"Analyst coverage initiations for banking IPOs"

AUTHORS	Matthew D. Crook John S. Howe
ARTICLE INFO	Matthew D. Crook and John S. Howe (2011). Analyst coverage initiations for banking IPOs. *Banks and Bank Systems*, *6*(2)
RELEASED ON	Friday, 08 July 2011
JOURNAL	"Banks and Bank Systems"
FOUNDER	LLC "Consulting Publishing Company "Business Perspectives"

NUMBER OF REFERENCES	NUMBER OF FIGURES	NUMBER OF TABLES
0	0	0

Matthew D. Crook (USA), John S. Howe (USA)

Analyst coverage initiations for banking IPOs

Abstract

The article examines analyst coverage initiations at the end of the quiet period for banking IPOs between 1990 and 2009. It is found that analyst coverage is initiated for only 15.5 percent of banks, a lower rate of initiation than for non-financial firms. This lower level of private sector monitoring suggests that regulation is a substitute, not a complement, for analyst following. The authors also find that banks with analyst coverage initiations experience five-day abnormal returns of -43 basis points versus 7 basis points for banks without analyst coverage initiations. Finally, the article also documents that as the number of operational activities for banks increases with legislative changes, analyst coverage also increases.

Keywords: banks, analyst coverage, investment banking.
JEL Classification: G21, G24.

Introduction

Analyst coverage provides information about firms to the investing public, providing a signal about the firms' future success (see Francis and Soffer, 1997; and Lys and Sohn, 1990). During a firm's IPO, the underwriting syndicate and its analysts access and collect information about the future prospects of the company. However, underwriting firms involved in the offering face restrictions on information release. Both the company going public and the underwriter are subject to a "quiet period" when neither may release additional information omitted from the prospectus concerning forecasts related to earnings, income or company valuation for a short time after the offering.

The quiet period begins when a firm files its registration statement with the Securiteis and exchange commision (SEC)[1] and lasts for 40 days after the offering[2]. Bradley, Jordan and Ritter (2003) perform the first examination of the quiet period and find a market-adjusted return for firms over a (-2, 2) day period centered on the end of the quiet period of 3.1 percent. The 76 percent of industrial firms receiving analyst coverage initiations within two days of the end of the quiet period drive the large positive return, and when considered exclusively, see market-adjusted returns of 4.1 percent.

Following previous IPO research, Bradley et al. eliminate banks, savings and loans from their sample, but banks are worthy of separate consideration. Banks differ from industrial firms in several significant ways. First, the banking industry is subject to systemic risk. Second, banks serve as delegated monitors and provide signals to the investing public about corporate borrowers. Third, banks provide an investment and savings vehicle for the public. Lastly, bank regulation increases the amount of available information for banks relative to industrial firms.

Bank IPOs are thus unique offerings. One of the consequences of the regulations establishing the depository insurance system is a large level of required information disclosure about the health of each bank or savings and loan. When a bank goes public, the available information regarding the bank significantly exceeds the available information for industrial firms. Most importantly, call reports provide quarterly financial data on bank holdings. Industrial firms have no such required filings. Because of their different information environment, as well as the differences discussed above, banks should be studied separately from industrial firms.

The differences between banks and industrial firms suggest three research questions about bank stocks and banking firms which we explore in this research. First, how do financial markets react to analyst initiations for banking IPOs? Second, does the initial underpricing of banking IPOs drive analyst coverage initiations? Third, how do changes in the banking regulatory environment change analyst coverage initiations over time?

We find that bank and bank holding company stocks do not have the same returns around the quiet period as industrial stocks. Stocks with no analyst coverage initiations experience the market-adjusted returns of 7 basis points compared to a negative 44 basis points for stocks with analyst coverage initiations. The results for banking stocks with analyst coverage differ from their industrial counterparts but still drive the overall returns over the 5-day period surrounding the quiet period. We find no significant difference in the amount of underpricing based on analyst coverage for banking IPO stocks. For banking stocks, analyst coverage initiations increase in frequency and number with the introduction of more regulatory changes.

[1] http://www.sec.gov/answers/quiet.htm.
[2] Before June 7, 2002, the quiet period was 25 days. For additional information on the changes and arguments regarding the change see http://www.sec.gov/rules/sro/34-45908.htm.

Our paper makes three contributions to the literature. First, we document the degree to which analysts initiate coverage for banking stocks and the impact of analyst coverage initiations on returns for banking stocks at the end of the quiet period. Second, we find that analyst coverage initiations for banking stocks are not associated with positive abnormal returns even when analysts issue favorable recommendations. Finally, we show that changes in the information environment through changes in permissible activities for banks and bank holding companies cause increases in the amount of analyst coverage.

1. Literature review and hypothesis development

We provide evidence on the first research question (How do financial markets react to analyst initiations for banking IPOs?) using conventional event study techniques. Regulatory bodies require banks to submit quarterly financial data in the form of call reports to the Federal deposit insurance corporation (FDIC) (regardless of being public or private). A bank with a public offering has therefore submitted multiple call reports[1]. When examined together, the call reports for a bank provide material information about the bank's practices and reduce the degree of information asymmetry. If the lower level of asymmetric information drives fewer analyst coverage initiations, hypothesis 1 should fail to be rejected.

Hypothesis 1: The lower information asymmetry for banks will result in lower abnormal returns in the (-2, 2) window centered on the end of the quiet period than for industrial firms.

To address the second research question (Does the initial underpricing of banking IPOs drive analyst coverage initiations?), we compare the underpricing of banking stocks with and without analyst coverage initiations. IPO underpricing has been suggested as a means of compensating investors for the costs of becoming informed. Outside investors and the firm both bear the costs to become informed and reduce information asymmetry. Rajan and Servaes (1997) examine the relation between underpricing and analyst coverage. They find greater amounts of underpricing results in an increased amount of analyst coverage in the first year after IPO. Therefore, we propose Hypothesis 2.

Hypothesis 2: Banks with greater underpricing will have more analyst coverage initiations.

Our third research question (How do changes in the banking regulatory environment change analyst coverage initiations over time?) examines the effect of regulatory changes on the initiation of analyst coverage. Regulations dictate the markets in which an institution may and the activities that it may undertake. Additionally, regulations directly affect disclosures and the information environment. Prior studies show analyst coverage depends on firms' information environment (Lang and Lundholm, 1996).

Two legislative regulatory events changed banks' operating environment. First, the Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994 expanded the ability of banks to branch across state lines. By allowing banks to expand geographically, the legislation may have increased the degree of information asymmetry – it is harder for investors and analysts to assess dispersed business activities. Second, the Financial Services Modernization Act of 1999 lifted restrictions on banks, allowing them to offer increased services and products, thereby increasing the degree of information asymmetry. We, thus, propose these time-series hypotheses.

Hypothesis 3: Banks going public prior to September 1995 will see fewer analyst coverage initiations than IPOs after that date.

Hypothesis 4: Banks going public in the period between September 1995 and November 1999 will see more analyst coverage initiations than seen by banks earlier, but less than IPOs after November 1999.

Hypothesis 5: Banks going public after November 1999 will have more analyst coverage initiations than IPOs prior to that date.

2. Methodology

We collect IPO data from Thomson Financial from January 1990 to December 2009 and find 8151 stock offerings with 187 from a depository institution or bank holding company. For the 187 banking stocks, we eliminate all depository shares, unit issues, spin-offs, or reverse leveraged buy-outs. We drop issuances without return data in the Center for research in securities prices (CRSP) database. Additionally, to verify that we capture only banking stocks in the sample, we scrutinize any stock with a Standard industrial classification (SIC) code[2] not within the list of depository institutions or bank holding companies on both Thomson Financial and CRSP to confirm the nature of the firm's business operations. Table 1 details the winnowing of the sample based on these criteria. The final sample consists of 116 depository institutions and bank holding companies.

---

[1] We use the Field-Ritter dataset (as used in Field and Karpoff, 2002; and Loughran and Ritter, 2004) and hand collection for any firms not listed in the dataset for firm age data. The median age of the sample firms is 11.5 years.

[2] SIC codes: 6020, 6021, 6022, 6029, 6030, 6035, 6036, 6090, 6710, 6712, 6719, 6740, 6790

Table 1. Sample selection criteria

This table presents the initial sample and the criteria for eliminating firms from the sample. The data represented are all firms reported as bank and bank holding companies with an IPO from 1990 to 2009 from Thomson Financial. We remove IPO firms classified American Depository Shares, reverse leverage buyouts, unit issues, spin-offs from another firm, or with insufficient data on CRSP to conduct event studies. We also remove firms from the sample under the category. Visual inspection/industry confirmation have different SIC codes in Thomson Financial and CRSP. We inspect each firm by reading the prospectus filing to ascertain the nature of business operations. Firms removed from the sample under the category. Long delay in first trading day announce their IPO at a date much earlier than the first reported trading day in CRSP; the difference in the IPO date and the first trading date for the ten firms exceeds 600 days. The firm removed in the category, first CRSP listing much earlier than IPO, began trading 267 days prior to the IPO date supplied by Thomson Financial.

		Number
Depository institution IPOs (1990-2009)		187
Less:		
	Depository shares	21
	Reverse leverage buyouts	2
	Unit issues	1
	Spin-offs	4
	No CRSP listing	21
	Visual inspection/industry confirmation	11
	Long delay in first trading day	10
	First CRSP listing much earlier than IPO	1
Final sample of depository institution IPOs		116

We use both the institutional brokerage estimate system's (IBES) recommendations – detail dataset and Thomson Reuters' First call company issued guidelines dataset to identify firms with analyst coverage initiations. The coverage initiations are in the form of a buy, sell, or hold recommendation. IBES coverage of analyst initiations begins in 1992, and first call coverage of analyst initiations begins in 1990. In 2000, IBES was integrated with first call. We use both datasets to insure the largest sample of analyst initiations and find a few additional analyst initiations by merging the analyst coverage for the sample for both analyst databases. We merge IBES and first call separately with our sample of IPOs. To get a comprehensive list of all analyst coverage initiations over the sample we merge both analyst coverage and IPO samples to form a unified sample. We remove duplicate initiations on a single day by the same analyst.

We present summary statistics for the sample in Table 2. Panel A provides summary statistics for the 116 bank IPOs. The average offering is $96 million with a minimum of $7.48 million and a maximum of $1.01 billion. We calculate the market capitalization at three days prior to the end of the quiet period. The average market capitalization is $105.4 million with a minimum of $8.04 million and a maximum of $1.23 billion. We calculate the average turnover for the eleven days ending three days prior to the end of the quiet period and find the average turnover to be 8 percent. The number of managing underwriters varies from one to seven underwriters with an average of 1.733 underwriters.

Table 2. Summary statistics

This table provides summary statistics for the sample of depository institutions and bank holding companies with IPOs between 1990 and 2009. We delete all American Depository Shares, reverse leverage buyouts, unit issues, spin-offs and firms with no listing on CRSP from the sample. Panel A describes the population of bank IPO firms. Panel B describes the firms with no analyst coverage initiations within two days following the expiration of the quiet period. Panel C describes the firms with analyst coverage initiations within two days following the expiration of the quiet period. Panel D compares the mean differences in the sub-samples of banking IPOs with and without analyst coverage initiations. Offer amount is the dollar value of shares offered in the public offering. We calculate the market capitalization based on prices three days before the quiet period. Size is the natural log of the market capitalization three days before the end of the quiet period. Turnover is the average volume of shares traded for the eleven days prior to two days before the expiration of the quiet period scaled by the total number of shares outstanding. NUMMAN is the number of managing underwriters in the IPO syndicate. AGE is the age of the bank when the bank goes public. COVERAGE is the number of analysts initiating coverage within two days following the end of the quiet period.

Panel A. Full sample of banking IPO stocks (n = 116)					
Variable	Mean	Median	Std. dev.	Min	Max
Offer amount (mil $)	95.990	53.574	129.38	7.480	1012.500
Market capitalization (mil $)	105.097	54.483	155.572	8.039	1231.875
Size	17.908	17.813	1.014	15.900	20.932
Turnover	0.008	0.006	0.009	0.001	0.075
NUMMAN	1.733	1.0	0.981	1	7
AGE	23.034	11.5	28.598	0	113
Panel B. Banking IPO stocks with no analyst coverage initiations (n = 98)					
Offer amount (mil $)	83.390	47.008	122.659	7.480	1012.500
Market capitalization (mil $)	91.088	50.839	148.264	8.039	1231.875
Size	17.784	17.744	0.974	15.900	20.932
Turnover	0.009	0.007	0.010	0.001	0.075
NUMMAN	1.622	1.0	0.936	1	7
AGE	23.990	12.0	29.342	0	113

Table 2 (cont.). Summary statistics

Panel C. Banking IPO stocks with analyst coverage initiations (n = 18)					
Variable	Mean	Median	Std. dev.	Min	Max
Offer amount (mil $)	164.590	110.316	146.589	23.390	585.200
Market capitalization (mil $)	181.367	120.876	176.085	23.390	705.898
Size	18.584	18.601	0.985	16.968	20.375
Turnover	0.006	0.004	0.006	0.001	0.021
NUMMAN	2.333	2.0	1.029	1	4
AGE	17.833	8.0	24.206	0	94
COVERAGE	1.778	1.5	1.003	1	4
Panel D. Comparison of banking IPO stocks with and without analyst coverage initiations					
Variable	Method	Variances	DF	t-statistic	Pr > |t|
Offer amount (mil $)	Satterthwaite	Unequal	21.6	-2.21	0.0379
Market capitalization (mil $)	Satterthwaite	Unequal	21.7	-2.05	0.0531
Size	Satterthwaite	Unequal	23.5	-3.17	0.0042
Turnover	Satterthwaite	Unequal	39.6	1.45	0.1562
NUMMAN	Satterthwaite	Unequal	22.5	-2.73	0.0121
AGE	Satterthwaite	Unequal	27.1	0.96	0.3468

Panel B provides summary statistics for the 98 firms that do not have analyst coverage initiations over the two days following the end of the quiet period. The mean offer amount is approximately $36 million with the minimum and maximums equal to those seen for the entire sample. The average turnover is 9 percent. The average number of managing under-writers of 1.622 indicates more offerings with one managing underwriter in firms that do not have analyst coverage initiated.

Panel C describes the firms with analyst coverage initiated in the two days immediately following the quiet period. Only 18 of 116 firms (15.5 percent) have analyst coverage. For the 18 firms, 32 analysts initiate coverage for an average of 1.77 analysts initiating coverage per firm. The average offering is $164.6 million with an average market capitalization of $181 million. The average turnover of 6 percent indicates that the firms that have analyst coverage initiations trade with lower frequency in the days prior to the end of the quiet period. The average number of managing underwriters is 2.333 for firms with analyst following initiations. Higher turnover suggest firms with analyst coverage have more initial visibility in the first days following the IPO.

Panel D compares the differences in mean values for bank IPOs that do not receive analyst coverage and bank IPOs receive analyst coverage. We find the average offer size is greater for banks receiving analyst coverage and the difference in size is statistically significant at the five percent level. The market capitalization for firms receiving analyst coverage is much larger and the difference is statistically significant at the five percent level. Firms with analyst coverage initiations have a larger number of managing underwriters. The difference in the average number of underwriters is 0.711 and is signifi-

cantly different between the two groups at the one percent level. Turnover for firms with no analyst coverage differs by about two percent from those with analyst coverage, but the difference is statistically insignificant.

To examine the reaction to analyst following and the end of the quiet period for banking stocks, we perform event studies using the market model. We follow the event study approach of Bradley et al. (2003). We use three market indices as a robustness check. The first benchmark is the CRSP equally weighted index, the second index is an equally weighted measure of all NASDAQ stocks listed on CRSP (all stocks with a share code equal to 3), and the third index is an equally weighted sample of banking stocks with SIC codes matched by at least one stock in the sample of bank and bank holding company IPOs. Because we obtain qualitatively similar results, we report only the CRSP index findings.

We examine the market reaction to all banking and depository institutions for the sample and the reaction to the end of the quiet period for two sub-samples of stocks: those that do not have analyst coverage initiations at the end of the quiet period and those that do. For each sample, we look at the daily abnormal return over the window (-5, 5) and the cumulative abnormal return for the windows (-2, 2), (-2, -1), and (0, 2) with zero as the expiration date of the quiet period.

To examine how underpricing affects the initiation of analyst coverage, we compare the difference between the sub-samples of firms with and without analyst coverage initiations for first day underpricing. We calculate the first-day underpricing as the difference between the offer price and the first-day closing price scaled by the offer price.

To test the changes in analyst coverage initiations across legislative and regulatory events, we report the historical number of analyst coverage initiations and use logistic regression to explain the initiation of analyst coverage. The sample of firms with multiple analyst coverage initiations is limited, so we do not examine the probability of multiple analyst coverage initiations. Instead, we model the probability of at least one analyst will initiate coverage at the end of the quiet period. Using the methods described for calculation of control variables from Bradley et al. (2003), we calculate the short-term performance using the closing price three days prior to the end of the quiet period and the difference in the closing price on the IPO date.

3. Results

Table 3 provides the event study results for the entire sample of bank IPOs from 1990 to 2009 using the CRSP equally weighted index. Panel A provides the daily market model returns for the period (-5, 5) centered on the end of the quiet period. Panel B provides cumulative returns for three event windows. The cumulative market-adjusted return over the (-2, 2) window is negative seven basis points and insignificant both statistically and economically. The other two windows that split the (-2, 2) window into its pre-event component and the event plus segment do not differ significantly from zero. We conclude that bank stocks behave differently than industrial stocks at the end of the quiet period – there is no abnormal stock return associated with the end of the quiet period.

Table 3. Event study results: entire sample (CRSP index)

This table provides event study results for the entire sample of bank and bank holding companies with an IPO from 1990 to 2009 as reported in Thomson Financial with return data available in CRSP. Day 0 denotes the expiration date of the quiet period (the 26th day following the offer date for any IPO prior to July 9, 2002 and the 41st day following the offer date for any IPO after July 9, 2002). Panel A provides daily market-adjusted returns using the equally weighted return for the CRSP index. Panel B provides cumulative market-adjusted returns using the equally weighted return for the CRSP index. We remove all depository shares, reverse LBOs, spin-offs or unit issues from the sample.

Panel A. Market-adjusted returns (MARs)				
Day	Average	t-statistic	n	Median
	MAR%			MAR%
-5	0.545	2.35	116	0.106
-4	0.229	0.84	116	0.178
-3	-0.348	-1.47	116	-0.029
-2	-0.115	-0.51	116	-0.039
-1	0.052	0.23	116	0.120
0	-0.008	-0.03	116	0.031
1	-0.232	-0.94	116	0.029
2	0.270	1.20	116	0.167
3	-0.101	-0.36	116	0.132
4	0.454	1.58	116	0.202
5	0.601	2.42	116	0.225
Panel B. Cumulative market-adjusted returns (CMARs)				
Window	Average	t-statistic	n	Median
	MAR%			MAR%
(-2,+2)	-0.007	-0.07	116	-0.014
(-2,-1)	-0.031	-0.23	116	-0.176
(0,+2)	0.010	0.09	116	0.000

Table 4 provides the event study results for the sample of bank IPOs from 1990 to 2009 with no analyst following initiations within two days after the expiration of the quiet period. The evidence in Panel A shows no statistically significant daily market model returns for banking stocks and no noticeable pattern in returns. Panel B shows a cumulative market adjusted return of 7.1 basis points over the (-2, 2) window. We find similar returns for both the pre-event segment and post-event segment and the return over the whole window. When comparing the returns for banking firms and the returns reported in Bradley et al. (2003) for industrial firms, the returns are similar.

Table 4. Event study results: banks with no analyst initiations (CRSP index)

This table provides event study results for stocks with no analyst coverage initiations within two days of the quiet period expiration for bank and bank holding companies with an IPO from 1990 to 2009 as reported in Thomson Financial with return data available in CRSP. Day 0 denotes the expiration date of the quiet period (the 26th day following the offer date for any IPO prior to July 9, 2002 and the 41st day following the offer date for any IPO after July 9, 2002). Panel A provides daily market-adjusted returns using the equally weighted return for the CRSP index. Panel B provides cumulative market-adjusted returns using the equally weighted return for the CRSP index. We remove all depository shares, reverse LBOs, spin-offs or unit issues from the sample.

Panel A. Market-adjusted returns (MARs)				
Day	Average	t-statistic	n	Median
	MAR%			MAR%
-5	0.566	2.21	98	0.111
-4	0.224	0.71	98	0.194
-3	-0.333	-1.21	98	-0.027
-2	-0.101	-0.41	98	0.080
-1	0.219	0.90	98	0.136
0	0.070	0.28	98	0.113
1	-0.085	-0.32	98	0.056
2	0.252	0.99	98	0.047
3	-0.176	-0.54	98	0.161
4	0.338	1.06	98	0.112
5	0.631	2.45	98	0.289
Panel B. Cumulative market-adjusted returns (CMARs)				
Window	Average	t-statistic	n	Median
	MAR%			MAR%
(-2,+2)	0.071	0.80	98	0.016
(-2,-1)	0.059	0.42	98	-0.176
(0,+2)	0.079	0.68	98	0.048

Table 5 provides the event study results for the sample of bank IPOs that see analyst coverage initiations in the two days immediately following the end of the quiet period. Panel A presents the market model returns. Over the (-3, 1) window all of the daily returns are negative. Panel B presents the cumulative market model returns. For all three event windows the returns are negative. The small sample size makes it difficult to find significant results. However, the -42.8 basis point return over the (-2, 2) event window at the end of the quiet period coupled with the negative returns for banking stocks with analyst initiations suggests that analyst coverage initiations do not signal strength for the bank being followed.

Table 5. Event study results: banks with analyst initiations (CRSP index)

This table provides event study results for stocks with analyst coverage initiations within two days of the quiet period expiration for bank and bank holding companies with an IPO from 1990 to 2009 as reported in Thomson Financial with return data available in CRSP. Day 0 denotes the expiration date of the quiet period (the 26th day following the offer date for any IPO prior to July 9, 2002 and the 41st day following the offer date for any IPO after July 9, 2002). Panel A provides daily market-adjusted returns using the equally weighted return for the CRSP index. Panel B provides cumulative market-adjusted returns using the equally weighted return for the CRSP index. We remove all depository shares, reverse LBOs, spin-offs or unit issues from the sample.

Panel A. Market-adjusted returns (MARs)				
Day	Average	t-statistic	n	Median
	MAR%			MAR%
-5	0.430	0.78	18	-0.009
-4	0.255	0.72	18	0.125
-3	-0.430	-1.47	18	-0.158
-2	-0.189	-0.36	18	-0.328
-1	-0.855	-1.72	18	-0.418
0	-0.430	-0.62	18	-0.126
1	-1.032	-1.55	18	-0.271
2	0.368	0.77	18	0.308
3	0.310	0.68	18	-0.080
4	1.088	1.67	18	0.270
5	0.441	0.55	18	0.020
Panel B. Cumulative market-adjusted returns (CMARs)				
Window	Average	t-statistic	n	Median
	MAR%			MAR%
(-2,+2)	-0.428	-1.37	18	-0.310
(-2,-1)	-0.522	-1.27	18	-0.443
(0,+2)	-0.365	-1.03	18	-0.252

The results for banking IPOs are the opposite of what is observed by Bradley et al. (2003). Banks without analyst coverage initiations perform better than banks with analyst coverage initiations and outperform other banks over the five day period centered on the quiet period. The inference based on the large positive returns run-up to the end of the quiet period by Bradley et al. (2003), that traders "buy on the rumor, sell on the news," does not hold for bank stocks.

The event study results support hypothesis 1. Banking stocks experience different returns from industrial stocks at the expiration of the quiet period. For the entire sample of banking stocks the cumulative market model returns are not different than zero. The 98 stocks with analyst coverage initiations have a small positive return of approximately 7 to 13 basis points (depending on the comparison index) over the (-2, +2) event window. The 18 stocks with analyst coverage initiations have larger negative returns of approximately 34 to 43 basis points (depending on the comparison index) over the (-2, +2) event window.

In testing hypothesis 2, we examine the initial underpricing for the sample of banking IPOs and across firms with no analyst coverage initiations and firms with analyst coverage initiations. We look at the initial underpricing as a predictor of analyst coverage. Evidence suggests that stocks with higher underpricing have more analyst coverage, e.g., Rajan and Servaes (1997).

Table 6 presents the underpricing results. Panel A shows the underpricing for the population and for each sub-sample. The mean underpricing for banking stocks is 6.102 percent. For stocks with no analyst coverage the underpricing is 6.407 percent and stocks that receive analyst coverage have an average underpricing of 4.445 percent. Panel B compares the stocks receiving no analyst coverage with stocks receiving analyst coverage. We compare the samples using the Satterthwaite (1946) method because of the large difference in variance. The results of the comparison show no statistical difference between the sample receiving coverage and the sample receiving no coverage.

Table 6. Examination of underpricing

This table describes the initial underpricing for the sample. Panel A presents the amounts of underpricing for the entire sample, firms with no analyst coverage initiations, and firms with analyst coverage initiations. Panel B compares the mean underpricing of each of the sub-samples (firms with no analyst initiations versus firms with analyst initiations) to test for a significant difference in mean underpricing.

Panel A						
N	Mean	Std. dev.	Minimum	Maximum	t-value	Pr > |t|
107	6.102	3.698	10.146	-54.098	6.48	<.0001
91	6.407	4.555	10.513	-54.098	6.03	<.0001
16	4.445	1.522	7.896	-8.333	2.39	0.0288

Table 6 (cont.). Examination of underpricing

Panel B						
Variable	Method	Variances	DF	t-value	Pr > |t|	
PUP	Satterthwaite	Unequal	29.3	0.93	0.3674	

The results from Table 6 suggest that underpricing and differences in analyst coverage initiations share no common link. Therefore, we reject hypothesis 2. Share underpricing is not indicative of increased analyst coverage. Banks do not engage in increased underpricing to encourage analyst coverage initiations.

When comparing the degree of underpricing of bank IPOs to industrial IPOs, bank IPOs have lower underpricing than industrial firms. Loughren and Ritter (2004) show the mean underpricing for stocks is 18.7 percent from 1980 to 2003. For the sub-periods from 1990 to 1998, 1999 to 2000, and 2001 to 2003, the mean underpricing is 14.8, 65.0 and 11.7 percent. We find the mean banking stock underpricing is 6.102 percent from 1990 to 2009. The lowest degree of underpricing found by Loughren and Ritter (2004) from 2001 to 2003 is approximately double this number.

To examine how the changes in the banking regulatory environment change analyst coverage initiations over time (hypotheses 3-5), we propose that analyst coverage initiations will increase over time as a percent of banking IPOs. We use two key legislative events as breakpoints to test how analyst coverage increases. The first breakpoint is September 1995 when the interstate branching portion of the Riegle-Neal Act took effect. The second breakpoint is November 1999 when the changes in permitted financial services for the Financial Services Modernization Act took effect.

Table 7 outlines the annual banking IPOs and analyst following for the period from 1990 to 2009. Bank IPOs are concentrated in the hot IPO market of the late 1990s with over 20 percent of the banks going public in 1998. For banks going public prior to Riegle-Neal (prior to September 1995), one firm (2.7 percent) has analyst coverage initiated. In the interim period between Riegle-Neal and the Financial Services Modernization Act (from September 1995 to November 1999), 11 banks (20.4 percent) have analyst coverage initiated. In the period following the passage of the Financial Services Modernization Act (November 1999 and after), five banks (25 percent) have analyst coverage initiated.

Table 7. Distribution of banking IPOs and analyst following

This table presents the distribution of banking IPOs and analyst initiations over the sample period from 1990 to 2009.

Year	IPOs	Firms with analyst following initiations	Total number of analyst initiations
1990	4	0	0
1991	5	0	0
1992	5	0	0
1993	14	0	0
1994	6	0	0
1995	2	1	1
1996	11	2	6
1997	10	2	3
1998	24	5	6
1999	6	1	1
2000	3	1	4
2001	0	0	0
2002	3	0	0
2003	3	2	5
2004	5	0	0
2005	6	0	0
2006	4	4	6
2007	2	0	0
2008	1	0	0

When comparing the number of analyst coverage initiations to the number of stock offerings and not simply the number of firms with analyst coverage initiations, the percent of analyst coverage initiations increases after each event. In Pre-Riegle-Neal, there is only one analyst initiating coverage. In the interim period between Riegle-Neal and the Financial Services Modernization Act the number of analyst coverage initiations is 20 (37.1 percent when scaled by all banking IPOs during the interim period). For firms with offerings after the Financial Modernization Act, the number of analyst coverage initiations for banking IPOs is 12 (45.8 percent when scaled by all banking IPOs during the period). The increases in coverage to total number of IPOs support rejecting the null hypothesis for hypotheses 3-5.

To further examine the regulatory impact analyst initiations, we use logistic regressions to determine the probability of an analyst initiation given a particular breakpoint. We use several control variables, as suggested in Bradley et al. (2003). Because a large number of new issues trade on the NASDAQ, we include an indicator variable equal to 1 for NASDAQ firms. We control for the number of managing underwriters in the IPO syndicate. Size is the natural log of the total shares issued multiplied by the offer price. Consistent with Bradley et al. (2003) we calculate turnover as the average volume of shares traded for the ten days prior to two days before the expiration of the quiet period scaled by the total number of shares for the offering including any oversold shares. We include short-term performance as a control measure as the day three days before the expiration of the quiet period. We calcu-

late the percent return for the first day of trading as the first day price minus the offer price divided by the offer price.

Table 8 presents the results of the logistic regressions with the marginal effects. Model 1 represents the base condition with only control variables. Size is a significant predictor of analyst coverage at the ten percent level. However, the model provides little predictive power in explaining the probability of an analyst initiation.

Model 2 introduces the indicator, PRE, for the period prior to the enactment of Riegle-Neal. The regression indicates a low probability that a banking firm will have analyst coverage initiated and firm size. Model 3 introduces the indicator, MID, for the period between the enactment of Riegle-Neal and the Financial Services Modernization Act. The regression indicates a likelihood of analyst coverage if the IPO occurs in the period, with firm size a posi-

tive significant predictor of analyst coverage initiations at the ten percent level and the percent underpricing as a negative significant predictor of analyst coverage initiations at the ten percent level.

Model 4 introduces the indicator, POST, for the period after the enactment of the Financial Services Modernization Act. The regression indicates that firm size is a positive significant predictor of analyst coverage initiations at the five percent level. Model 5 examines the effect of including both MID and POST as indicator variables. The regression confirms the probability of analyst coverage initiations is greatest when the IPO occurs between the enactment of Riegle-Neal and the Financial Services Modernization Act. Firm size is a positive predictor of analyst coverage initiations at the 10 percent level. The percent of underpricing for the issuance is a negative predictor of analyst coverage initiations at the 10 percent level.

Table 8. Logistic regressions to predict the probability of analyst coverage initiations over time

This table presents the results for logistic regressions analyzing the probability of analyst coverage initiations over the time period prior to the enactment of the Riegle-Neal Act, the period after the enactment of the Financial Services Modernization Act and the time period between the enactments of the two acts. PRE is an indicator variable equal to 1 when the firm's IPO is before September 1995. MID is an indicator variable equal to 1 when the firm's IPO is after September 1995 and before November 1999. POST is an indicator variable equal to 1 when a firm's IPO is after November 1999. NASDAQ is an indicator variable equal to 1 when a firm is listed on NASDAQ. NUMMAN is the number of managing underwriters in the IPO syndicate. SIZE is the natural log of the market capitalization three days before the end of the quiet period. Turnover (TURNOVER) is the average volume of shares traded for the eleven days prior to two days before the expiration of the quiet period scaled by the total number of shares outstanding. PERF is the degree of short-run performance for days between the IPO and the day three days before the expiration of the quiet period and is measured as the difference between 3 days before the end of the quiet period and the closing price on the IPO date. PUP is the percentage of underpricing for the issuance and calculated as the first day closing price minus the offer price divided by the offer price. The marginal effects for continuous variables indicate the change in probability for a one standard deviation change in the value of the continuous variable. The marginal effect for indicator variable indicates the change in probability based on a change of the independent variable from 0 to 1. The pseudo r^2 presented is calculated using the technique described in McFadden (1973). P-values are in italics below the coefficients.

	(1)		(2)		(3)		(4)		(5)	
		Marginal effects		Marginal effects		Marginal effects		Marginal effects		Marginal effects
Intercept	-12.676		-9.323		-14.828		-14.913		-13.319	
	0.067		*0.202*		*0.103*		*0.455*		*0.085*	
PRE			-1.567	-0.109						
			0.169	*0.068*						
MID					1.033	0.090			1.662	0.149
					0.103	*0.096*			*0.147*	*0.159*
POST							-0.578	-0.047	0.961	0.094
							0.455	*0.381*	*0.468*	*0.538*
NASDAQ	-0.988	-0.134	-1.240	-0.165	-0.841	-0.094	-0.796	-0.096	-1.026	-0.120
	0.443	*0.559*	*0.346*	*0.499*	*0.524*	*0.626*	*0.547*	*0.638*	*0.446*	*0.578*
NUMMGR	0.348	0.033	0.321	0.027	0.492	0.040	0.434	0.039	0.427	0.034
	0.235	*0.235*	*0.272*	*0.291*	*0.122*	*0.122*	*0.179*	*0.167*	*0.186*	*0.198*
Size	0.656	0.063	0.492	0.042	0.731	0.060	0.778	0.070	0.620	0.049
	0.071	*0.062*	*0.199*	*0.193*	*0.058*	*0.046*	*0.052*	*0.037*	*0.133*	*0.121*
Turnover	-76.196	-7.312	-54.002	-4.605	-101.702	-8.286	-98.993	-8.961	-80.043	-6.333
	0.224	*0.176*	*0.405*	*0.385*	*0.161*	*0.090*	*0.182*	*0.111*	*0.290*	*0.244*
PERF	-0.020	-0.002	-0.012	-0.001	-0.014	-0.001	-0.020	-0.002	-0.011	-0.001
	0.643	*0.643*	*0.782*	*0.782*	*0.764*	*0.764*	*0.650*	*0.649*	*0.809*	*0.809*
PUP	-0.036	-0.003	-0.031	-0.003	-0.040	-0.003	-0.040	-0.004	-0.036	-0.003
	0.225	*0.205*	*0.278*	*0.266*	*0.191*	*0.162*	*0.197*	*0.168*	*0.234*	*0.213*
Prob > χ^2	0.022		0.016		0.014		0.032		0.020	
Pseudo r^2	0.148		0.173		0.176		0.153		0.182	

Conclusion and policy implications

We examine the end of the quiet period for 116 banking stocks over the period from 1990 to 2009. Only 15.5 percent have analyst coverage initiated over the two days immediately following the end of the quiet period. The number and frequency of analyst initiations increases over time from 3 percent during the period before the passage of Riegle-Neal to 45.8 percent after the passage of the Financial Services Modernization Act. We introduce and test five hypotheses related to analyst coverage and information asymmetry for banking IPOs.

Hypothesis 1 predicts returns to banking stocks differ over a (-2, 2) event window from returns observed for industrial firms. We find mixed support for hypothesis 1. The abnormal returns for all banking IPOs are not significantly different than zero. As reported in Bradley et al. (2003), industrial stocks have a positive return of 3.1 percent. For banking stocks without analyst coverage initiations, we find returns similar to the returns for their industrial counterparts. For banking stocks with analyst initiations the return differs from the return for industrial stocks. Industrial stocks see returns at approximately 4.1 percent (Bradley et al.) and bank stocks see returns of -43 basis points.

Hypothesis 2 predicts that bank stocks with greater underpricing will have more analyst coverage initiations. We find that banking stocks have greater underpricing for firms that do not have analyst coverage initiations at the end of the quiet period. When comparing the two averages, the difference in the percent underpricing is not statistically different.

Hypotheses 3-5 predict that analyst coverage increases over time as regulation constraining bank operations declines. Bank regulation relaxed constrains on branching across state lines with the passage of Riegle-Neal. We find the degree of analyst coverage increases following the enactment of Riegle-Neal.

Hypothesis 4 contends that bank IPOs will have more coverage following the enactment of Riegle-Neal but less than the coverage seen after the passage of the Financial Modernization Act. We find that analyst coverage initiations are greater in the interim period between the two acts but not in excess of analyst coverage after the enactment of the Financial Services Modernization Act.

Hypothesis 5 contends that banks will have more analyst coverage following the enactment of the Financial Services Modernization Act than the periods prior. The percent of analyst coverage initiations as a function of total banking IPO offerings increases after the enactment of the Financial Services.

Overall, our results show that analyst following is less intense for banking firms than for industrial firms at the end of the quiet period. Further, there is a relatively small price reaction to the initiation of analyst coverage for banking firms. Because the amount of analyst coverage serves proxy for asymmetric information (see Brennan and Subrahmanyan, 1995; Chang, Dasgupta, and Hilary, 2006)[1], we conclude that the regulatory environment for banking firms decreases the attractiveness of initiating coverage. Thus, regulation is a substitute, not complement, for analyst following. Because of the social benefits of analyst following (Jensen and Meckling, 1976), this effect is a negative consequence of banking regulation. As regulators and legislators contemplate regulatory reform in the post-crisis era, this external cost should be acknowledged and accounted for.

References

1. Bradley, Daniel J., Bradford D. Jordan, and Jay R. Ritter (2003). The quiet period goes out with a bang, *Journal of Finance*, 58, pp. 1-36.
2. Brennan, Michael J. and Avanidhar Subrahmanyan (2005). Investment analysis and price formation in securities markets, *Journal of Financial Economics*, 38, pp. 361-381.
3. Chang, Xin, Sudipto Dasgupta, Gilles Hilary (2006). Analyst coverage and financing decisions, *Journal of Finance*, 41, pp. 3009-3048.
4. Core, John E. (2001). A review of the empirical disclosure literature: discussion, *Journal of Accounting and Economics*, 31, pp. 441-456.
5. Field, Laura C. and Jonathan Karpoff (2002). Takeover defenses of IPO firms, *Journal of Finance*, 57, pp. 1857-1889.
6. Francis, Jennifer and Leonard Soffer (1997). The relative informativeness of analysts' stock recommendations and earnings forecast revisions, *Journal of Accounting Research*, 35, pp. 193-211.
7. Jensen, Michael C. and William H. Meckling (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure, *Journal of Financial Economics*, 3, pp. 305-360.
8. Lang, Mark H., and Russel J. Lundholm (1996). Corporate disclosure policy and analyst behaviour, *The Accounting Review*, 71, pp. 467-492.
9. Loughran, Tim and Jay R. Ritter (2004). Why has IPO underpricing changed over time? *Financial Management*, 33, pp. 5-37.

---

[1] Core (2001) suggests an endogenous relationship between analyst coverage and information asymmetry. Increased analyst coverage may reduce information asymmetry or reduced information asymmetry may increase analyst coverage.

10. Lys, Thomas and Sungkyu Sohn (1990). The association between revisions of financial analysts' earnings forecasts and security-price changes, *Journal of Accounting and Economics*, 13, pp. 341-363.
11. McFadden, Daniel (1973). Conditional logit analysis of qualitative choice behavior, in P Zarembka, ed: *Frontiers in Econometrics* (Academic Press).
12. Merton, Robert C. (1987). A simple model of capital market equilibrium with incomplete information, *Journal of Finance*, 42, pp. 483-510.
13. Rajan, Raghuram and Henri Servaes (1997). Analyst following of initial public offerings, *Journal of Finance*, 52, pp. 507-529.
14. Satterthwaite, F.E. (1946). An approximate distribution of estimates of variance components, *Biometrics Bulletin*, 2, pp. 110-114.