:

$$CR_{i,t} = \sum_{t=0}^t \frac{P_{i,t} - P_{i,0}}{P_{i,0}}$$

where  $CR_{i,t}$  is the cumulative return of stock  $i$  for period  $t$ ,  $P_{i,t}$  is the price of stock  $i$  at the close of day  $t$ , and  $P_{i,0}$  is the offering price of the security. The market return is computed for the same period in a similar manner where  $P_0$  is the market close on the day prior to the offering and  $P_t$  is the market close on day  $t$ . The upper bound on  $t$  is either one-day, five-days, or one-month.

**Exhibit 2: Results of Other IPO Studies**

<i>Study</i>	<i>Time Frame</i>	<i>1 day excess returns</i>	<i>5 day excess returns</i>	<i>1 month excess returns</i>
Ritter (1980)	1977-82	26.5%		
Ibbotson-Sindelar-Ritter (1988)	1977-87	16.4%		
Barry-Jennings (1993)	1988-90	6.78%		
McDonald-Fisher (1972)	1969		28.5%	34.6%
Neuberger-LaChapelle (1983)	1975-80		27.7%	33.6%
Neuberger-Hammond (1974)	1965-69		17.1%	19.1%
Reilly (1977)	1972-75		10.9%	11.6%
Block-Stanley (1980)	1974-78		5.9%	3.3%
Logue (1973)	1965-69		41.7%	

The abnormal return on the stock is computed as follows:

$$AR_{i,t} = CR_{i,t} - CMR_t$$

where  $AR_{i,t}$  is the abnormal return for security  $i$  during period  $t$ ,  $CR_{i,t}$  is the cumulative return of security  $i$  during period  $t$ , and  $CMR_t$  is the cumulative return of the market during period  $t$ .

Next, we compute the average abnormal return as follows:

$$e_t = \sum_1^n \frac{AR_{i,t}}{n_t}$$

where  $e_t$  is the average abnormal return for time  $t$ , and  $n$  is the total number of stocks. We use a t-test to determine whether the abnormal return is significant.

### III. Results

Exhibit 3 displays our results. The top number is the abnormal return for IPOs in the corresponding period, and the bottom number is the associated probability that the abnormal return is not different from 0. Positive abnormal returns range from .61% (1-day) to 2.41% (1-month) for the entire period from 1975 to 1994. Also, abnormal returns are positive and significant for the sub-period 1985-1989. No other sub-period had such a clear pattern. Over the entire period 1975-1994, all results were positive and significant.

Exhibit 3 shows the results of other IPO studies. Abnormal returns for banking industry IPOs are considerably less than other, more general IPO studies. This supports the idea that banking industry IPOs are more efficient than IPOs in other industries. This is perhaps due to easier valuation of banking assets, as many bank assets are very liquid with easily determined market values. Also, these lower abnormal returns suggest that banks are setting a better offering price and thus raising equity financing more efficiently.

Although it may be said that the returns for one day are not comparatively lower than the lowest one-day abnormal returns observed, overall, Logue's conclusion must be upheld. The abnormal returns exhibited by the observed banking IPOs would definitely bias overall average abnormal returns downward in a study that considers IPO returns from various industries. These results support the informational asymmetry hypothesis of IPO underpricing, which states that the less information the market has about the firm's assets, the higher the abnormal returns of the firm's IPO.

**Exhibit 3: Abnormal Returns and P-Values\***

<i>RETURNS</i>	<i>1975-79</i>	<i>1980-84</i>	<i>1985-89</i>	<i>1990-94</i>	<i>1975-94</i>
1-day Bank	0.59% (.1950)	0.52% (.2249)	0.41% (.0550)	1.09% (.1177)	0.61%* (.0036)
5-day Bank	0.30% (.7836)	-0.01% (.9864)	1.28%* (.0038)	1.85% (.0890)	1.11%* (.0021)
1-month Bank	-2.01% (.2750)	3.02%* (.0224)	1.86%* (.0128)	2.63% (.1200)	2.10%* (.0005)
1-day S&L	NA	1.42%* (.0303)	0.99%* (.0007)	0.44% (.2237)	0.75%* (.0009)
5-day S&L	NA	1.43% (.1845)	1.35%* (.0167)	1.42%* (.0077)	1.37%* (.0002)
1-month S&L	NA	2.36% (.3822)	2.02%* (.0417)	2.74%* (.0011)	2.41%* (.0003)

\* Coefficients are significant at the 5% level.

#### IV. Summary and Conclusions

We estimate the abnormal returns following an IPO for commercial banks and savings banks during the period 1975 to 1994 and find a significant, positive abnormal return. This suggests that banking industry IPOs are generally underpriced, however we note that the underpricing is less than in other industries as previous researchers such as Logue (1973) predicted. The lower abnormal returns arguable occur because it is easier to price the assets of banks due to their liquidity.

As for the sub-periods, perhaps the 1985-1989 sample showed significant results because the economy was in the middle of an economic boom filled with investor optimism. Interest rates were coming down, making bank assets more valuable. Also, the legislation emphasized keeping banks safe and protected via liberal insurance policies. Making bank assets less risky created value in the banking industry. The entire sample period from 1975-1994 exhibits a common average characteristic of IPOs—that is, they were underpriced initially and provided significant abnormal returns in the early trading. The main focus is the size of the returns compared to that of other IPO studies. The bank abnormal returns are low compared to non-financial IPOs suggesting Logue was correct in assuming the lower informational asymmetry associated with the banking industry drastically reduces the early excess returns associated with IPO issues.

An alternative explanation is that the larger sample sizes for the 1985-1989 and 1975-1994 time periods affected the significance tests. Larger sample sizes tend to produce significant results for the same or even lower level of abnormal returns than small sample sizes. Further research is needed to fully understand banking industry IPO return price behavior.

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