

# FRBSF ECONOMIC LETTER

Number 2006-07, April 14, 2006

## Security Analysts and Regulatory Reform

Just a few years ago, Wall Street was rocked by scandals about conflicts of interest involving stock analysts' reports. In response, the U.S. Securities and Exchange Commission (SEC) undertook investigations and filed a number of complaints against some major securities firms and analysts. These complaints cited evidence to suggest that some analysts' research was not designed to give investors an objective assessment of a company and its prospects, but rather was designed to attract and retain investment banking clients by giving "buy" or "hold" recommendations for that firm whether the recommendations were fully warranted or not (see, for example, the SEC's Litigation Releases Nos. 18115 and 18111).

To attempt to restore public confidence in the objectivity of analyst research, the SEC, other regulatory agencies, and industry associations introduced reforms for the conduct of equity research, with a focus on making analysts more independent and on requiring securities firms to increase their disclosures. But these reforms have not been without their detractors. For example, some market participants have argued that making analysts more independent of investment banking will entail burdensome costs that could lead these firms to devote fewer resources to equity research; see, for instance, the comments by Marc E. Lackritz, president of the Securities Industry Association, regarding Rule 2711 of the National Association of Securities Dealers (NASD) on "Research Conflicts of Interest," in *Money*, February 7, 2002.

This *Economic Letter* summarizes recent research by Chen and Marquez (2005) that addresses the question of whether such regulatory efforts are likely to improve the objectivity of analysts' research reports and aid investors in their investment decisions. One message from the analysis is that an understanding of the nature of the information production process within securities firms is necessary to assess the likely effectiveness of the regulatory initiatives.

### **Two regulatory approaches: structural reform and increased disclosure**

Two regulatory approaches to the analyst conflict of interest problem have dominated public discussion

and guided recent policy changes. The first approach uses structural reforms as a means to insulate equity research from investment banking activities; that is, it erects or significantly strengthens internal barriers that limit both the degree of contact and the flow of information between an analyst and the rest of the firm. For instance, reforms instituted by the New York Stock Exchange (NYSE) and the National Association of Securities Dealers (NASD) since 2002 include requirements that (1) analysts not be supervised by the investment banking department, (2) investment banking personnel be prohibited from discussing research reports with analysts before distribution, unless personnel from a firm's legal or compliance department are present, and (3) analysts not be allowed to attend "pitch meetings" in which investment bankers solicit underwriting business from corporate clients.

The second approach seeks to improve securities firms' disclosure practices so that investors are more aware of the true incentives underlying analysts' reporting behavior. An example of this type of regulation is the SEC's Regulation Analyst Certification (Regulation AC), adopted in April 2003, which requires analysts to disclose in research reports whether they received any direct or indirect compensation for their report. Analysts who cannot certify that they did not receive compensation for a specific report must disclose the magnitude and source of compensation.

### **An analysis of regulation**

Empirical research indicates that analysts' stock recommendations and earnings forecasts tend to be less accurate and more optimistically biased when made in the context of investment banking relationships (see, for example, Dugar and Nathan, 1995; Lin and McNichols, 1998; and Michaely and Womack, 1999). This research, then, gives some support for considering regulatory initiatives for curbing incentives for biased stock analysis. However, the empirical evidence does not provide a framework of assessing the potential, and possibly undesirable, effects of the alternative approaches.

Such a framework is provided by Chen and Marquez (2005), which investigates the effects of

conflict-of-interest regulations on information production within securities firms and on the quality of analysts' investment reports. They develop a theoretical model in which the production and dissemination of information by a securities firm, such as an investment bank, responds to the regulatory regime. In their model, an investment bank employs an analyst to conduct research on a client firm and to issue stock reports to the public. In one framework considered by the authors, it is assumed that the investment bank's main goal is to try to win future business from the client. To achieve this goal, it can structure the analyst's compensation to induce the analyst to bias his reports, that is, to be overly optimistic, so as to support the client's stock price. In the absence of regulation, this bias would undermine the research effort and would diminish the value of stock reports to investors.

From the analyst's perspective, in addition to any other compensation he may receive, there are long-term career concerns—that is, in the long run, the analyst is rewarded for having a reputation for being accurate. These career concerns provide the analyst with an incentive to acquire information so as to report objectively. They also provide an incentive to dedicate resources to improving the accuracy of the reports, tempering the influence of the investment bank on the analyst's reporting behavior.

### Basic findings

Using this framework, Chen and Marquez (2005) show that imposing an information barrier can sometimes lead to an increase in the informational content of analyst reports. This in turn leads to more informative stock prices, as analysts generate more information that becomes available to investors. There is a simple intuition for this result: by restricting communication between the analyst and the investment bank, that is, by making the analyst's information unobservable to the rest of the investment bank, the bank has less ability to influence the analyst's reporting behavior through compensation. This reduction in "distortion" reduces the extent to which research effort is wasted (in terms of producing biased analysis), allowing the analyst to benefit more from producing information. As a result, the quality of stock reports increases, and investors enjoy better information about the client firm.

Turning to disclosure regulation, Chen and Marquez (2005) focus on the requirement that the securities firm publicly disclose the magnitude of any compensation paid to the analyst. The authors show

that, even when investors can observe the analyst's wage payments received for writing reports, the investment bank can derive positive expected profits from inducing an optimistic reporting bias by restructuring the compensation contract to hide some of the analyst's information. Specifically, the bank recognizes that a biased report will be useful only if investors cannot back out the true information about the compensation arrangements of the analyst. The investment bank therefore chooses sometimes to pool its payments to the analyst so as to prevent investors from using the wage disclosure to differentiate between falsely optimistic reports and more objective reports.

On net, however, while the disclosure of the wage payment does not perfectly reveal the analyst's information (that is, which reports are likely to be overly optimistic), it does provide investors with an additional piece of useful information. Furthermore, because disclosure of compensation makes it more difficult for the bank to offer greatly different compensation as a function of what the analyst uncovers, the analyst's incentives to generate objective information are enhanced by the regulation. In other words, the authors find that regulation requiring investment banks to disclose analysts' compensation always improves the quality of information available to investors.

### What if banks care about producing information?

In the basic model discussed so far, the investment bank cares only about attracting future underwriting business by issuing overly optimistic reports on the companies they track. However, the investment bank could find that analyst's unbiased research creates other valuable benefits, such as more accurate pricing of deals or improved due diligence. Likewise, the investment bank may be concerned with its own reputation for producing useful and timely information for its investing clients. Chen and Marquez (2005) show that, in these instances, restricting communication between the bank and the analyst can in fact lead to a reduction in the quality of reports. In essence, the inability to observe directly an analyst's information about the client forces the investment bank to structure its incentive scheme so as to extract from the analyst the information (objective analysis) that would otherwise be freely available to it. The act of obtaining this information, however, constrains the investment bank's ability to use the compensation scheme for other purposes, such as rewarding the analyst for producing accurate information. On net, this leads to weaker incentives for the analyst to pro-

duce accurate information. This additional factor, therefore, brings into question the likely effectiveness of barriers to information as a solution to the conflict of interest problem faced by analysts.

This also points to an important difference between the two types of regulation, information barriers and disclosure requirements: whereas limiting communication is counterproductive precisely in settings where analyst research generates the most value, disclosure regulation never suffers from this problem, even in the extended setting considered here. The contrast between the two types of regulation arises from the fact that disclosure regulation works by increasing rather than decreasing the overall flows of information between the various parties. As a result, disclosure regulation always provides the analyst with greater incentives to produce accurate information.

### Implications

This theoretical analysis provides a number of empirical predictions regarding the stock price impact of analyst research, and it also sounds a note of caution concerning the likely effects of regulation. First, the analysis implies that disclosure requirements will increase the “credibility” or price impact of optimistic stock reports. Second, the spread in stock prices following a credible optimistic recommendation compared to a pessimistic recommendation should increase as well. The reason is that, even without regulations, pessimistic reports would be seen as credible; therefore, when effective regulations are instituted, negative stock price responses to pessimistic reports would not be expected to be affected, while positive responses to optimistic analyst reports would be expected to be larger in magnitude. Third, regulation that lends credibility to analysts’ reports will tend to have the biggest impact when there is significant uncertainty about a firm’s fundamental value (for example, new, small, rapidly growing firms with many intangible assets). Also, regulation should have a larger impact on credibility for analysts with powerful career concerns, such as mid-career analysts who have well-established reputations and who have large current and future earnings at stake.

This line of research also suggests that, since the conflict of interest that undermines the objectivity of analyst research is primarily a problem of information transmission between securities firms and investors, it is best addressed by solutions designed to increase the amount of information available to all parties.

**Robert Marquez**  
**University of Maryland and**  
**Visiting Scholar, FRBSF**

### References

- Chen, M., and R. Marquez. 2005. “Regulating Securities Analysts.” Mimeo, University of Maryland.
- Dugar, A., and S. Nathan. 1995. “The Effect of Investment Banking Relationships on Financial Analyst’s Earnings Forecasts and Investment Recommendations.” *Contemporary Accounting Research* 12(1), pp. 131–160.
- Lin, H.-W., and M.F. McNichols. 1998. “Underwriting Relationships, Analysts’ Earnings Forecasts, and Investment Recommendations.” *Journal of Accounting and Economics* 25, pp. 101–127.
- Michaely, R., and K. Womack. 1999. “Conflict of Interest and the Credibility of Underwriter Analyst Recommendations.” *Review of Financial Studies* 12, pp. 653–686.
- National Association of Securities Dealers. 2002. “Proposed Rule Regarding Research Analyst Conflicts of Interest.” File No. SR-NASD-2002-21, February 8.
- New York Stock Exchange. 2002. “Disclosure and Reporting Requirements.” Information Memo 02-24, May 20, 2002.
- Securities and Exchange Commission. 2002. “Commission Approves Rules to Address Analyst Conflicts.” Press release, May 8.
- Securities and Exchange Commission. 2003. “Final Rule: Regulation Analyst Certification.” Release Nos. 33-8193; 34-47384, April 14.
- “Wall St. Faces Tough Rules.” 2002. *Money*, February 7.

ECONOMIC RESEARCH  
 FEDERAL RESERVE BANK  
 OF SAN FRANCISCO

PRESORTED  
 STANDARD MAIL  
 U.S. POSTAGE  
 PAID  
 PERMIT NO. 752  
 San Francisco, Calif.

P.O. Box 7702  
 San Francisco, CA 94120  
 Address Service Requested

Printed on recycled paper  
 with soybean inks



**Index to Recent Issues of *FRBSF Economic Letter***

DATE	NUMBER	TITLE	AUTHOR
10/3	05-25	Inflation Expectations: How the Market Speaks	Kwan
10/14	05-26	The Rise and Spread of State R&D Tax Credits	Wilson
10/21	05-27	Estimating the “Neutral” Real Interest Rate in Real Time	Wu
10/28	05-28	Oil Price Shocks and Inflation	Trehan
11/4	05-29	Economies of Scale and Continuing Consolidation of Credit Unions	Wilcox
11/10	05-30	Spendthrift Nation	Lansing
11/18	05-31	Why Hasn’t the Jump in Oil Prices Led to a Recession?	Fernald/Trehan
11/25	05-32	The Bretton Woods System: Are We Experiencing a Revival?	Glick/Spiegel
11/30	05-33	Uncertainty and Monetary Policy	Dennis
12/2	05-34	Recent Policy Issues Regarding Credit Risk Transfer	Lopez
12/9	05-35	Shifting Data: A Challenge for Monetary Policymakers	Fernald/Wang
12/16	05-36	Bank ATMs and ATM Surcharges	Gowrisankaran/Krainer
12/23	05-37	The Diffusion of Personal Computers across the U.S.	Doms
12/30	05-38	Do Oil Futures Prices Help Predict Future Oil Prices?	Wu/McCallum
1/27	06-01	2006: A Year of Transition at the Federal Reserve	Yellen
2/24	06-02	Productivity Growth: Causes and Consequences, Conference Summary	Wilson
3/3	06-03	Postal Savings in Japan and Mortgage Markets in the U.S.	Cargill/Scott
3/10	06-04	External Imbalances and Adjustment in the Pacific Basin	Glick/Spiegel
3/17	06-05	Enhancing Fed Credibility	Yellen
4/07	06-06	What Is the Federal Reserve Banks’ Imputed Cost of Equity Capital?	Barnes/Lopez

Opinions expressed in the *Economic Letter* do not necessarily reflect the views of the management of the Federal Reserve Bank of San Francisco or of the Board of Governors of the Federal Reserve System. This publication is edited by Judith Goff, with the assistance of Anita Todd. Permission to reprint portions of articles or whole articles must be obtained in writing. Permission to photocopy is unrestricted. Please send editorial comments and requests for subscriptions, back copies, address changes, and reprint permission to: Public Information Department, Federal Reserve Bank of San Francisco, P.O. Box 7702, San Francisco, CA 94120, phone (415) 974-2163, fax (415) 974-3341, e-mail [sf.pubs@sf.frb.org](mailto:sf.pubs@sf.frb.org). **The *Economic Letter* and other publications and information are available on our website, <http://www.frbsf.org>.**