ESSAYS ON BANKING IPOS

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The undersigned, appointed by the Dean of the Graduate School, have examined the dissertation entitled:

ESSAYS ON BANKING IPOS

presented by Matthew D. Crook, a candidate for the degree Doctor of Philosophy, and hereby certify that, in their opinion, it is worthy of acceptance.

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To my parents, Fred and Karen Crook, who have helped me at every stage along the path to pursue and fulfill my dream. I cannot adequately express what your love and support has meant to me. Without it, I don't know that I would have been able to make it through some of the obstacles I encountered along my path. I hope that I will always continue to make you proud.

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ABSTRACT

When a firm goes public, the initiation of analyst coverage can provide a benefit to investors and the newly public firm. Newly public firms have a large degree of information asymmetry. Information about the company is released in the prospectus, but the information does not eliminate all of the information asymmetry. Through the IPO process, analysts discover a lot of information about the firm going public. Following the expiration of the quiet period, analysts may provide guidance about the future prospects of the company. Industrial firms do not have a history of releasing operating data and financial information, thus they are forced to rely on analyst coverage to reduce information asymmetry. Banks release quarterly financial information whether public or not. The difference in information environments suggests that the decision to initiate coverage and the value of analyst coverage should differ for banks and industrial firms.

This dissertation explores the market reaction to analyst coverage initiations and the factors leading to coverage initiations by analysts for newly public banking stocks. I use two cases to investigate the timeliness and reaction to analyst coverage initiations. The first case serves as a means to examine how the difference in the information environment affects analyst coverage using the expiration of the quiet period to judge analyst behavior for banks. The second case allows me to look longitudinally at analyst coverage initiations and examine the factors that influence the time until coverage is initiated and if the market reacts differently to coverage with more elapsed time between the expiration of the quiet period and the first initiation of analyst coverage.

Chapter two, my first essay, examines analyst coverage initiations at the end of the quiet period for banking IPOs between 1990 and 2009. I find that analyst coverage is initiated for 15 percent of banks and those banks experience five-day aggregate returns of -43 basis points versus 11 basis points for banks without analyst coverage initiations. Contrary to prior research, I find that underpricing is not indicative of analyst coverage. As the number of operational activities for banks increase with legislative changes, analyst coverage increases.

Chapter three, my second essay, examines the factors leading to the timeliness of analyst coverage initiations and the market reaction to analyst coverage as it is initiated over time. I find that banks with either high insider ownership after the IPO, lower leverage after the IPO, or larger size tend to have earlier coverage initiations. Banks with stock prices deviating from fundamental value do not have a strong tendency to have rapid analyst coverage following the expiration of the quiet period. However, the evidence suggests that extreme deviation from fundamental value increases the time until analyst coverage is initiated. I find that, while the cumulative aggregate returns for banks when analysts initiate coverage is negative, there is no indication that the market is more informed by the initiation of coverage.

Chapter 1: INTRODUCTION

Analyst coverage initiations can be a boon to a newly public company. The announcement can generate high returns for the company (Bradley, Jordan and Ritter 2003). However, banks and bank holding companies have been excluded from most studies on IPOs because of their differences from industrial firms. Banks and bank holding companies comprise a non-trivial segment of publically traded firms. Banks operate differently due to their regulation stemming from the public's need for financial intermediation. The regulation requires more disclosure and alters the information environment for banks. Because banks serve as a critical source of funds and have a different information environment, a study of the impact of analyst coverage initiations for banks apart from industrial firms is needed.

This dissertation attempts to provide insight into the differing information environment for banks by documenting the reaction to analyst coverage initiations and the factors leading to analyst coverage initiations. I deploy two essays to explore the factors leading to analyst coverage initiations, the impact on stock prices when coverage is initiated, and the strength of the information conveyed when coverage is initiated. Bank and bank holding companies are ideal for evaluating the impact of analyst coverage in a different information environment because of the disclosure requirements for having depository insurance.

My first essay, Chapter 2 in this document, focuses on the decision to issue analyst coverage at the end of the quiet period and the market reaction to the end of the

quiet period for banks. Analyst coverage provides signals to the market about the future prospects of the firm going public. The signal reduces the potential loss to investors by reducing the amount of information asymmetry about the newly public firm. Bradley et al. (2003) shows that industrial firms have a 3.1 percent cumulative aggregate return centered on the end of the quiet period with nearly 90 percent of firms receiving at least one analyst coverage initiation within two days of the quiet period's expiration.

Public disclosures of aggregate financial statements are required of all federally insured banks, so the information asymmetries are different for banks when compared to industrial firms. If the market agrees, then the factors leading to analyst coverage and the reaction to the initiation of coverage at the end of the quiet period should differ from that found for industrial firms. I posit that returns for stocks with analyst coverage initiated should be lower than industrial firms and analyst coverage initiations increase with the degree of information asymmetry. I find that very few banks have analyst coverage initiated at the end of the quiet period. I use traditional event study methods to show that banks with coverage initiated have lower cumulative aggregate returns than banks without coverage initiated or industrial firms. I use logistic regressions to show that as the information asymmetry increases due to changes in the information environment the probability of analyst coverage initiations increases. Firm size, a common predictor of analyst coverage, increases the probability of analyst coverage initiations. However, the degree of underpricing, another common predictor of analyst coverage, does not increase the probability of analyst coverage initiations.

My second essay, Chapter 3 in this document, examines the factors for banks that increase and decrease the time until an analyst will initiate coverage and the information

conveyed to the market for the coverage initiations. Analyst coverage has several benefits to firms going public. Firms receiving analyst coverage experience increased liquidity and increases in funding sources. By identifying the factors that have the strongest impact on coverage initiations, managers wishing to receive coverage can structure their IPO to maximize these factors.

My objective for the second essay is to learn more about the factors that increase the time until analysts initiate coverage and if the increased time until coverage is initiated increases the information conveyed by the initiation. My first essay shows that very few banks receive analyst coverage at the end of the quiet period and the cumulative aggregate returns to banks receiving coverage lack statistical significance. I posit that banks with high deviation from fundamental value, high insider ownership post-IPO, larger size, and lower leverage will have earlier analyst coverage initiations. Banks regulated by states ought to have slower coverage initiations. I, also, posit that analyst coverage initiations that occur longer after the IPO should generate cumulative abnormal returns of a greater magnitude than returns generated from those banks receiving coverage more quickly after their IPO.

I find that banks with either high insider ownership after the IPO, lower leverage after the IPO, or larger size tend to have earlier coverage initiations. Banks with stock prices deviating from fundamental value do not have a strong tendency to have rapid analyst coverage following the expiration of the quiet period. However, the evidence suggests that extreme deviation from fundamental value increases the time until analyst coverage is initiated. I find that, while the cumulative aggregate returns for banks when

analysts initiate coverage is negative, there is no indication that the market is more informed by the initiation of coverage.

Chapter 2: ANALYST COVERAGE OF BANKING IPOS AT THE END OF THE QUIET PERIOD

1. Introduction

Analyst coverage provides information about firms to the investing public. Privy to private information about firms, analysts provide a signal about the future success about followed firms (see, e.g., Francis and Soffer 1997, 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 issuing firm may release factual business information related to its business operations, financial developments, or advertisements (and other information) about the firm's services and products under a safe harbor provision.

The quiet period begins when a firm files its registration statement with the 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

[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.

quiet period drive the large positive return, and when considered exclusively, see market-adjusted returns of 4.1 percent. The remaining 24 percent of industrial IPO firms with no analyst coverage initiations in the two days following the end of the quiet period see returns of 10 basis points.

Consistent with previous IPO research, Bradley et al. eliminate banks and savings & loans from their sample, but banks are worth considering separately. Banks differ from industrial firms in both function and structure. 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.

The financial crisis of 2007-2009 provides ample evidence of systemic risk to banks and the banking industry. One major source of systemic failure is the interrelation between banks and other financial intermediaries. The failure of one or two institutions can cause turmoil in the financial system. However, an industrial firm's failure causes turmoil for suppliers, customers, and workers of a singular firm. The threat of shared financial ruin separates banks from industrial firms; therefore, banks should be studied apart from industrial firms.

The investing public relies upon the banking industry to serve as delegated monitors. Banks use information gathered from historical dealings to assess the default probability of a borrower for a given loan. Fama (1985) discusses the value to a borrower for credit extended by a bank and highlights how banks provide inside debt where the debtholder receives additional information about the firm in exchange for the

extension of funds. He further discusses how the extension of credit by banks signals creditworthiness of the borrower. Diamond (1984) discusses the theoretical framework behind delegated monitoring and through his model establishes that the net cost to depositors for using a bank is lower than the cost to an individual attempting to monitor a firm. The monitoring involved in lending sets banks apart from industrial firms and justifies examining banks separately from industrial firms.

Traditional banks secure capital from individuals as depositors with the promise of a modest return on their investment. To insure the stability of the system to the individuals providing funds for banks to extend to borrowers, banks are subject to additional layers of regulation. Banking regulation establishes a means to monitor the behavior of the institutions and insure the safety of the deposits. When banks become publicly traded, management must respond to an additional level of monitoring and expectations from shareholders. Higher regulatory levels warrant the exclusion of banks from a sample studying all IPOs, but the added expectations placed upon newly public banks justifies studying the initial market reaction to bank IPOs.

Bank IPOs are unique offerings. One of the products of the regulations establishing the depository insurance system is a large level of required information disclosure about the health of each bank or savings & loan. When a bank goes public through an equity offering, the available public information regarding the bank significantly exceeds the available information for industrial firms. The call reports provide quarterly financial data on bank holdings. Industrial firms have no such required filings. Based on the information disclosures, banks should be studied separately from

industrial firms. A study of bank IPOs provides the opportunity to examine the pricing and market reactions given a long history of financial reporting.

These differences suggest three research questions about bank stocks and banking firms which I explore in this essay. 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?

I 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 11 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. I 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.

My paper makes three contributions to the literature on the quiet period. First, I 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, I find that analyst coverage initiations for banking stocks are not associated with positive abnormal returns even when analysts issue favorable recommendations. Finally, I 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.

2. Literature Review and Hypothesis Development

To address the first research question, I first examine the regulatory and information environment of banks. Regulatory bodies require banks to submit quarterly financial data in the form of call reports to the FDIC (regardless of being public or private). The quarterly call reports provide insight into the obligations of the bank over time. A bank with a public offering has submitted numerous call reports.[3] When examined together, the call reports for a bank provide material information about bank practices and reduce the information asymmetry associated with future operations.

Private industrial firms and banks do not share the same regulatory environment. No regulating body forces industrial firms to disclose detailed quarterly financial information for public scrutiny prior to a public offering. The SEC requires all firms going public to issue a prospectus containing detailed information about itself. Prospectuses typically contain 3 to 5 years of annual financial data, and some prospectuses contain recent quarterly data. Aside from press coverage and meetings with the public, the prospectus contains most of the information available on an industrial firm going public.

Prior literature shows that information supply drives analyst following and analyst coverage increases with information disclosure (see, e.g., Francis, Hanna, and Philbrick 1997, Lang and Lundholm 1996, Healy and Wahlen 1999). The information flow for

[3] I 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 data set for firm age data. The median age of my sample firms is 11 years.

most banks about operating cash flow, reserves, and liabilities exceeds the information released for industrial firms.

Prior to the expiration of the quiet period, no-one affiliated with the offering firm can release information about the firm's future prospects. Industrial firms lack the wealth of information disclosed by banks. The informational vacuum about an industrial firm's future during the quiet period increases the importance of analyst coverage initiations to reduce information asymmetries in the days immediately after an IPO.

I contend that banks have lower information asymmetry than industrial firms and the lower information asymmetry generates lower abnormal returns over an event window of (-2, 2) centered at the end of the quiet period. The long time series of quarterly financial disclosures for banks serves to reduce information asymmetry. Less need to resolve information asymmetry drives the absence of analyst coverage initiations for most banks. With lower information asymmetry, investment in a bank IPO allows the buyer to invest in a company with less volatility in returns. If a 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 my second research question, I 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. The volume of analyst coverage serves as a proxy for asymmetric information (see, e.g., Brennan and Subrahmanyan, 1995, Chang, Dasgupta, and Hilary 2006).[4] More analyst coverage suggests a lower degree of information asymmetry. Rajan and Servaes (1997) do not exclude banking stocks from their sample, but do split the sample by industrial classifications in their analysis of the determinants of analyst following. If no difference in underpricing and analyst coverage exists for banking stocks, the results found by Rajan and Servaes should hold.

Merton (1987) suggests an alternative explanation for increased analyst coverage for underpriced stocks. He suggests that a firm may choose to spend resources to "generate stories about the firm in the financial press" (p. 501). He rationalizes the cost to the firm as being similar to the cost of marketing the firm's products. For firms seeking capital in the equity market, a low cost resource available to generate following is the discounted offer price for their stock. The discounted price according to Merton's model attracts analyst coverage and potentially expands the investor base in the firm.

Banking stocks have more information releases prior to their IPOs through call reports, but the information release is not comprehensive. Analysts can signal additional information about the future performance of newly public banks. The relation between analyst coverage and underpricing suggests banks with greater underpricing should have more analyst coverage initiations. Additionally, some banks may choose an offer price to

[4] 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.

attract investors through increased analyst coverage initiations. Therefore, I propose Hypothesis 2:

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

My third research question examines the effect of regulatory changes on the initiation of analyst coverage. Regulations dictate the markets an institution may operate in and permissible activities. Additionally, regulations directly affect disclosures and the information environment. Prior studies show analyst coverage depends on firms' information environment (Lang and Lundholm, 1996). Thus, to explore the impact of regulation on analyst coverage, I consider the question, "How do changes in the banking regulatory environment change analyst coverage initiations over time?"

From 1990 to 2009, three events may have affected analyst coverage initiations. Two legislative regulatory events drastically changed banks' operating environment, and one legal settlement changed the flow of information from analysts to investors. The Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994 expanded the ability of banks to branch across state lines. The Financial Services Modernization Act of 1999 lifted restrictions on banks allowing them to offer increased services and products. A third event, a Global Settlement with investment banks, expanded the quiet period for new stock issuances from 25 to 40 days and restricted analysts from roadshows during the promotion of IPOs.[5]

Prior to the passage of Riegle-Neal, bank regulation limited the ability of banks to offer interstate banking.[6] Diversification of assets and liabilities across geographical

[5] http://www.sec.gov/news/speech/factsheet.htm

[6] The limitation on interstate banking was allowed in certain regions by states or only by reciprocal agreements between states and was established through judicial precedent by the Supreme Court in

regions required holding collateralized assets purchased from other institutions. In September 1995, legislation took effect that eliminated the restrictions to interstate branching and allowed geographic diversification through mergers. Riegal-Neal fostered significant change in the banking industry. Bank mergers enabled larger banks to emerge with greater financing needs. This shift in regulatory environment changed the information environment – call reports did not necessarily provide the same historical perspective about a bank's financial history.

Merged banks had both increases in assets and liabilities and in most cases more geographical diversity. The increases to the assets and liabilities of the now larger bank do not reflect the sum of the parts of the previous two banks.[7] The merger process causes organizational changes to both the target and purchasing firm. The evolution of banks under one state's regulations differs from the evolution of a bank subject to another state's regulations. Cultural differences can cause a disruption in a company's information flow. The disruptions in information create information asymmetry within the company and in the information provided to the investment public. With disclosure increases following the merger (press releases, call reports, etc.), the degree of information asymmetry should decrease to a level closer to the level prior to the merger.

The Financial Modernization Act caused an additional shift in the regulatory environment that should change in the information environment. The act enabled banks to deviate from traditional activities into additional product offerings. The expansion of

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Northeast Bancorp, Inc., et al., v. *Board of Governors of the Federal Reserve System* in 1985. The decision allowed banks in states with reciprocal agreements to circumvent the limitation on interstate banking established by the "Douglas Amendment" of the Bank Holding Company Act of 1956.

[7] In an examination of conference calls and information asymmetry, Brown, Hillegiest, and Lo (2004) suggest that companies will engage in conference calls to reduce the level of information asymmetry around unusual events (such as a merger). They also discuss that the information asymmetry may decline mechanically after the event. However they do not provide any indication of the rate of asymmetry decline.

services enabled banks to generate additional income from investment activities and fee services. Profits from newly offered services potentially mask performance and increase the opacity of revenue streams. Activities restricted to investment banks, finance companies, and insurance companies became available to banks. Additionally, the act allowed investment banks, finance companies, and insurance companies to provide services traditionally restricted to depository institutions. The call report information could not convey the same signal as in earlier periods. Additional service required more sophisticated analysis to disentangle the activities and the health of banks going public. The demand for analyst coverage should increase, thus causing the quantity supplied of coverage to increase, and I expect that the Financial Modernization Act would cause the number of analysts initiating coverage to increase.

The Global Settlement[8] in 2002 with investment banks restricted the interaction between analysts and investment bankers. The enacted rules restrict analyst involvement with the investment banking promotion of IPOs to reduce any potential conflict of interest influencing the objectivity of the analyst. Kadan, Madueira, Wang, and Zach (2009) show that affiliated analyst recommendations become less optimistic after the Global Settlement and document a move to a three-tier rating system from the five-tier rating system used earlier. They do not address any loss of analyst initiations, but confirm earlier findings that affiliated analysts are less likely to issue pessimistic recommendations than unaffiliated analysts.

[8] The Global Settlement spurred several changes involving the use of analysts and sell-side research. The change in the quiet period resulted from NYSE Rule 472 and NASD Rule 2711 and went into effect on June 7, 2002. The settlement decision was reached in December 2002 and the enforcement agreement went into effect on April 28, 2003.

Another product of the Global Settlement extended the quiet period from 25 to 40 days. The restricted interaction between analysts and investment bankers should not affect the outside information environment and the information supply for analysis. The increase in time between IPO and information release from an underwriter's analyst department should have little bearing on the initiation of coverage. The reluctance of affiliated analysts to issue pessimistic coverage could constrain analysts from initiating coverage, but any restriction would bias me from finding results related to finding a higher degree of analyst coverage after the enactment of the Financial Services Modernization act.

In summarizing the changes to the regulatory and information environment, two events ought to impact the demand for analyst coverage initiations. Riegle-Neal allowed banks to merge across state lines and potentially reduced the available information about banks. The Financial Services Modernization Act increased the activities permissible for banks to offer and potentially complicated banks' balance sheet information increasing information asymmetry. The Global Settlement with investment banks did not change the information environment. The settlement focused on improving objectivity of analysts and delayed the release of information; neither change should impact the need for information or the volume of initiations. The two legislative changes should impact the demand for analyst following initiations, and I propose the following 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.

3. Data

I collect IPO data from Thomson Financial from January 1990 to December 2009 and find 8151 stock offerings with 187 being from a depository institution or bank holding company. For the 187 banking stocks, I eliminate all depository shares, unit issues, spin-offs, or reverse leveraged buy-outs. I drop issuances without return data in the Center for Research in Securities Prices (CRSP) database. Additionally, to verify that I capture only banking stocks in the sample, I scrutinize any stock with a Standard Industrial Classification (SIC) code[9] 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. The confirmation process included performing a search for the company on EDGAR to look at the firm's prospectus filing. If the prospectus contained information confirming that the firm does not operate in the banking industry, I eliminate the firm from the sample. Table I details the loss of potential sample firms from the sample. Depository shares and firms with insufficient data on CRSP account for most of the losses. I eliminate 10 firms due to a large gap in the time between their listed IPO date and their first trading date. For these firms the first trading date exceeded at least 600 days. The final sample consists of 1146 depository institutions and bank holding companies.

I 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

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

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. I 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. I merge IBES and First Call separately with my sample of IPOs. To get a comprehensive list of all analyst coverage initiations over the sample I merge both analyst coverage and IPO samples to form a unified sample. I remove duplicate initiations on a single day by the same analyst.

I present the summary statistics for the sample in Table II. 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. I 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. I 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.

Panel B provides summary statistics for the 98 firms that do not have any 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 underwriters 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 suggests 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 that receive analyst coverage. I 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 significantly 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.

Table III shows the number of IPOs and analyst coverage initiations over time. Bank IPOs are concentrated in the hot IPO market of the late 1990s. Over 20 percent of

the sample went public in 1998 and are associated with almost 19 percent of the analyst coverage initiations. Of the stocks receiving analyst coverage, four stocks do not get an analyst rating of buy or strong buy. Two analysts rate one stock as a hold. The other three stocks have mixed recommendations with a hold issued by one analyst and at least one buy or strong buy from another analyst.

4. Empirical Methods

To examine the reaction to analyst following and the end of the quiet period for banking stocks, I perform a series of event studies. I model the event study based on the event study performed by Bradley et al. (2003). However, I do not focus strictly on using the NASDAQ index of stocks as the exclusive benchmark for the event study, nor do I exclusively examine stocks with analyst following immediately after the end of the quiet period.

I use three benchmarks for my comparison. 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.[10]

I use the market model to compute abnormal returns for the event studies. I calculate beta similar to the method outlined in Bradley et al (2003) using a post-event estimation over the trading interval from 20 to 120 days following the end of the quiet period. Brown and Warner (1980) provide insight for using this technique. They state that if there is a period of abnormal performance included in the estimation period it is

[10] The SIC codes used to construct the index are 6020, 6021, 6022, 6029, 6030, 6035, 6036, 6090, 6710, 6712, 6719, 6740, and 6790

difficult to assume normality in returns. For periods with abnormal performance inclusion of the event in the estimation period will "increase the variance of the security-specific performance measures" (p. 250).

I examine the market reaction to all banking and depository institutions for the sample and the reaction to the end of the quiet period for the two sub-samples of stocks that do not have analyst coverage initiations at the end of the quiet period and stocks that have analyst coverage initiations. For each sample, I 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, I compare the difference between the sub-samples of firms with and without analyst coverage initiations for first day underpricing. I 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, I report the historical number of analyst coverage initiations and use logistic regression focused on the initiation of analyst coverage. The sample of firms with multiple analyst coverage initiations is limited, so I do not examine the probability of multiple analyst coverage initiations. Instead, I 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), I 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.

5. Results

Table IV provides the event study results for the entire sample of bank IPOs from 1990 to 2009 as compared to the CRSP equally weighted index. Panel A provides the daily market-adjusted returns for the period (-5, 5) centered on the end of the quiet period. Any large positive return off-sets any negative return in the previous or following day. 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. The return is not significantly different from the market return. I conclude that bank stocks receiving coverage behave differently than industrial stocks receiving coverage at the end of the quiet period.

Table V provides the event study results for the sample of bank IPOs from 1990 to 2009 that do not have any analyst following initiations within two days after the expiration of the quiet period. The evidence in Panel A shows no statistically significant daily market-adjusted 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. I 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 VI 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-adjusted returns and over the (-3, 1) window all of the daily returns are negative. Panel B presents the cumulative market-adjusted returns. For all three event windows the return is negative. The small sample size makes it difficult to find strong 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 a signal. Analyst coverage initiations do not signal strength for the bank being followed.

The performance for IPO banking stocks when compared to NASDAQ stocks is no different than when compared to all CRSP stocks. Tables VII – IX provide the event study results for the population of bank IPOs and the samples of stocks receiving and not receiving analyst coverage initiations using equally weighted NASDAQ stocks as the market adjustment. The results presented in Table VII are similar to the results seen in Table IV. Some of the daily market adjusted returns in Panel A are significant at the 5 percent level, but the results do not suggest a trading strategy.

I find consistent results between Table VIII and Table V. In Panel A, no pattern in returns exists for stocks without analyst initiations. None of the results is significant at the 10 percent level. The results presented in Table IX are consistent with the returns in Table VI. The daily return results in Panel A of Table IX are similar to the results discussed in Panel A of Table VI.

When comparing banking stocks IPOs to the index of stocks within their industry, I find that new issues have better performance over the (-2, 2) event window centered on the end of the quiet period. The performance improvement is linked with not having analyst coverage initiated at the end of the quiet period. Tables X – XII provide the event

study results for the bank IPO population and the samples receiving and not receiving analyst coverage initiations at the end of the quiet period using the equally weighted banking stock index. I find similar results for the event study presented in Table X to those presented in Table IV and Table VII. I find similar results in Table XI to those seen in Table V and Table VIII with one exception. Over the (-2, 2) window centered on the quiet period, I find a cumulative market-adjusted return of 13 basis points.

Bradley et al. (2003) examine returns for the quiet period based on a sample period from 1996 to 2000. As a robustness check, Tables XIII – XV present the daily and cumulative market-adjusted returns. I find similar results for the period used in Bradley et al (2003) and my sample period.

When examining stocks with analyst coverage initiations, I find consistent results across all three market index benchmarks. The daily market-adjusted returns and cumulative market-adjusted returns are similar. The results for banking IPOs are the opposite of what is observed by Bradley et al. (2003). Banks without analyst coverage initiations perform significantly 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. If investors buy on rumor of favorable news from analyst in their coverage initiations, the trend of negative returns in Panel A and the larger negative return over the pre-quiet period expiration period when compared to the entire (-2, 2) event window would not be seen.

There is mixed support for Hypothesis 1 from the event study results. 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 adjusted returns are not different than the market return contrary to what is seen in Bradley et al. (2003). 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 centered on the end of the quiet period (similar to Bradley et al.). 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 centered on the end of the quiet period contrary to Bradley et al. The results suggest that initiations of analyst coverage for banking stocks signal a stock with returns below the market return at the end of the quiet period.

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

Table XVI presents the results for first-day underpricing. Panel A shows the degree of 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. I compare the samples using the

Satterthwaite (1946) method due to 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.

The results from Table XVI suggest that underpricing and differences in analyst coverage initiations share no common link. Therefore, I reject Hypothesis 2. Share underpricing is not indicative of increased analyst coverage. The underpricing of stocks with no analyst coverage exceeds the underpricing of stocks that receive analyst coverage initiations. It appears that 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. The lower underpricing for bank IPOs suggests that less money is left on the table. I 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.

To examine how the changes in the banking regulatory environment change analyst coverage initiations over time (Hypotheses 3-5), I propose that analyst coverage initiations will increase over time as a percent of banking IPOs. I 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 III outlines the annual banking IPOs and analyst following for the period of 1990 to 2009. For firms 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 (September 1995 to November 1999), 11 firms (20.4 percent) have analyst coverage initiated. In the period following the passage of the Financial Services Modernization Act (November 1999 and after), five firms (25 percent) have analyst coverage initiated.

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. 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, I use logistic regressions to determine the probability of an analyst initiation given a particular breakpoint. I use several control variables as suggested in Bradley et al. (2003). Because a large number of new issues trade on the NASDAQ, I include an indicator variable equal

to 1 for NASDAQ firms. I 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) I 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. I include short-term performance as a control measured as the day three days before the expiration of the quiet period. I calculate the percent return for the first day of trading as the first day price minus the offer price divided by the offer price.

Table XV presents the correlations between the variables of interest: H3 for the period prior to the enactment of Riegle-Neal, H4 for the period between the enactment of Riegle-Neal and the Financial Services Modernization Act, and H5 for the period after the enactment of the Financial Services Modernization Act. The results of the correlation analysis show no correlation between the control variables or variables of interest.

Table XVI presents the results of the logistic regressions with the marginal effects. Model 1 represents the base condition with only control variables. From the regression, 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 firm will have analyst coverage initiated and firm size is not significant.

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 positive 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 ten 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.

6. Conclusion

I examine the end of the quiet period for banking stocks looking at 116 firms. Only 15.5 percent have analyst coverage initiated over the two days immediately following the end of the quiet period from 1990 to 2009. 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. I 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. I find mixed support for Hypothesis 1. The returns for all banking IPOs are not significantly different than the market return. As reported in Bradley et al., industrial stocks have a positive return of 3.1 percent. For

banking stocks without analyst coverage initiations, I 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. I 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; therefore I reject Hypothesis 2.

Hypotheses 3 – 5 predict that analyst coverage increases over time as regulation constraining bank operations declines. Bank regulation relaxed constraints on branching across state lines with the passage of Riegle-Neal. I find the degree of analyst coverage increases following the enactment of Riegle-Neal. Therefore, I fail to reject Hypothesis 3.

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. I 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. Therefore, I fail to reject Hypothesis 4.

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. Therefore, I fail to reject Hypothesis 5.

Table I: Summary of Sample

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. I 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. I remove firms from the sample under the category, Visual Inspection/Industry Confirmation, have different SIC codes in Thomson Financial and CRSP. I 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

Table II: Summary Statistics

This table provides summary statistics for the sample of depository institutions and bank holding companies with IPOs between 1990 and 2009. I 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. I 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
Panel C – Banking IPO Stocks with Analyst Coverage Initiations (n = 18)					
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

Table III: 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

Table IV: 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. I remove all depository shares, reverse LBOs, spin-offs or unit issues from the sample.

Panel A: Market-adjusted Returns (MARs)

Day	Average MAR%	t-statistic	n	Median 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 MAR%	t-statistic	n	Median 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 V: 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. I remove all depository shares, reverse LBOs, spin-offs or unit issues from the sample.

Panel A: Market-adjusted Returns (MARs)

Day	Average MAR%	t-statistic	n	Median 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 MAR%	t-statistic	n	Median 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 VI: 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. I remove all depository shares, reverse LBOs, spin-offs or unit issues from the sample.

Panel A: Market-adjusted Returns (MARs)

Day	Average MAR%	t-statistic	n	Median 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 MAR%	t-statistic	n	Median 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

Table VII: Event Study Results: Entire Sample (NASDAQ 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 all NASDAQ listings. Panel B provides cumulative market-adjusted returns using the equally weighted return for all NASDAQ listings. I remove all depository shares, reverse LBOs, spin-offs or unit issues from the sample.

Panel A: Market-adjusted Returns (MARs)

Day	Average MAR%	t-statistic	n	Median MAR%
-5	0.542	2.35	116	0.095
-4	0.232	0.84	116	0.160
-3	-0.323	-1.37	116	-0.050
-2	-0.071	-0.31	116	-0.044
-1	0.054	0.24	116	0.096
0	0.038	0.16	116	0.034
1	-0.240	-0.99	116	0.004
2	0.294	1.30	116	0.132
3	-0.053	-0.19	116	0.193
4	0.501	1.73	116	0.183
5	0.587	2.37	116	0.189

Panel B: Cumulative Market-adjusted Returns (CMARs)

Window	Average MAR%	t-statistic	n	Median MAR%
(-2,+2)	0.015	0.16	116	-0.011
(-2,-1)	-0.009	-0.06	116	-0.148
(0,+2)	0.030	0.27	116	0.020

Table VIII: Event Study Results: Banks with no Analyst Initiations (NASDAQ 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 all NASDAQ listings. Panel B provides cumulative market-adjusted returns using the equally weighted return for all NASDAQ listings. I remove all depository shares, reverse LBOs, spin-offs or unit issues from the sample.

Panel A: Market-adjusted Returns (MARs)

Day	Average MAR%	t-statistic	n	Median MAR%
-5	0.565	2.21	98	0.100
-4	0.230	0.72	98	0.197
-3	-0.305	-1.11	98	-0.050
-2	-0.056	-0.22	98	-0.014
-1	0.213	0.88	98	0.111
0	0.123	0.50	98	0.126
1	-0.098	-0.38	98	0.024
2	0.274	1.08	98	0.076
3	-0.125	-0.39	98	0.203
4	0.396	1.23	98	0.175
5	0.613	2.39	98	0.243

Panel B: Cumulative Market-adjusted Returns (CMARs)

Window	Average MAR%	t-statistic	n	Median MAR%
(-2,+2)	0.091	1.00	98	0.042
(-2,-1)	0.079	0.54	98	-0.123
(0,+2)	0.100	0.86	98	0.079

Table IX: Event Study Results: Banks with Analyst Initiations (NASDAQ 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 all NASDAQ listings. Panel B provides cumulative market-adjusted returns using the equally weighted return for all NASDAQ listings. I remove all depository shares, reverse LBOs, spin-offs or unit issues from the sample.

Panel A: Market-adjusted Returns (MARs)

Day	Average MAR%	t-statistic	n	Median MAR%
-5	0.421	0.78	18	-0.052
-4	0.234	0.63	18	0.018
-3	-0.425	-1.43	18	-0.215
-2	-0.298	-0.59	18	-0.306
-1	-0.593	-1.30	18	-0.122
0	-0.624	-0.95	18	-0.147
1	-0.943	-1.42	18	-0.147
2	0.618	1.49	18	0.348
3	0.138	0.33	18	-0.145
4	1.148	1.79	18	0.231
5	0.314	0.40	18	-0.061

Panel B: Cumulative Market-adjusted Returns (CMARs)

Window	Average MAR%	t-statistic	n	Median MAR%
(-2,+2)	-0.368	-1.18	18	-0.134
(-2,-1)	-0.446	-1.07	18	-0.127
(0,+2)	-0.317	-0.90	18	-0.224

Table X: Event Study Results: Entire Sample (Bank 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 all bank and bank holding company stocks[11]. Panel B provides cumulative market-adjusted returns using the equally weighted return for all bank and bank holding company stocks. I remove all depository shares, reverse LBOs, spin-offs or unit issues from the sample.

Panel A: Market-adjusted Returns (MARs)

Day	Average MAR%	t-statistic	n	Median MAR%
-5	0.507	2.18	116	0.108
-4	0.256	0.94	116	0.263
-3	-0.235	-0.98	116	-0.049
-2	-0.058	-0.25	116	-0.095
-1	0.140	0.65	116	0.225
0	0.070	0.30	116	0.158
1	-0.175	-0.72	116	0.016
2	0.302	1.35	116	0.198
3	-0.145	-0.51	116	0.019
4	0.571	2.01	116	0.372
5	0.687	2.72	116	0.321

Panel B: Cumulative Market-adjusted Returns (CMARs)

Window	Average MAR%	t-statistic	n	Median MAR%
(-2,+2)	0.056	0.66	116	0.019
(-2,-1)	0.041	0.30	116	-0.103
(0,+2)	0.065	0.59	116	-0.017

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

Table XI: Event Study Results: Banks with no Analyst Initiations (Bank 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 all bank and bank holding company stocks[12]. Panel B provides cumulative market-adjusted returns using the equally weighted return for all bank and bank holding company stocks. I remove all depository shares, reverse LBOs, spin-offs or unit issues from the sample.

Panel A: Market-adjusted Returns (MARs)

Day	Average MAR%	t-statistic	n	Median MAR%
-5	0.514	2.02	98	0.180
-4	0.264	0.84	98	0.231
-3	-0.184	-0.66	98	-0.049
-2	-0.038	-0.15	98	-0.095
-1	0.287	1.22	98	0.231
0	0.160	0.65	98	0.240
1	-0.020	-0.08	98	0.053
2	0.262	1.04	98	0.069
3	-0.237	-0.73	98	-0.010
4	0.474	1.51	98	0.372
5	0.718	2.76	98	0.474

Panel B: Cumulative Market-adjusted Returns (CMARs)

Window	Average MAR%	t-statistic	n	Median MAR%
(-2,+2)	0.130	1.58	98	0.042
(-2,-1)	0.124	0.85	98	-0.089
(0,+2)	0.134	1.16	98	0.084

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

Table XII: Event Study Results: Banks with Analyst Initiations (Bank 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 all bank and bank holding company stocks[13]. Panel B provides cumulative market-adjusted returns using the equally weighted return for all bank and bank holding company stocks. I remove all depository shares, reverse LBOs, spin-offs or unit issues from the sample.

Panel A: Market-adjusted Returns (MARs)

Day	Average MAR%	t-statistic	n	Median MAR%
-5	0.461	0.80	18	-0.0920
-4	0.184	0.54	18	0.1288
-3	-0.536	-1.79	18	-0.3133
-2	-0.336	-0.70	18	-0.1165
-1	-0.463	-0.95	18	0.1299
0	-0.661	-1.03	18	-0.0469
1	-0.962	-1.38	18	-0.2481
2	0.713	1.90	18	0.4921
3	0.131	0.29	18	0.1085
4	1.167	1.78	18	0.2229
5	0.347	0.43	18	0.0149

Panel B: Cumulative Market-adjusted Returns (CMARs)

Window	Average MAR%	t-statistic	n	Median MAR%
(-2,+2)	-0.342	-1.15	18	-0.0941
(-2,-1)	-0.399	-1.00	18	-0.1641
(0,+2)	-0.303	-0.89	18	-0.1554

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

Table XIII: Event Study Results: Banking Stock IPOs for 1996 to 2000

This table provides event study results for stocks for bank and bank holding companies with an IPO from 1996 to 2000 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). Panel A provides daily market-adjusted returns using the equally weighted return for all bank and bank holding company stocks. Panel B provides cumulative market-adjusted returns using the equally weighted return for all bank and bank holding company stocks. I remove all depository shares, reverse LBOs, spin-offs or unit issues from the sample.

Panel A: Market-adjusted Returns (MARs)

Day	Average MAR%	t-statistic	n	Median MAR%
-5	0.474	1.48	54	0.066
-4	0.240	0.74	54	0.194
-3	-0.240	-0.64	54	0.221
-2	0.048	0.17	54	0.241
-1	-0.085	-0.28	54	0.065
0	-0.196	-0.51	54	-0.035
1	-0.442	-1.29	54	-0.037
2	0.737	2.87	54	0.365
3	-0.344	-0.91	54	-0.039
4	0.947	2.38	54	0.515
5	0.116	0.29	54	-0.096

Panel B: Cumulative Market-adjusted Returns (CMARs)

Window	Average MAR%	t-statistic	n	Median MAR%
(-2,+2)	0.012	0.09	54	0.087
(-2,-1)	-0.018	-0.10	54	-0.054
(0,+2)	0.033	0.20	54	0.282

Table XIV: Event Study Results: Banking Stock IPOs for 1996 to 2000 without Analyst Coverage Initiations

This table provides event study results with no analyst coverage initiations within two days of the quiet period expiration with an IPO from 1996 to 2000 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). Panel A provides daily market-adjusted returns using the equally weighted return for all bank and bank holding company stocks. Panel B provides cumulative market-adjusted returns using the equally weighted return for all bank and bank holding company stocks. I remove all depository shares, reverse LBOs, spin-offs or unit issues from the sample.

Panel A: Market-adjusted Returns (MARs)

Day	Average MAR%	t-statistic	n	Median MAR%
-5	0.401	1.17	43	0.073
-4	0.294	0.76	43	0.246
-3	-0.268	-0.58	43	0.267
-2	0.088	0.29	43	0.266
-1	0.137	0.42	43	0.109
0	0.006	0.01	43	0.091
1	-0.118	-0.34	43	0.007
2	0.629	2.12	43	0.053
3	-0.393	-0.84	43	0.170
4	0.739	1.69	43	0.500
5	0.025	0.07	43	0.022

Panel B: Cumulative Market-adjusted Returns (CMARs)

Window	Average MAR%	t-statistic	n	Median MAR%
(-2,+2)	0.148	1.34	43	0.094
(-2,-1)	0.113	0.71	43	-0.007
(0,+2)	0.172	1.18	43	0.324

Table XV: Event Study Results: Banking Stock IPOs for 1996 to 2000 with Analyst Coverage Initiations

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 from 1996 to 2000 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). Panel A provides daily market-adjusted returns using the equally weighted return for all bank and bank holding company stocks. Panel B provides cumulative market-adjusted returns using the equally weighted return for all bank and bank holding company stocks. I remove all depository shares, reverse LBOs, spin-offs or unit issues from the sample.

Panel A: Market-adjusted Returns (MARs)

Day	Average MAR%	t-statistic	n	Median MAR%
-5	0.763	0.89	11	0.014
-4	0.029	0.05	11	-0.381
-3	-0.131	-0.32	11	0.016
-2	-0.110	-0.14	11	-0.324
-1	-0.952	-1.32	11	-0.828
0	-0.987	-0.92	11	-0.447
1	-1.709	-1.78	11	-0.936
2	1.161	2.29	11	0.963
3	-0.155	-0.36	11	-0.101
4	1.758	1.86	11	0.753
5	0.471	0.36	11	-0.183

Panel B: Cumulative Market-adjusted Returns (CMARs)

Window	Average MAR%	t-statistic	n	Median MAR%
(-2,+2)	-0.520	-1.02	11	-0.169
(-2,-1)	-0.531	-0.79	11	-0.154
(0,+2)	-0.512	-0.90	11	-0.180

Table XVI: 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|
116	6.102	3.698	10.146	-54.098	6.48	<.0001
98	6.407	4.555	10.513	-54.098	6.03	<.0001
18	4.445	1.522	7.896	-8.333	2.39	0.0288

Panel B

Variable	Method	Variances	DF	t Value	Pr > |t|
PUP	Satterthwaite	Unequal	29.3	0.93	0.3674

Table XVII: Correlations between Predictors of Analyst Coverage Initiations

This table presents the correlations between the variables used to predict the probability of a firm having an analyst coverage initiation. 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. PERF is the short-run performance for days between the IPO and the day three days before the expiration of the quiet period. PUP is the percent return for the first day of trading and calculated as the first day price minus the offer price divided by the offer price. P-values are in italics below the correlation value.

	PRE	MID	POST	NASDAQ	NUMMGR	SIZE	TURNOVER	PERF	PUP
PRE	1	-0.5925	-0.3795	0.0213	-0.1778	-0.4254	0.2072	0.0373	0.0228
		<.0001	*<.0001*	*0.8205*	*0.0563*	*<.0001*	*0.0256*	*0.6909*	*0.808*
MID	-0.5925	1	-0.5204	-0.0197	-0.1019	-0.03	0.0751	-0.0621	0.0013
	<.0001		*<.0001*	*0.8341*	*0.2764*	*0.749*	*0.4232*	*0.5075*	*0.989*
POST	-0.3795	-0.5204	1	0	0.3055	0.4855	-0.3059	0.0318	-0.0257
	<.0001	*<.0001*		*1*	*0.0009*	*<.0001*	*0.0008*	*0.7346*	*0.7845*
NASDAQ	0.0213	-0.0197	0	1	-0.2174	-0.2808	-0.1355	-0.1835	-0.0786
	0.8205	*0.8341*	*1*		*0.0191*	*0.0023*	*0.1471*	*0.0487*	*0.4015*
NUMMGR	-0.1778	-0.1019	0.3055	-0.2174	1	0.5079	0.018	-0.0264	-0.1424
	0.0563	*0.2764*	*0.0009*	*0.0191*		*<.0001*	*0.8475*	*0.7787*	*0.1272*
SIZE	-0.4254	-0.03	0.4855	-0.2808	0.5079	1	-0.1513	0.1351	0.1416
	<.0001	*0.749*	*<.0001*	*0.0023*	*<.0001*		*0.105*	*0.1483*	*0.1295*
TURNOVER	0.2072	0.0751	-0.3059	-0.1355	0.018	-0.1513	1	0.0251	0.0468
	0.0256	*0.4232*	*0.0008*	*0.1471*	*0.8475*	*0.105*		*0.7893*	*0.6181*
PERF	0.0373	-0.0621	0.0318	-0.1835	-0.0264	0.1351	0.0251	1	0.1406
	0.6909	*0.5075*	*0.7346*	*0.0487*	*0.7787*	*0.1483*	*0.7893*		*0.1322*
PUP	0.0228	0.0013	-0.0257	-0.0786	-0.1424	0.1416	0.0468	0.1406	1
	0.808	*0.989*	*0.7845*	*0.4015*	*0.1272*	*0.1295*	*0.6181*	*0.1322*	

Table XVIII: 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 > $\chi 2$	0.022		0.016		0.014		0.032		0.020	
Pseudo r^2	0.148		0.173		0.176		0.153		0.182	

Chapter 3: ANALYST COVERAGE INITIATIONS IN BANKING IPOS

1. Introduction

Analyst recommendations provide benefits to investors and to companies issuing securities. Their recommendations enable uninformed investors to make decisions without incurring large costs of information gathering. Merton (1987) suggests that the cost of gathering information about a stock is lower when one already knows about securities that have returns correlated with the returns of the stock. The lower-cost information gathering by analysts improves efficiency and increases funding available to newly public firms. Analysts provide uninformed investors information that can potentially assuage fears related to investing in a newly public firm.

Another benefit of analyst coverage—for both investors and companies—is increased liquidity. Analyst coverage contributes to the degree to which a firm's stock is liquid. Brennan and Subrahmanyan (1995) suggest that the liquidity increase stems from lower adverse selection costs. Using trading volume, quoted spreads, and institutional ownership, Irvin (2003) finds that liquidity improves after coverage initiations. He further suggests that firms "should encourage analyst coverage to capture the incremental liquidity benefits" (p. 433).

Rajan and Servaes (1997) find that new issues with more underpricing tend to have greater analyst following. Bradley, Jordan and Ritter (2003) find similar results associated with analyst coverage initiations. Additionally, Bradley et al. show that

analyst coverage is nearly 90 percent in the first two days after the expiration of the quiet period.

However, analyst coverage initiations and underpricing for bank IPOs do not follow the same pattern as industrial firms. Using a sample from 1990 to 2009, Crook and Howe (2011) show that banks have modest coverage at the end of the quiet period, with only 15 percent of all bank IPOs having analyst coverage initiated.

Additionally, Crook and Howe find that bank IPOs have a mean underpricing of 6.6 percent and that bank stocks that receive analyst coverage are underpriced by only 4.2 percent. By comparison, the mean underpricing for industrial stocks is 18.7 percent (Loughren and Ritter 2004).

Banks differ from industrial firms in their function and regulation. Banks function as a delegated monitor for both private and publicly traded firms, providing household savers a means to invest in corporate securities by investing in financial products offered by the bank. Some banks have investment divisions that produce research and provide advice to investment clients. Crook and Howe (2011) provide evidence that analysts do not provide coverage for the same proportion of banking IPOs as industrial firms at the end of the quiet period. They also find that bank IPOs with analyst coverage initiations at the end of the quiet period underperform the market around the expiration date.

The link between analyst following and stock performance is well documented (see, e.g., Doukas, Kim, and Pantzalis 2005, and Francis and Soffer 1997). Womack (1996) finds that analysts' recommendations strongly influence stock prices for both the time immediately following the recommendation and for months following the

recommendation. D'Mello and Ferris (2000) find that negative stock returns are associated with fewer analysts following the company. However, the findings of Crook and Howe (2011) show the link between analyst following and stock performance does not hold for banks.

The importance of analyst coverage and the difference in analyst coverage initiations for banks versus industrial firms lead me to examine two research questions in this essay. First, what factors influence the timeliness of analyst coverage initiations for banking firms? That is, what are the characteristics that contribute to when analysts initiate coverage? Second, does the market reaction to analyst coverage initiations for banking firms depend on the time elapsed between IPO and coverage initiation?

2. Literature Review and Hypothesis Development

The amount of IPO underpricing is a strong indicator of analyst coverage initiations for industrial firms (Rajan and Servaes 1997) but not indicative of analyst coverage initiations for banks (Crook and Howe 2011). Therefore to address my first research question, I examine the characteristics of banks before they receive analyst coverage initiations to deduce what characteristics of banking stocks influence the time to analyst coverage initiations.

Analysts use their information gathering and expertise to evaluate firms and issue recommendations based on their evaluations. Analyst recommendations help reduce information asymmetry and allow for more efficient pricing of securities. The availability of information drives analyst coverage initiations (see, e.g., Francis, Hanna, and Philbrick 1997, Lang and Ludholm 1996). However, banks release quarterly

financial information in their call reports, but do not have a large degree of analyst coverage initiations in the first few days following their IPO (Crook and Howe 2011).

Individuals act on information when the benefits of acting exceed the costs of the information (Fama 1991). When a bank has a mismatch between price and value in an extreme, either undervalued or overvalued, analysts provide guidance to investors that reduces the information asymmetry associated with the mismatch. Merton (1987) suggests that money managers will expend the resources necessary to market investment strategies to customers. Motivated by interest in and demand for research, analysts will expend similar resources.

As the market price of a bank's stock diverges from fundamental value, analysts see increased benefits of gathering information and initiating coverage. Thus, analyst coverage initiations ought to increase as the difference in fundamental value and stock price increases. Therefore, I propose Hypothesis 1:

Hypothesis 1: Deviations in stock price from fundamental value will increase the speed of analyst coverage initiations.

Investment banks attempt to curry favor to secure future business with clients either through allocating shares of a hot IPO, or through analysts initiating favorable analyst coverage to support the share price of a recent issuance. Doukas et al. (2003) find that strong analyst coverage can cause shares to be overvalued and low analyst coverage can lead stocks to be undervalued. Managers and founding shareholders benefit from the wealth increase from the increased coverage. Evidence suggests that investment banks provide benefits to clients for subsequent business (see, e.g., Womack 1996, Michaely and Womack 1999, Cliff and Denis 2004).

When a bank is chartered, investors provide capital as seed money for lending and initial operations. In some cases, the CEO is a primary shareholder and in other cases the primary shareholder is a monitor of management. In their study of state chartered banks, Sullivan and Spong (2007) find that owner-managers have a mean ownership stake of 37 percent and 86 percent of their personal wealth invested in the bank. For large shareholders monitoring hired-manager banks, their personal wealth invested in the bank is 41 percent. In each case, the primary shareholder has a large concentration of his personal wealth invested in the bank.

A primary shareholder may choose to keep his shares instead of liquidating the shares when the firm goes public. Cashing out by a large shareholder can be a negative signal to potential investors about the future of the company (Leland and Pyle, 1977). To curry favor with insiders wishing to rebalance their portfolio post-IPO, a stock price supported by strong analyst coverage allows them to maximize the proceeds from stock sales. Therefore, I propose Hypothesis 2:

Hypothesis 2: Larger insider ownership following the IPO will increase the speed of analyst coverage initiations.

Several studies have examined the impact of firm size on the initiation of analyst coverage. Bhushan (1989) develops and tests a model to determine which factors influence analyst following and finds that firm size is a strong determinant of analyst following. His explanation for the influence of firm size on analyst following is two-fold. First, the demand for analyst services should be greater for larger firms because larger firms will allow for more liquidity and lower market frictions when trading on information. Second, larger firms are more widely held and analyst coverage enables the generation of more market interest to increase transaction business for their firm.

Subsequent studies have explored analyst coverage and the effect of firm size on the initiation of coverage. Bradley et al. (2003) find that size is a strong predictor of analyst coverage initiations at the end of the quiet period. In analysis similar to Bradley et al., Crook and Howe (2011) find that size is the only significant predictor for analyst coverage for banking IPOs at the end of the quiet period.

Given the arguments made by Bhushan (1989) and the confirmation found by both Bradley et al. (2003) and Crook and Howe (2011), I predict that larger firms will see coverage initiated before smaller firms, ceteris paribus. Because size is a predictor of banking IPO coverage initiations at the end of the quiet period, I expect that larger banks will receive analyst coverage before smaller banks. This reasoning leads to Hypothesis 3:

Hypothesis 3: Analysts will initiate coverage more rapidly for larger banks.

Banks differ greatly from industrial firms because of the high degree of leverage undertaken by banks. A bank is considered well capitalized when its leverage ratio (the ratio of the book value of equity to assets) is above 5 percent.[14] At levels lower than 4 percent, regulators initiate corrective action measures to reduce the risk of bank failure. Because there is no regulatory concern when the ratio exceeds the level at which a bank is well capitalized, little incentive exists for banks to operate at a ratio above the threshold.

When new equity is issued, the equity increase mechanically lowers the factors affecting capitalization requirements and raises the ratio. The newly raised capital can be used for several things, including retiring debt, increasing investments, increasing lending, expanding services, or recapitalizing the bank. However, the increase in assets

[14] 12 CFR part 208, Subpart D

from expansion or decrease in assets from the retirement of debt raises the ratio. The higher ratio signals that a bank may be lending at a lower than optimal level or has the potential to capture more business.

Except for the case where the bank issues equity for recapitalization, the new lending from deploying the new capital from the equity offering is small relative to the potential increase in borrowing to rebalance the leverage ratio to historical levels. The new equity provides management with the ability to borrow and increase the asset pool managed by the bank. The increase in equity allows the bank to incur an equal percent increase in liabilities and insure that the leverage ratio remains unchanged.

The return to the bank's equilibrium leverage ratio signals that the bank will continue to operate in a manner similar to the past. A leverage ratio higher than the bank's historical leverage ratio signals the potential for expansion and can provide analysts with confidence to issue coverage. Therefore, I propose Hypothesis 4:

> Hypothesis 4: A bank with a leverage ratio higher than its historical leverage ratio will have earlier analyst coverage initiations.

When founded, U.S. banks have an option to be chartered at the state or national level. A national bank is chartered and supervised by the Office of the Comptroller of the Currency (OCC) and is a member institution in the Federal Reserve System. State banks are chartered in the state in which they are headquartered and not required to be a member of the Federal Reserve System. A state regulating body and the FDIC supervise state non-member banks. A state bank may choose to be a member institution in the Federal Reserve System and regulated by the Federal Reserve in addition to the state.

National banks may operate in any state under the rules defined by the OCC and Federal Reserve. Several restrictions placed upon lending institutions by states do not

apply to national banks. State charted banks are subject to all restrictions placed upon them by their chartering state. The variance in state regulations allows some state chartered banks to have more options in the services they provide. For example, some states allow banks to engage in insurance underwriting and real estate investment. The differing scopes of operations cause more information asymmetry about state chartered banks operations than nationally chartered banks. The increased asymmetry increases the costs of producing accurate research on public state chartered banks. Therefore, I propose Hypothesis 5:

Hypothesis 5: State chartered banks will see a longer elapsed time before analyst coverage is initiated.

To address my second research question—the relation between the time to initiation and the stock price reaction to the initiation—I compare the market reaction to analyst coverage initiations for banking stocks segmented by time elapsed between the IPO and coverage initiation. Bradley et al. (2003) show that industrial stocks with analyst coverage initiations experience a positive 5-day abnormal return of 4.1 percent at the end of the quiet period. Crook and Howe (2011) shows that banking stocks with analyst coverage initiations experience a negative 5 day abnormal return of 0.44 percent at the end of the quiet period.

Call reports submitted prior to a bank going public provide financial analysts with financial information on which to base their assessment of a bank's financial strength. However, the call reports provide only historical operating data prior to the IPO. Future plans for the use of the proceeds for the IPO are included in the prospectus. Some common reasons for banking IPOs include: retirement of debt, expansion of the capital base for investments, and expansion of the capital base for new loan originations.

However, increases in specific lending categories are not immediately visible to analysts or investors.

The nature of loan origination does not allow for instantaneous expansion. Lending depends on the availability of qualified borrowers and can take several months before the new capital can be deployed. When banks claim that proceeds will go to expansion of their capital base for loan origination, analysts must wait to see if the loans materialize before confirming a return to historical lending ratios. Therefore, analyst coverage initiations shortly after the quiet period may provide little information about the future prospects of the bank.

Michaely and Womack (1999) discuss the incentives of analysts to initiate coverage for IPOs. They find that firms with favorable analyst coverage by underwriters do not perform as well as those with favorable analyst coverage initiated by other brokerages and suggest that analysts may initiate coverage to improve stock prices for IPOs that met with an unfavorable market response. Early initiations of analyst coverage for bank stocks potentially serve as "window dressing" and are discounted by the market. Analyst coverage initiations after more elapsed time should not be issued simply for providing price support for a stock with an unfavorable market response to the IPO. Additional elapsed time allows analysts to gather more information about the bank and insure that the IPO proceeds have been allocated in a manner similar to the pre-IPO period. Therefore, I propose Hypothesis 6:

Hypothesis 6: Analyst coverage of banks initiated with more time elapsed after the IPO are more informative.

3. Data

I collect IPO data from Thomson Financial from January 1990 to December 2009 and find 8151 stock offerings with 187 being from a depository institution or bank holding company. For the 187 banking stocks, I eliminate all depository shares, unit issues, spin-offs, or reverse leveraged buy-outs. I drop issues with insufficient return data for calculating event study returns in the Center for Research in Securities Prices (CRSP) database. Additionally, to verify that I capture only banking stocks in the sample, I scrutinize any stock with a Standard Industrial Classification (SIC) code[15] 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. The confirmation process includes performing a search for the company on EDGAR to look at the firm's prospectus filing. If the prospectus contains information confirming that the firm does not operate in the banking industry, I eliminate the firm from the sample. I eliminate 10 firms because of a large gap in the time between their listed IPO date and their first trading date. For these firms, the first trading date exceeds the announced IPO date by at least 600 days. The remaining sample of firms with the appropriate SIC codes is 116.

I 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. I use both datasets to insure the largest sample of analyst initiations and find additional analyst initiations by merging the

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

analyst coverage for the sample for both analyst databases. I merge IBES and First Call separately with my sample of IPOs. To get a comprehensive list of all analyst coverage initiations over the sample I merge both analyst coverage and IPO samples to form a unified sample. I remove duplicate initiations on a single day by the same analyst.

I gather institution-specific data about total assets, capital requirements, and liabilities on all commercial banks[16] and bank holding companies[17] from the Federal Reserve Bank of Chicago. The data are available for each quarter and are separate for bank holding companies and for commercial banks. I use data from the first quarter of 1989 to the third quarter of 2010.

To insure that banks from the SDC/IBES/FirstCall sample match with the commercial banks or bank holding company in the reports provided by the Federal Reserve Bank of Chicago, I use several methods to insure the match. First, I match the samples using zip codes and the first letter of the bank's name. When the zip code and first letter of the bank's name does not result in a match with the bank, I match banks using the chartering state and the first letter of the bank's name. With each of these methods, I visually confirm that the name of the bank matches with the bank listed in the IPO. Of the 116 banks in the initial sample, the zip code and first letter matching and the state and first letter matching account for 80 of the matching banks.

To increase the number of matches, I examine the SEC filings for each of the remaining 46 banks to determine if any errors in charter state or zip code exist in the data from SDC. I find one error in chartering state and found seven instances where a bank holding company operated solely or conducted most of its business through one holding –

[16] http://www.chicagofed.org/webpages/banking/financial_institution_reports/commercial_bank_data.cfm
[17] http://www.chicagofed.org/webpages/banking/financial_institution_reports/bhc_data.cfm

its commercial bank. Seven of the IPO companies had SIC codes of banks or bank holding companies, but are not federally insured depository institutions. These institutions include pay-day loan corporations, electronic check clearing service providers, and casino ATM providers. Twenty-one banks and bank holding companies could not be matched with call report or bank holding company data and were dropped from the sample. The final sample of banks and bank holding companies is 88.

Table I presents the summary data for the insured financial institutions with analyst coverage initiated in the sample. Seventy-eight banks receive analyst coverage initiations between the expiration of the quiet period and four years after their IPO with a median of 49 days after the quiet period for coverage initiation. The sample size falls from 88 to 78 because four banks fail to receive analyst coverage and six banks were unable to be matched to call reports after their IPO. A majority of the sample are bank holding companies. The banks in the sample tend to be slightly less leveraged when coverage is initiated than their historical leverage.

4. Empirical Methods

To examine my first research question, the factors that contribute to the timeliness of the initiation of coverage, I first conduct univariate tests to examine which factors outlined in Hypotheses 1 to 5 have a significant effect on the time to analyst coverage.

To test H1, I generate a measure of deviation from fundamental value as the difference between the ratio of market to book for banking stocks and the average market to book for the banking industry. Using a population of banking stocks I determine the average market to book across the industry. I winsorize the data at the first and ninety-ninth percentiles to remove the effect of outliers on the average book to market ratio. To

measure high deviation of price from fundamental value, I divide the distribution into thirds. I judge that a bank has a high deviation if the market to book for the IPO bank is within the upper third or within the lower third.

For my sample of banking IPOs, I calculate market to book using the market capitalization ten days prior to the expiration of the quiet period and the book value is from the first call report or bank holding company report after the IPO. Because I am not concerned with the direction of deviation, either extreme undervaluation or overvaluation, I use the absolute value of the deviation for my tests. To denote high deviation from the industry average market to book, I use an indicator variable in my regressions.

To test H2, I use the value of insider ownership as provided by Thomson Financial. The exact level of inside ownership is not available at the time analyst coverage is initiated, so I use the value of insider ownership immediately following the IPO. Given the frequency of lock-up provisions, this approach is reasonable.

To test H3, I use the natural log of the market value of equity as the size of the bank. I calculate the market value of equity three days prior to the expiration of the quiet period.

To test H4, I use the book value of equity scaled by total assets to proxy for the leverage of the bank. Actual bank leverage, the core capital scaled by total assets, is unavailable. The core capital is a field kept undisclosed for banks and bank holding companies in the data available from the Federal Reserve Bank of Chicago. I calculate the change in leverage as the leverage when coverage is initiated minus the historical

leverage of the bank. Historical leverage is the average leverage in the four years prior to analyst coverage.

To test H5, I get the charter information from the bank holding company and call report data. All bank holding companies are regulated by the Federal Reserve, so they are all considered for my tests as having the Federal Reserve as their chartering organization.

After the initial testing, I include several control variables identified by Crook and Howe (2011) as affecting the probability of analyst coverage initiations. I use the percent first day underpricing, offer size, firm age, and three time period indicators (PRE, MID, and POST). The time indicators allow for a broad examination of time effects. PRE is an indicator variable denoting that the bank IPO occurred before September 1995. MID is an indicator variable denoting that the bank IPO occurred between September 1995 and November 1999. POST is an indicator variable denoting that the bank IPO occurred after November 1999.

My final examination of each hypothesis is a multivariate regression using the variables significant in the univariate testing. I use one measure of deviation from fundamental value in combination with the other factors that may contribute to the speed of initiation of analyst coverage.

To examine my second research question about the information content of analyst coverage initiations, I use event study techniques to generate cumulative aggregate returns over a small event window, (-2, +2) days centered on the initiation of analyst coverage. I look at three different indexes, all CRSP stocks, all NASDAQ stocks, and an index of bank and bank holding company stocks, to compare returns. I aggregate returns

for the sample to determine the market reaction to analyst coverage initiations. In addition to the aggregate returns, I examine the absolute value of returns to see if the magnitude of returns increases with the passage of time before the first initiation of coverage.

5. Results

Table II provides the univariate results for Hypotheses 1 to 5 for the sample of bank IPOs with FDIC insurance from 1990 to 2009. Regression 1 examines how deviation from fundamental value affects the time until the initiation of coverage. The model has very little explanatory power and the coefficient is insignificant, but the direction denotes that deviation increases the time to coverage.

Regression 2 tests how extreme deviation from fundamental value affects the time until initiation coverage. The model has very little explanatory power, but the direction denotes that extreme negative or positive deviation from the average increases the time to analyst coverage.

Regression 3 examines how insider ownership affects the speed at which analyst coverage is initiated. Higher insider ownership significantly reduces the time to analyst coverage. Regression 4 shows that a bank with less leverage than its historical leverage tends to have analyst coverage initiated more rapidly. The result is significant at the 10 percent level. Regression 5 shows that the size of the bank reduces the time to analyst coverage initiations and is significant at the 5 percent level.

Regressions 6 to 8 show that the supervisory organization has no significant effect on analyst coverage initiations. No significant results are found for regressions probably because of the lack of dispersion in the sample. Seventy-one of the banks in the sample

are bank holding companies and regulated by the Federal Reserve leaving only seven banks regulated by a national or state charter.

Table III explores how the results from Table II are mitigated by the time of the offering, the degree of IPO underpricing, the offer size, and age of the bank. The introduction of control variables does not change the directional effect of any of the variables that contribute to analyst coverage initiations. The significance levels are reduced as are the magnitudes of the coefficients on the variables. However, insider ownership and size still remain significant at the 5 percent level.

Table IV examines the combinations of deviation between intrinsic value and price, insider ownership, size and change in leverage. I run three series of tests as shown in Panels A, B, and C. Panel A tests the effect of the deviation from fundamental value. Panel B tests the effect of high deviation from fundamental value. Panel C tests the effect of the combination of deviation from fundamental value and high deviation from fundamental value.

Panel A shows that deviation from fundamental value does not have a significant effect on the number of days until coverage is initiated. The sign of the coefficient shows that greater deviation increases the time to analyst coverage, which is inconsistent with Hypothesis 1. Deviation from fundamental value is significant at the ten percent level when all elements are included in the regression. Insider ownership after the IPO fails to be significant in any of the regressions.

The direction of the coefficient on insider ownership is consistent with Hypothesis 2. Size is a significant predictor of reduced days to coverage initiations at the one percent level in both Regressions 4 and 5, consistent with Hypothesis 3. A higher

deviation from the historical leverage of the bank reduces the number of days until coverage is initiated for bank stocks, which is consistent with Hypothesis 4. . An increase in size of three percent or approximately $2 million (in Regression 2) will reduce the time until analyst coverage is initiated by one day. For Regression 5, an increase in size by 0.66 percent or approximately $400 thousand will reduce the time until analyst coverage initiation by one day.

Panel B shows that extreme deviation from fundamental value increases the time until analyst coverage is initiated. Higher insider ownership reduces the time before coverage initiation consistent with the results in Panel A. The results are significant at the ten percent level and an increase in insider ownership of one standard deviation from the mean will decrease the time to analyst coverage by about 54 days. Consistent with Panel A, size is a significant predictor of reduced time to analyst coverage initiations and the results are significant at the one percent level

Consistent with Panel A, a bank with a higher leverage ratio than the bank's historical leverage results in reduced time until analyst coverage is initiated. A change in the deviation of the leverage ratio by one standard deviation results in coverage initiated about 5 days earlier. The change in size has results similar to those seen in Panel A.

Panel C yields similar results to those seen in Panels A and B. The deviation from fundamental value is not a significant predictor of days to coverage. However, when moderated by the indicator variable denoting a more extreme deviation from fundamental value, the coefficient on deviation from fundamental value changes direction, consistent with Hypothesis 1. Insider holdings, size, and a higher leverage ratio than historically remain significant, consistent with Hypotheses 2, 3, and 4.

To examine the market perception of information contained in slower time to analyst coverage, I use event studies comparing my sample firms to several indexes. Additionally, I compare the absolute value of returns across time. I use the absolute value of returns, because the absolute value eliminates the need for considering the buy, sell, or hold recommendation of the analyst initiating coverage.

Table V provides the event study results for the sample compared to the CRSP equally weighted index. Panel A provides the daily market-adjusted returns for the period (-5, 5) centered on the day when analyst coverage is initiated. Panel B provides cumulative returns for three event windows. The cumulative market return for the (-2, 2) window is negative 20 basis points and is both statistically significant (at the 5 percent level) and economically significant. The two windows that split the event window into pre- and post- segments are both negative. The post announcement is higher in magnitude and statistically significant at the 10 percent level. This result suggests that first time coverage initiations have a negative effect on bank stock prices, consistent with Hypothesis 6.

Table VI provides event study results that compare the performance of bank stocks receiving analyst coverage to an equally weighted index of NASDAQ stocks. The results are consistent with those found for when bank returns are compared to the CRSP equally weighted index. The cumulative market return for the (-2, 2) window is negative twenty basis points and is both statistically significant (at the 5 percent level) and economically significant.

Table VII provides the event study results for the sample compared to an equally weighted index of bank and bank holding company stocks. The results are consistent

with the results for both the CRSP and NASDAQ equally weighted indexes. However, the returns are nine basis points lower and lack the statistical significance seen for the other two indexes.

The event studies do not provide conclusive evidence as to the informative nature of coverage initiations over time. Overall, the event studies suggest that analyst coverage of banks is not seen as favorable for banks and bank holding companies.

Figure I provides a visual description of the absolute value of returns over time. The figure shows that, regardless of the index the returns are compared to, there is no discernable trend in returns. Except for one return, the absolute value of returns ranges from zero to about 1.5 percent. The one anomalous return occurs 1298 days after the end of the quiet period. The figure does not yield a pattern in the returns when coverage is initiated.

Figure II provides a visual description of the absolute value of all three comparison indexes. The absolute values of returns for the three indexes tend to mirror each other.

Panel A of Table VIII provides a "bucket" approach to cumulative aggregate returns for the equally weighted CRSP index. The absolute value of returns ranges from 53 basis points to 77 basis points. The average absolute value of returns is 65 basis points with a standard deviation of 51 basis points. The return of 77 basis points in the last category is driven by the high return seen on Figure 1 at 1298 days. Figure III provides a visual image of the absolute value of the bucketed returns.

Panel B of Table VIII presents a modified distribution of the absolute value of returns. The panel has the point at 1298 days removed and, the average cumulative

aggregate return drops from 77 basis points to 50 basis points. Figure IV provides a visual image of the data presented in Panel B.

6. Conclusion

I examine the factors contributing to analyst coverage initiations over time for bank stocks from 1990 to 2009. I identify 78 banks and bank holding companies with 50 percent receiving analyst coverage in the first month after the expiration of the quiet period. I identify five factors that could contribute to time until analyst coverage is initiated.

Hypothesis 1 examines the influence of market price deviations from fundamental value on analyst coverage initiations and predicts that deviations in stock price from fundamental value reduces time to analyst coverage initiations. I find that the deviation from fundamental value causes more time to elapse before coverage is initiated, but most of the results are not statistically different from zero. More extreme cases of deviation from fundamental value further increase the time to coverage initiations. Only when deviation is paired with the indicator for extreme deviation does deviation suggest a more rapid coverage initiation, but the result is not statistically different than zero. Therefore, I reject Hypothesis 1.

Hypothesis 2 predicts that higher insider ownership following the IPO will increase the speed at which analysts tend to initiate coverage. When considered separately, higher insider ownership reduces the time to analyst coverage initiations. When considered with other factors, higher insider ownership still reduces the time to coverage. A one standard deviation change in the insider ownership reduces the time to analyst coverage initiations by about 54 days. Therefore, I fail to reject Hypothesis 2.

Hypothesis 3 predicts that large banks will have more rapid analyst coverage initiations. Bank size as measured by the natural log of market capitalization reduces the time to analyst coverage in most cases. In most cases, size reduces the time to coverage initiations. A change of 0.66 percent to 3 percent (depending on the model) reduces the time until analyst coverage is initiated by one day. Therefore, I fail to reject Hypothesis 3.

Hypothesis 4 predicts that banks with less leverage when compared to their historical leverage will have earlier analyst initiations. Across every test, banks with lower leverage than historical levels reduce the time to analyst coverage. The time to coverage is reduced by about 5 days. Therefore, I fail to reject Hypothesis 4.

Hypothesis 5 suggests that state chartered banks will see longer elapsed time before analyst coverage is initiated. The univariate tests of the dependence of charter and time to analyst coverage initiations does not reveal results statistically different from zero. Therefore, I reject Hypothesis 5.

Hypothesis 6 contends that analyst coverage initiations after more elapsed time will convey more information to the market. Using the absolute value of returns, the magnitude of returns should be consistently different across time. The absolute value of returns over time fails to yield any discernable pattern. If returns were more informative as time elapsed, we would see a pattern in the data. Therefore, I reject Hypothesis 6.

Overall, the results suggest factors that influence when analysts choose to initiate coverage for banking stocks. Analysts will more readily initiate coverage when the bank has a high degree of insider ownership after the IPO occurs. Larger banks will see more rapid initiations of coverage. Banks with a lower degree of leverage will see coverage

before banks with higher leverage, ceteris paribus. Deviation from fundamental value and the bank's supervisory authority do not have a significant effect on the initiation of coverage. Coverage initiated after more elapsed time does not contain additional information.

Table I: Summary of Control Variables

This table provides summary statistics for the sample of banks with IPOs between 1990 and 2009. I delete all American Depository Shares, reverse leverage buyouts, unit issues, spin-offs, firms with no listing on CRSP and firms that do not receive analyst coverage. Panel A describes the population of insured banks and bank holding companies. Panel B provides descriptive information about governing bodies and the time period in which the bank or bank holding company goes public. CHFD is the days elapsed between the end of the quiet period and the initiation of analyst coverage. MEBE is the ratio of market value of equity to book value of equity calculated ten days prior to the expiration of the quiet period. DFV is the absolute value of the deviation between the industry average and banking IPO ratio of market value of equity to book value of equity. INSHA is the percentage of insider ownership after the initial public offering. LFMV is the natural log of the market value of three days prior to the expiration of the quiet period. ΔLEV is the difference in the leverage ratio at the time of coverage initiation and the historical leverage ratio of the bank scaled to a percentage. AGE is the age of the bank at the time of IPO. OFFER is the number of shares in the IPO multiplied by the offer price. LOFF is the natural log of the OFFER. PUP is the percent of underpricing at the time of the IPO. FEDRES is an indicator variable denoting that the bank or bank holding company is monitored by the Federal Reserve. NATION is an indicator variable denoting that the bank has a national charter. State is an indicator variable denoting that the bank has a state charter. PRE is an indicator variable denoting that the bank IPO occurred before September 1995. MID is an indicator variable denoting that the bank IPO occurred between September 1995 and November 1999. POST is an indicator variable denoting that the bank IPO occurred after November 1999.

Panel A: Non-indicator Variables for Banks and Bank Holding Companies with FDIC Insurance

Variable	N	Mean	Median	Std Dev	Minimum	Maximum
CHFD (Days)	78	189.01	49.50	325.27	0	1597
MEBE	62	1.645	1.493	0.604	0.437	3.537
DFV	62	0.438	0.247	0.470	0.015	2.115
INSHA	54	32.58	29.67	17.96	3.10	69.00
LFMV	77	18.005	17.945	0.990	15.939	20.932
ΔLEV	63	0.015	0.013	0.022	-0.031	0.087
AGE (Years)	78	17.69	10.50	23.34	0	100
OFFER (mil $)	78	37,838,461	19,320,000	106,998,462	4,500,000	947,801,250
LOFF	78	16.851	16.777	0.834	15.320	20.670
PUP	78	5.904	4.555	9.710	-54.098	27.609

Panel B: Indicator Variables for Banks and Bank Holding Companies with FDIC Insurance

	N	Number
DFNI	62	28
FEDRES	78	71
NATION	78	1
STATE	78	6
PRE	78	19
MID	78	35
POST	78	24

Table II: Univariate Tests for Time to Analyst Coverage Initiations

The following table presents the results for univariate regressions comparing each of the variables to the time before analyst coverage initiations. P-values are listed below the regression coefficients in italics.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Intercept	127.886	113.353	385.118	214.7432	2427.506	214	183.519	192.458
	0.005	*0.0105*	*0.0001*	*<.0001*	*0.0003*	*0.0877*	*<.0001*	*<.0001*
DFV	39.363							
	0.5687							
DFNI		70.326						
		0.2751						
INSHA			-6.251					
			0.015					
ΔLEV				-28.704				
				0.0755				
LFMV					-124.188			
					0.0007			
FEDRES						-27.451		
						0.8329		
NATION							428.4805	
							0.1925	
STATE								-44.7917
								0.7482
N	62	62	55	52	78	78	78	78
R^2	0.0054	0.0198	0.1084	0.0526	0.1415	0.0006	0.0222	0.0014

Table III: Regressions with Controls

The following table presents regressions associated with each of the hypotheses using time to analyst coverage initiations as the dependent variable with control variables introduced in Crook and Howe (2011). P-values are listed below the regression coefficients in italics.

	(1)	(2)	(3)	(4)	(5)	(6)
Intercept	946.802	-831.907	-686.668	5296.785	1014.690	-157.262
	0.2322	*0.2286*	*0.2982*	*0.0013*	*0.2156*	*0.8354*
DFV		96.513				
		0.1597				
DFNI			167.078			
			0.0077			
INSHA				-6.463		
				0.0072		
LFMV					-26.615	
					0.7161	
ΔLEV						-24.048
						0.1177
PUP	-2.526	-5.802	-6.577	-2.804	-2.221	-2.877
	0.4678	*0.063*	*0.0237*	*0.4416*	*0.537*	*0.3595*
PRE	335.884	321.487	351.973	-135.670	334.315	328.001
	0.0013	*0.0003*	*<.0001*	*0.4655*	*0.0015*	*0.0008*
MID	44.039	117.498	120.068	-166.726	38.612	102.931
	0.5996	*0.1165*	*0.0925*	*0.2062*	*0.6523*	*0.2216*
AGE	1.020	1.399	1.551	-0.519	1.205	0.727
	0.4823	*0.233*	*0.1661*	*0.7527*	*0.4362*	*0.5807*
LOFF	-51.185	47.862	36.856	-282.836	-26.773	14.188
	0.2594	*0.2275*	*0.3317*	*0.002*	*0.7413*	*0.7417*
N	78	62	62	54	78	61
R^2	0.2384	0.2861	0.3501	0.3705	0.2389	0.2735

Table IV: Factors Contributing to the Arrival of Analyst Coverage Initiations

This table presents the multivariate regressions using time to analyst coverage initiations as the dependent variable. In each panel, a differing measure for the change in intrinsic value is used. P-values are listed below the regression coefficients in italics.

Panel A: Regressions Using Model 1 Approximations for Intrinsic Value					
	(1)	(2)	(3)	(4)	(5)
Intercept	193.634	751.232	166.211	2305.006	2999.655
	0.024	*0.262*	*0.002*	*0.005*	*0.001*
DFV	29.471	57.696	47.177	87.862	125.055
	0.701	*0.423*	*0.507*	*0.242*	*0.092*
INSHA	-2.436			-3.084	-3.043
	0.285			*0.151*	*0.139*
LFMV		-34.546		-116.151	-151.486
		0.350		*0.010*	*0.001*
ΔLEV			-22.358		-35.064
			0.153		*0.045*
N	43	62	59	43	42
R^2	0.029	0.202	0.040	0.183	0.295
Panel B: Regressions Using Model 2 Approximations for Intrinsic Value					
	(1)	(2)	(3)	(4)	(5)
Intercept	187.195	963.677	153.284	2418.595	2942.472
	0.025	*0.159*	*0.004*	*0.002*	*0.000*
DFNI	117.064	102.372	70.719	168.793	173.759
	0.145	*0.140*	*0.291*	*0.028*	*0.019*
INSHA	-3.200			-3.747	-3.423
	0.152			*0.068*	*0.085*
LFMV		-47.319		-122.564	-148.654
		0.212		*0.004*	*0.001*
ΔLEV			-21.296		-31.226
			0.167		*0.057*
N	43	62	59	43	42
R^2	0.076	0.046	0.052	0.254	0.344

Panel C: Regressions Using Model 3 Approximations for Intrinsic Value						
	(1)	(2)	(3)	(4)	(5)	(6)
Intercept	116.943	194.532	963.537	154.540	2333.507	2934.639
	0.013	*0.020*	*0.162*	*0.005*	*0.004*	*0.001*
DFV	-25.052	-123.338	-22.564	-12.443	-68.246	-4.226
	0.794	*0.280*	*0.814*	*0.902*	*0.520*	*0.968*
DFNI	86.653	215.428	116.951	79.094	221.153	176.966
	0.338	*0.079*	*0.211*	*0.410*	*0.051*	*0.110*
INSHA		-2.881			-3.549	-3.412
		0.198			*0.090*	*0.093*
LFMV			-47.131		-117.668	-148.224
			0.218		*0.007*	*0.001*
ΔLEV				-20.993		-31.055
				0.183		*0.071*
N	62	43	62	59	43	42
R^2	0.021	0.104	0.047	0.052	0.262	0.344

Table V: Event Study Results: 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 day analyst coverage is initiated. 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. I remove all depository shares, reverse LBOs, spin-offs or unit issues from the sample.

Panel A: Market-adjusted Returns (MARs)

Day	Average MAR%	t-statistic	n	Median MAR%
-5	0.145	0.56	84	0.156
-4	-0.300	-1.33	84	0.006
-3	0.223	0.69	84	0.043
-2	0.217	0.85	84	0.047
-1	-0.555	-2.24	84	-0.320
0	-0.388	-1.42	84	-0.184
1	-0.121	-0.49	84	-0.183
2	-0.136	-0.49	84	-0.004
3	-0.039	-0.14	84	-0.055
4	0.207	0.87	84	0.114
5	0.167	0.61	84	0.066

Panel B: Cumulative Market-adjusted Returns (CMARs)

Window	Average MAR%	t-statistic	n	Median MAR%
(-2,+2)	-0.197	-2.23	84	-0.204
(-2,-1)	-0.169	-1.26	84	-0.139
(0,+2)	-0.215	-1.72	84	-0.209

Table VI: Event Study Results: NASDAQ index

This table provides event study results for the entire sample of bank and bank holding companies with FDIC insurance with an IPO from 1990 to 2009 as reported in Thomson Financial with return data available in CRSP. Day 0 denotes the day analyst coverage is initiated. 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. I remove all depository shares, reverse LBOs, spin-offs or unit issues from the sample.

Panel A: Market-adjusted Returns (MARs)

Day	Average MAR%	t-statistic	n	Median MAR%
-5	0.182	0.71	84	0.140
-4	-0.311	-1.38	84	-0.012
-3	0.242	0.75	84	0.099
-2	0.235	0.92	84	0.056
-1	-0.572	-2.32	84	-0.346
0	-0.440	-1.68	84	-0.104
1	-0.047	-0.19	84	-0.105
2	-0.174	-0.63	84	-0.057
3	-0.079	-0.28	84	-0.094
4	0.256	1.11	84	0.141
5	0.123	0.45	84	0.011

Panel B: Cumulative Market-adjusted Returns (CMARs)

Window	Average MAR%	t-statistic	n	Median MAR%
(-2,+2)	-0.200	-2.26	84	-0.176
(-2,-1)	-0.168	-1.26	84	-0.114
(0,+2)	-0.220	-1.75	84	-0.156

Table VII: Event Study Results: Bank index

This table provides event study results for the entire sample of bank and bank holding companies with FDIC insurance with an IPO from 1990 to 2009 as reported in Thomson Financial with return data available in CRSP. Day 0 denotes the day analyst coverage is initiated. 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. I remove all depository shares, reverse LBOs, spin-offs or unit issues from the sample.

Panel A: Market-adjusted Returns (MARs)

Day	Average MAR%	t-statistic	n	Median MAR%
-5	0.200	0.80	84	0.285
-4	-0.283	-1.21	84	0.001
-3	0.262	0.81	84	0.128
-2	0.230	0.95	84	0.058
-1	-0.440	-1.73	84	-0.112
0	-0.397	-1.52	84	-0.172
1	0.132	0.53	84	-0.012
2	-0.090	-0.34	84	-0.007
3	-0.044	-0.16	84	-0.122
4	0.396	1.68	84	0.182
5	0.172	0.65	84	0.098

Panel B: Cumulative Market-adjusted Returns (CMARs)

Window	Average MAR%	t-statistic	n	Median MAR%
(-2,+2)	-0.113	-1.31	84	-0.063
(-2,-1)	-0.105	-0.80	84	-0.126
(0,+2)	-0.118	-0.94	84	-0.076

Table VIII: Analyst Coverage Initiations over Time

This table presents the speed at which analysts initiate coverage over time. ABS(CAR) is the absolute value of cumulative aggregate returns. Panel A presents the timeliness of coverage for the sample of 82 banks with available returns. Panel B presents the timeliness of coverage for 81 banks with the return outlier at 1298 days removed from the sample.

Panel A: All Banks with Analyst Coverage and Returns			
Time (days)	Banks	Percent of Total	ABS(CAR)
0 to 2	13	15.85%	0.612
3 to 30	28	34.15%	0.648
31 to 90	13	15.85%	0.649
91 to 180	8	9.76%	0.711
181 to 365	6	7.32%	0.664
365 to 730	7	8.54%	0.534
731+	7	8.54%	0.765
Panel B: Banks with Analyst Coverage with Outlier Removed			
Time (days)	Banks	Percent of Total	ABS(CAR)
0 to 2	13	16.05%	0.612
3 to 30	28	34.57%	0.648
31 to 90	13	16.05%	0.649
91 to 180	8	9.88%	0.711
181 to 365	6	7.41%	0.664
365 to 730	7	8.64%	0.534
731+	6	7.41%	0.495

Figure I: Market Reaction to Analyst Coverage

The following graph illustrates the cumulative abnormal returns when compared to the CRSP equal weighted index over time to analyst coverage initiations for banking IPOs. Market reaction is measured as the absolute value of the cumulative abnormal return over a (-2, 2) event window. In the event that multiple firms see analyst coverage initiations on a single day, the average absolute value of the cumulative abnormal return is used. The first day of coverage (noted as Day 0 in the graph) is the expiration of the quiet period. For ease of presentation, days are expressed as the base ten logarithms of days.

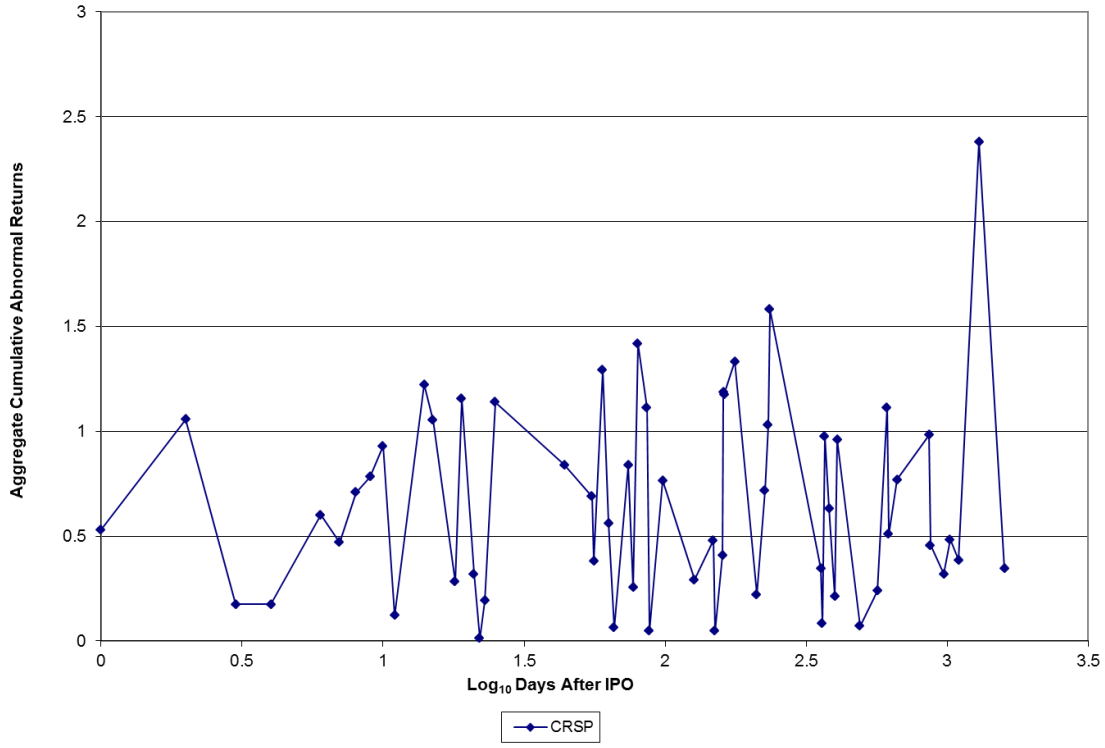


Figure II: Market Reaction to Analyst Coverage with Multiple Indexes

The following graph illustrates the cumulative abnormal returns when compared to the CRSP equal weighted index, the NASDAQ equally weighted index, and an index of banking stocks over time to analyst coverage initiations for banking IPOs. Market reaction is measured as the absolute value of the cumulative abnormal return over a (-2, 2) event window. In the event that multiple firms see analyst coverage initiations on a single day, the average absolute value of the cumulative abnormal return is used. The first day of coverage (noted as Day 0 in the graph) is the expiration of the quiet period. For ease of presentation, days are expressed as the base ten logarithms of days.

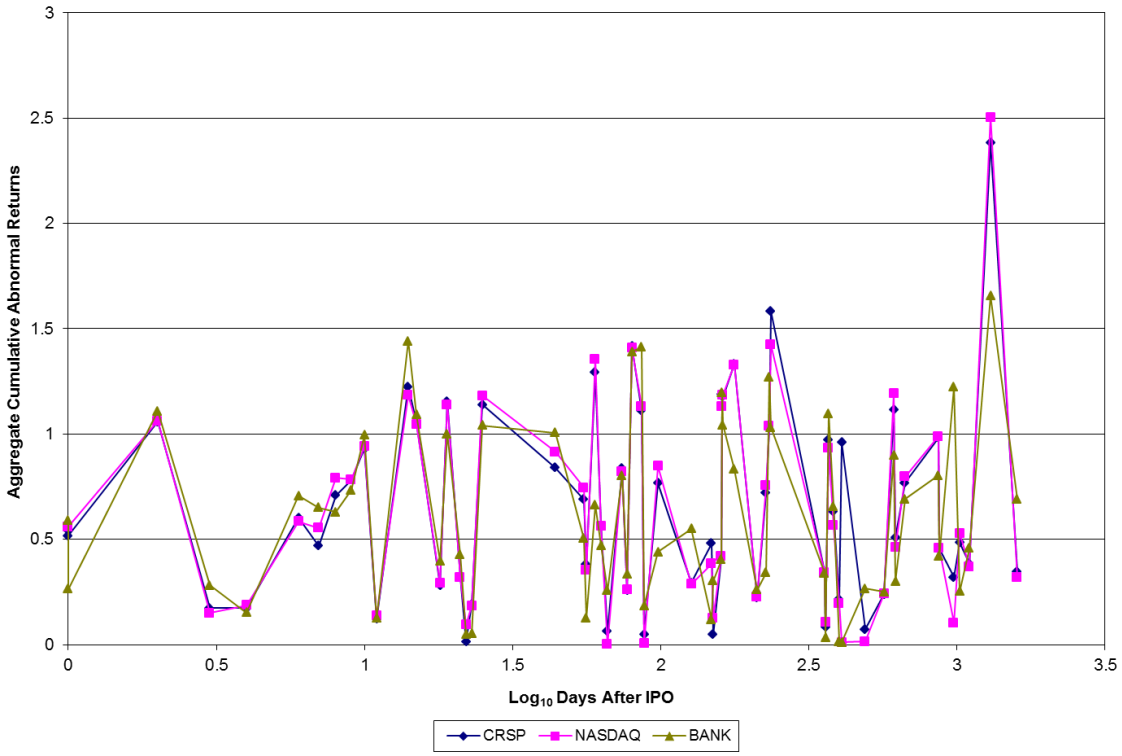


Figure III: Market Reaction to Analyst Coverage in Aggregate Time Windows

The following graph illustrates the cumulative abnormal returns when compared to the CRSP equally weighted index, the NASDAQ equally weighted index, and an index of banking stocks over time to analyst coverage initiations for banking IPOs. I measure market reaction as the absolute value of the cumulative abnormal return over a (-2, 2) event window. In the event that multiple firms see analyst coverage initiations on a single day, I use the average absolute value of the cumulative abnormal return. The first day of coverage (noted as Day 0 in the graph) is the expiration of the quiet period. For ease of presentation, days are expressed as the base ten logarithms of days.

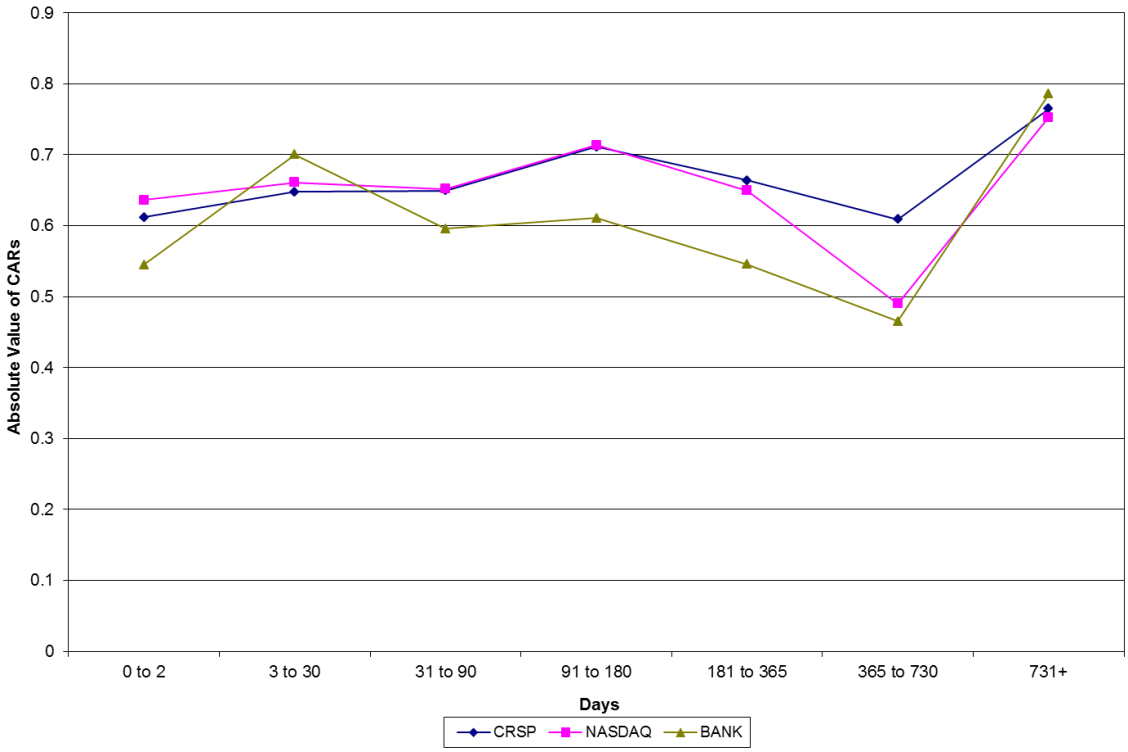
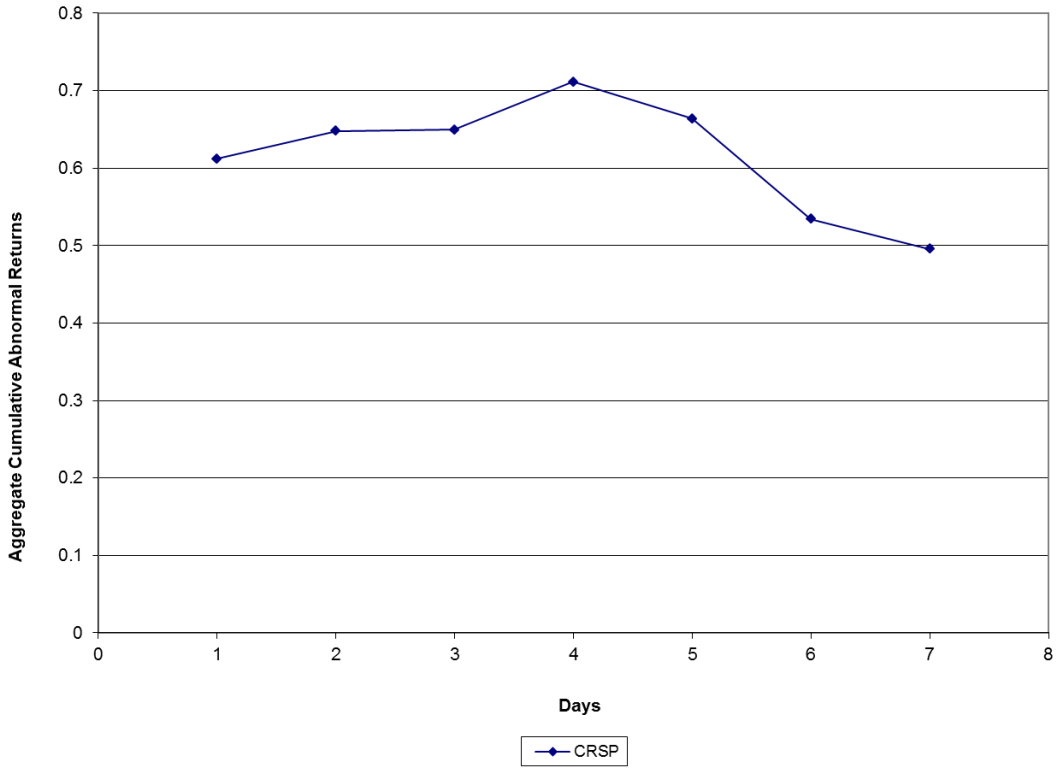


Figure IV: Market Reaction to Analyst Coverage in Aggregate Time Windows with a Removed Outlier

The following graph illustrates the cumulative abnormal returns when compared to the CRSP equal weighted index, the NASDAQ equally weighted index, and an index of banking stocks over time to analyst coverage initiations for banking IPOs. Market reaction is measured as the absolute value of the cumulative abnormal return over a (-2, 2) event window. In the event that multiple firms see analyst coverage initiations on a single day, the average absolute value of the cumulative abnormal return is used. The first day of coverage (noted as Day 0 in the graph) is the expiration of the quiet period. For ease of presentation, days are expressed as the base ten logarithms of days.



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VITA

Matthew Crook grew up in Poplar Bluff, Missouri. He received a Bachelor of Science degree in 1997 from the University of Missouri – Rolla. After graduation he accepted a position at the Chicago FireBrick Company in Chicago, Illinois as a Research Engineer designing monolithic refractories. His primary area of research was in alumina-silicon carbide systems. After two years of working for Chicago FireBrick, the company was acquired by National Refractories and Minerals Company and he was transferred to their facility in Mexico, Missouri when the research lab in Chicago was closed. During the iron and steel industry slowdown and subsequent bankruptcies in 2001, he was downsized when National Refractories hit financial hardship and eventually filed for bankruptcy protection.

Because of the poor market conditions, he chose to pursue a Master's in Business Administration at Arkansas State University in Jonesboro, Arkansas. During his MBA, he found a natural aptitude and strong interest in finance. Upon graduation, he worked several jobs, but found them unfulfilling. He decided to pursue a career in academe. Matthew began his doctoral studies at the University of Missouri in 2006 and five years later will graduate with a Doctor of Philosophy degree in Business Administration, specializing in Finance. He will join the faculty of Stetson University as a Visiting Professor in Finance in the fall of 2011.