

2004

# Conflict or Credibility: Analyst Conflicts of Interest and the Market for Underwriting Business

James C. Spindler

Follow this and additional works at: [https://chicagounbound.uchicago.edu/law\\_and\\_economics](https://chicagounbound.uchicago.edu/law_and_economics)



Part of the [Law Commons](#)

---

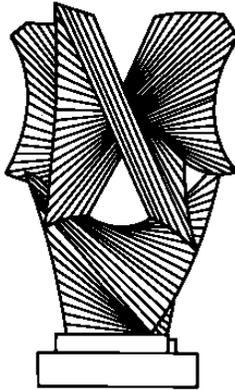
## Recommended Citation

James C. Spindler, "Conflict or Credibility: Analyst Conflicts of Interest and the Market for Underwriting Business" (John M. Olin Program in Law and Economics Working Paper No. 215, 2004).

This Working Paper is brought to you for free and open access by the Coase-Sandor Institute for Law and Economics at Chicago Unbound. It has been accepted for inclusion in Coase-Sandor Working Paper Series in Law and Economics by an authorized administrator of Chicago Unbound. For more information, please contact [unbound@law.uchicago.edu](mailto:unbound@law.uchicago.edu).

# CHICAGO

JOHN M. OLIN LAW & ECONOMICS WORKING PAPER NO. 215  
(2D SERIES)



## Conflict or Credibility: Analyst Conflicts of Interest and the Market for Underwriting Business

*James C. Spindler*

**THE LAW SCHOOL  
THE UNIVERSITY OF CHICAGO**

July 2004

This paper can be downloaded without charge at:  
The Chicago Working Paper Series Index: <http://www.law.uchicago.edu/Lawecon/index.html>  
and at the Social Science Research Network Electronic Paper Collection:  
[http://ssrn.com/abstract\\_id=564381](http://ssrn.com/abstract_id=564381)

# **Conflict or Credibility: Analyst Conflicts of Interest and the Market for Underwriting Business**

**James C. Spindler\***

---

\* John M. Olin Fellow in Law and Economics and Lecturer in Law, University of Chicago Law School. For helpful comments and suggestions, I would like to thank Douglas Baird, Barbara Ann Banoff, Lisa Bernstein, Richard Epstein, Allen Ferrell, Phillip Hamburger, Mina Kumar, Saul Levmore, Doug Lichtman, Paul Mahoney, Jeff Meli, Richard Painter, Randy Picker, Eric Posner, Jim Rossi, Mark Seidenfeld, George Triantis, and David Weisbach, as well as workshop participants at the law schools of the University of Chicago, DePaul University, Florida State University, Temple University, and the University of Virginia.

## **Conflict or Credibility: Analyst Conflicts of Interest and the Market for Underwriting Business**

Abstract:

*This paper argues that, contrary to conventional wisdom, conflicts of interest among equities research analysts (i.e., where investment banks would offer positive analyst research in quid pro quos for underwriting business) were beneficial to the capital markets. First, conflicted analyst research credibly signaled positive inside information that is otherwise too costly to communicate under 1933 Act liability, correcting adverse-selection problems. Second, conflicted analyst research mitigated agency costs between issuer and underwriter by allowing the underwriter to credibly commit to seek a higher offering price than the underwriter would prefer. Third, analyst research quid pro quos took the form of a competitive bidding market among underwriters, and may have improved competition in the underwriting industry. In light of these conclusions, recent reforms prohibiting analyst conflicts of interest do more harm than good. Preferable modes of regulation include liberalizing 1933 Act liability, increasing mandatory disclosure of conflicts, and increasing fraud penalties.*

“Well, we are against fraud, aren’t we?”

SEC Commissioner Sumner Pike<sup>1</sup>

## Part I. Introduction

In the bull market of the 1990s, and perhaps even earlier, investment banks who sought lucrative underwriting business<sup>2</sup> developed the practice of attracting issuers with favorable analyst research coverage, or the promise thereof.<sup>3</sup> Issuers were responsive to such tactics, and positive analyst research became one of the principal factors on which issuers would choose an underwriter.<sup>4</sup> Analyst research departments came under the sway of investment bankers, with analyst compensation often being determined by investment banking business generally, or even based upon specific deals.<sup>5</sup> Analysts became, essentially, part of the investment banking team—pitching deals to issuers, marketing offerings in roadshow presentations to investors, and producing post-offering research coverage with an eye toward attracting new investment banking clients.

These analyst “conflicts of interest,” and the *quid pro quos* that exchanged research for underwriting business, were public knowledge.<sup>6</sup> Analyst conflicts of interest

---

<sup>1</sup> Quoted by Milton Freeman, ABA Sec. Corp. Banking & Bus. Law, Conference on Codification of the Federal Securities Laws, 22 Bus. Law 793, 922 (1967).

<sup>2</sup> The attached Figure A depicts graphically a typical underwriting relationship.

<sup>3</sup> Analyst conflicts of interest date back at least to the deregulation of trading commissions in 1975. See, e.g., Hearings Before the Subcommittee on Capital Markets, Insurance, and Government Sponsored Enterprises of the Committee of Financial Services of the U.S. House of Representatives, “Analyzing the Analysts,” June 14, July 31, 2001, (hereinafter “Congressional Hearings”) at 4 (“After the deregulation of trading commissions in 1975, Wall Street firms began using investment banking as a means to compensate their research departments”).

<sup>4</sup> See Congressional Hearings, supra n. 3, at 9 (testimony of Matt Winkler, Editor in Chief, Bloomberg News); Krigman, Shaw, and Womack, Why do Firms Switch Underwriters?, Journal of Financial Economics, 60 (2001) 245-284 (finding that issuers switch underwriters in part to “buy additional and influential analyst coverage”) at 245.

<sup>5</sup> Congressional Hearings, supra n.3, written statement of Laura S. Unger, Acting Chairman of the SEC, at 231.

<sup>6</sup> See, e.g., *In re Merrill Lynch & Co. Inc. Research Reports Securities Litigation (In re Merrill Lynch & Co. Inc. Global Technology Fund Securities Litigation)*, S.D.N.Y., Master File No. 02 MDL 1484, Case No. 02-CV-7854 (MP), 7/2/03 (the “alleged conflict of interest between brokerage firms, investment bankers and research analysts... was a matter of public knowledge for years before the amazing boom of the market [that] initially rewarded those who disregarded such caveats.”) (cited from Securities Regulation and Law Report, vol 35 no. 28, 7/14/03). Discussion of analyst conflicts of interest in the news and

were disclosed in the research reports themselves.<sup>7</sup> As the market continued to climb, little concern was raised over these conflicts by securities regulators, though occasionally a news or academic journal article did address the issue. In any event, though the duty of honesty always attached to analyst research,<sup>8</sup> either no one thought the analyst conflicts led to endemic dishonesty, or else no one cared, as these practices continued without any significant regulation throughout the boom years.<sup>9</sup>

However, as the strong bull market of the “new economy” turned into the dot.bomb decline of the new millennium, the media, regulators, and the legislature began directing attention toward analyst conflicts of interest and the market for analyst research. The story that they pieced together was that conflicted analyst research was used to promote companies substantially lacking in promise (not to mention, profits) at highly inflated prices. Under this officially-accepted story, underwriters and their analyst lackeys were culpable of what was, functionally, systemic fraud.<sup>10</sup> Perhaps in cases the issuers were complicit as well—though they appear to have been mostly ignored by the

---

academic journals dates back to at least the early 1990s. See, e.g., Donald Langevort, *Investment Analysts and the Law of Insider Trading*, 76 Va. L. Rev. 1023 (1990); Jonathan A. Shayne and Larry G. Soderquist, *Inefficiencies in the Market for Initial Public Offerings*, 48 Vanderbilt L. Rev. 965 (1995); Ellen E. Schultz, *Wall Street Grows Treacherous for Analysts Who Speak Out*, Wall St. J. C1 (April 5, 1990). (cited from Shayre and Soderquist, 1995, supra).

<sup>7</sup> NASD Rule 2210 and NYSE Rule 472 required member firms to disclose certain conflicts of interest when a member firm’s analyst recommends a security, including whether the firm was a manager or co-manager of a public offering within three years before the date of the research report. See SEC release No. 34-45908, May 10, 2002.

<sup>8</sup> See SEC Release Nos. 33-8193, 34-47384, at Section I.I. The SEC stated that Regulation AC “does not impose new liability on analysts or their firms,” and instead “formalizes and adds rigor to analysts’ responsibilities to express their views truthfully and without guile.”

<sup>9</sup> Regulation FD (Fair Disclosure) was partly an attempt to prevent issuers from currying favor with analysts through selective disclosure of nonpublic information. 17 C.F.R. § § 243.100-243.103 (2001). See Richard Painter, *Standing up to Wall Street (and Congress)*, 101 Mich. L. Rev 1512, 1518.

<sup>10</sup> See, e.g., *Complaint of the SEC against Citigroup Global Markets* (hereinafter “SEC Citigroup Complaint”), available at <http://www.sec.gov/litigation/complaints/comp18111.htm>. (one of several SEC complaints alleging the existence of illegal conflicts); Congressional Hearings, supra n. 3 at 31 (one congressman characterized analysts as “cheerleaders for the bubble”); Fortune Magazine, “Hear No Risk, See No Risk, Speak No Risk: How a bunch of Wall Street analysts hyped a company called Winstar—to death,” vol. 143 no. 10, May 14, 2001

inquiries.<sup>11</sup> In any event, widespread losses among retail investors provided plenty of political fuel for the fires of reform.<sup>12</sup>

After two hearings of Congress on the subject, the Sarbanes-Oxley Act of 2002 contained provisions calling for regulation of analyst conflicts by the SEC and the self-regulatory organizations (namely, the NYSE and the NASD).<sup>13</sup> The rules they enacted now effectively outlaw the market for analyst research,<sup>14</sup> ostensibly based upon the assumption that conflicts of interest lead inexorably to bad information being forced upon the market. The legal commentary addressing analyst conflicts of interest in the post-bubble world has almost universally been in line with this generally accepted version of events.<sup>15</sup>

Unfortunately, a few nagging doubts pop up about this simple tale of innocent investors and evil underwriter-analysts. For example, this pattern existed for a very long time: how is it that conflicted analyst research would be able consistently to fool investors over a period of at least a decade? Why wouldn't "independent" analysts, or the independent financial media, play a countervailing role? With analyst/underwriter conflicts being publicly known (and, arguably, discounted by the market<sup>16</sup>), why would

---

<sup>11</sup> Congress, for example, seemed to place the blame squarely upon the underwriters and analysts, rather than upon the issuers. See, generally, Congressional Hearings, *supra* n.3. This may be due to the inability of market observers to decide whether issuers were being overpaid or underpaid for their public offerings. See n. 74, *infra*, discussing the overpricing/underpricing debate.

<sup>12</sup> See, e.g., Megan Barnett, "Days of Reckoning," *The Industry Standard*, August 20, 2001 at 1, describing reform of Wall Street conflicts of interest as a "no-lose political issue."

<sup>13</sup> Sarbanes-Oxley Act of 2002, Pub. L. 107-204 (2002), Section 501.

<sup>14</sup> See NYSE Rule 472; NASD Rule 2711, described *infra* at nn.37-40 and accompanying text. The SEC's Regulation AC (Analyst Certification) implemented enhanced analyst disclosure, but did not prohibit conflicts outright. See SEC Release Nos. 33-8193, 34-47384, *supra* n. 10.

<sup>15</sup> See, e.g., Jill Fisch and Hillary Sale, *The Securities Analyst as Agent: Rethinking Regulation of Analysts*, 88 *Iowa L. Rev.* 1035, 1035, 1039 (2003); Joel Seligman, *No One Can Serve Two Masters: Corporate and Securities Law after Enron*, 80 *Wash. U. L.Q.* 449, 451, 505. The widespread but mistaken assumption that analysts are agents of investors is probably due to the traditional pre-1975 (when trading commissions were regulated) role of analysts as agents of brokers, who were in turn agents of investors.

<sup>16</sup> See Paul Gompers and Josh Lerner, *Conflict of Interest in the Issuance of Public Securities: Evidence from Venture Capital*, 42 *J.L. & Econ.* 1, (1999) (finding that the markets are able to rationally discount underwriters' conflicts of interest resulting from venture capital stakes in an issuer's securities); John Morgan and Phillip C. Stocken, *An Analysis of Stock Recommendations*, *Rand Journal of Economics*, vol. 34, no. 1, 183, (2003) (developing a theoretical framework in which investors are aware of analyst conflicts and discount positive analyst research accordingly). While Roni Michaely and Kent L. Womack, *Conflict of Interest and the Credibility of Underwriter Analyst Recommendations*, 12 *Review of Financial Studies* 4, 653, 668 (1999), find some evidence of less-than-complete discounting by the market with regard to underwriters' research reports in the 1990-91 IPO market, I would note that their regression result (*id.* at 677) shows that underwriter-analyst recommendations have no significant effect on long term stock

issuers still demand underwriter-affiliated analysts, rather than just spending more on media events and advertising, or making more positive disclosure about themselves in the prospectus? And how is it that this market for analyst research, if it really was such a bad thing, was allowed to exist in public view all throughout the 1990s?

In answering those questions, I argue that analyst research *quid pro quos*, in fact, played a significant and positive role in the functioning of the capital markets. My specific findings are thus:

(1) The market correctly perceived optimistic analyst research (or the underwriter's commitment to subsequently publish positive analyst research) as a signal of positive, hitherto nonpublic information about the issuer. The willingness of an underwriter to sell the securities of an issuer about whom the underwriter's analyst had issued an optimistic research report allowed a rational inference that the underwriter had learned positive information about the issuer in the course of the due diligence process. Put another way, the underwriter was risking harsh legal and reputational liability by doing the deal if it subsequently turned out that the analyst research turned out to be falsely optimistic; conflicted analyst research therefore had significant credibility in the marketplace. This was especially valuable because the 1933 Act effectively prohibits disclosure of much positive information regarding the issuer, which otherwise prevents good quality issuers from selling their stock (an "adverse selection" problem).

(2) Positive analyst research, or the promise thereof, helped to overcome agency problems that exist between issuers and underwriters because of an inability to contract as to offering price and effort. Because of the way in which the proceeds and costs of an underwriting are divided up between an issuer and its underwriter (the issuer receives the great majority of the proceeds, while the costs of the selling effort lie largely on the underwriter), underwriters may prefer to sell the issuer's securities at a lower price. *Ex ante* contracting may be impossible because of uncertainties regarding market demand for the securities, and because of the issuer's inability to monitor the underwriter's efforts and expenditures. However, by committing to publish positive analyst research prior to the offering, the underwriter can bind itself to seeking a high offering price for the

---

performance, which is consistent with the signaling model developed in Part III.A.2 of this paper, where the commitment and signal occurs at the time of offering.

issuer's shares. The underwriter also incurs, up front, a substantial cost on behalf of the issuer, which again mitigates agency costs.

(3) Analyst research *quid pro quos* took the form of a competitive bidding market among underwriters as they vied for issuer business by publishing or promising optimistic analyst research. This was a form of competition within the underwriting industry; banning such a practice may have the perverse effect of helping underwriters to collude on pricing, resulting in transfers of welfare from issuers to underwriters; it is not clear whether underwriters compete significantly on other grounds. This may be part of the reason why investment banking firms have readily acquiesced in banning conflicted analyst research. The NASD and NYSE rules that ban conflicted analyst research effectively mandate underwriter collusion, and the fact that investment banking firms are significant constituencies of both the NASD and the NYSE may help to explain their rulemaking.

In total, it appears that conflicted analyst research actually benefited investors, issuers, and the process of efficient capital formation generally, while it may have been detrimental to the interests of underwriters. Banning conflicted analyst research is therefore quite counterproductive. Certain reforms, such as increased disclosure or fraud penalties, may be desirable that they could strengthen the analyst research signal, and reduce the probability that unsavvy investors would incorrectly rely on conflicted analyst research. A more fundamental solution, however, would be to allow direct communication of positive and forward looking information to investors subject to a fraud liability rule, as opposed to the current regime of §11 strict liability.

This paper will proceed as follows: Part II describes in more detail the underwriting and analyst relationships that prevailed prior to their prohibition, the commonly-accepted story of analyst malfeasance and the regulatory response thereto, and some nagging doubts about the consensus view of analyst conflicts. Part III develops an informal model of issuer-underwriter-investor behavior, in which favorable analyst research serves as an observable commitment that mitigates adverse selection and principal-agent problems, as well as improving competition in the underwriting industry. Part IV considers the ramifications of prohibiting analyst conflicts, and then suggests a preferable mode of regulation, rather than prohibition. Part V briefly concludes.

## **Part II. Analysts, conflicts of interest in the public offering process, and regulation thereof**

### **A. The role of the research analyst**

Most people who invest their money are familiar with the concept of an analyst report.<sup>17</sup> For widely-held securities, at least one analyst is likely to cover the issuer and publish research reports. In addition to publicly-available information about the issuer, analyst research reports often contain the subjective opinion of the analyst, often termed a “rating” or “recommendation,” as to whether the securities ought to be bought or sold. While “buy/sell/hold” categories are the most common format of analyst recommendations, analysts may also issue “price target” ratings, which are, much as they sound, meant to be an evaluation of the likely price peak that the issuer’s stock will achieve.

Analysts, for purposes of this paper, come in two varieties: “conflicted,” and “independent.” Independent analysts are exactly that: they have no affiliation that would lead them to give biased advice. The independent analyst business model involves soliciting investors to pay for subscriptions to the analyst’s research report newsletters. Unfortunately, investors generally appear unwilling to do this, with very few investors purchasing independent research.<sup>18</sup> This lack of demand for independent research is perhaps best explained by the efficient market hypothesis: since analysts no more than sort through and collate publicly available information,<sup>19</sup> one would expect that there is

---

<sup>17</sup> Analysts, and their role in public offerings, have been extensively discussed in the recent legal literature, and so the description here is brief. See Hill and Sale, *supra* n. 18, at 1041-1056, for a very good description of the analyst’s role in a securities firm and the possible sources of conflicts. Robert Sieland, *supra* n. 18, provides a useful perspective on how analysts became agents of the investment banks and issuers subsequent to the 1975 deregulation of brokerage commissions. For an overview of analyst practices, see also SEC Investor Alert, Analyzing Analyst Recommendations, available at <http://www.sec.gov/investor/pubs/analysts.htm>.

<sup>18</sup> See Congressional Hearings, *supra* n. 3, testimony of Scott C. Cleland at 49. Conflicted research analysts “have well over 90% of the market for research commissions.”

<sup>19</sup> Regulation FD, enacted in 2000, expressly forbids issuers from communicating nonpublic information to analysts or to persons likely to trade on the information without making contemporaneous public disclosure of the information. See Regulation FD *supra* n. 11. Prior to Regulation FD, analyst reports could contain new information provided privately by management.

little value that they can add to the marketplace. To the dubious extent that analysts do add value by performing fundamental analysis on public information they have collected, the market reaction to this information occurs quickly enough that any informational advantage disappears within literally minutes.<sup>20</sup> For the average investor, then, such reports are without value. This goes quite some way in explaining why independent analysts play only a small role in the market, and why investors generally choose not to purchase their research.<sup>21</sup>

More often, analysts are employed by brokerages and underwriting firms. These are the “conflicted” analysts, since their ties to brokerage and underwriting have the potential to bias their research in conflict with the interests of investors. Brokerages offer research to investors in order to induce investors to maintain an account with them, though this has become less important as a source of funding analyst research since trading commissions were deregulated in 1975.<sup>22</sup> More relevant in recent times is that underwriters may offer analyst coverage to an issuer as an additional service in the investment banking relationship. The conflicted analyst is an agent of the underwriter, who is in turn an agent of the issuer.<sup>23</sup>

So, for underwriter-analysts, the practice of publishing positive analyst research appears to have been largely an attempt to gain underwriting business from prospective issuers. The way it worked, taking the account of media and Congressional reports, is

---

<sup>20</sup> See Sok Tae Kim, Ji-Chai Lin, and Myron B. Slovin, Market Structure, Informed Trading, and Analysts’ Recommendations, *Journal of Financial and Quantitative Analysis*, vol. 32, no. 4, 507 (1997) (finding that any information contained in analyst research is reflected in stock prices within five to fifteen minutes of the market open, and well before the research is released publicly). This study was done prior to the enactment of Regulation FD, and thus it is likely that the current effect of analyst research is even smaller than at the time of the study. See *supra* n. 22.

<sup>21</sup> Another way of looking at this issue is to consider what the analyst would do if she did, in fact, have valuable information. She would almost certainly not publish it, and would choose, rather, to trade on that information herself (or for her firm). One can imagine that only the least valuable analyst research is made public. And, in reality, investment banks often employ large teams of people who do exactly that, producing proprietary research for their or their customers’ trading desks.

<sup>22</sup> For perspective, one should note that the problem of analyst conflicts predates the capture of analysts by underwriting firms. Prior to 1975, when trading commissions were deregulated (see *supra* n. 3), brokerages used analyst research to encourage greater amounts of trading and, hence, brokerage commissions. See *In re Merrill Lynch, Pierce, Fenner & Smith, Inc.*, SEC Act Release No 14149 (November 9, 1977).

<sup>23</sup> This shift in the agency relationship of the analyst from the pre- to post-1975 world no doubt accounts for some of the confusion among academics and regulators, who still try to shoehorn analysts into a traditional agency relationship with investors that simply no longer fits. See Richard Painter, *Standing Up to Wall Street and Congress*, 101 Mich. L. Rev. 1512, 1517-1518; Robert P. Sieland, *Caveat Emptor! After all the Regulatory Hoopla, Securities Analysts Remain Conflicted on Wall Street*, 2003 U. Ill. L. Rev. 531, 534-42.

fairly straightforward. Underwriters know that an issuer is considering doing an offering, and will soon be shopping around for an underwriter. If the issuer is a public company (a “seasoned issuer”) in the U.S. or abroad, the underwriter will offer positive research in return for underwriting business. If the issuer is a private company considering its initial public offering (“IPO”), the underwriter would attempt to attract the issuer on the basis of the positive research the underwriter had already published in the issuer’s industry, promising to do the same for the issuer post-offering.<sup>24</sup> In either case, the issuer would find itself courted by a group of underwriters offering varying degrees of “optimism” in their research, and the issuer would, *ceteris paribus*, choose the underwriter offering the most optimism.<sup>25</sup>

After the issuer had selected its underwriter, the underwriter would involve the analyst in the actual offering process, which would include organizational meetings with management, due diligence, and roadshow marketing activities for potential investors.<sup>26</sup> Once the offering was completed and the statutory quiet period had elapsed, analysts resumed/initiated coverage of the issuer with, in the vast majority of cases, a “buy” rating.<sup>27</sup> Since analysts played such an integral role in the offering process, analyst compensation might be based on specific deals or the firm’s general underwriting business.

None of this was necessarily illegal: so long as analyst reports were “honest,” conflicts of interest did not automatically rise to an actionable level.<sup>28</sup> As the SEC has

---

<sup>24</sup> For a concrete example of this phenomenon, see, e.g., Elkind, *supra* n\_. In the pre-IPO scenario, analysts also often scouted out candidates for going public. Phone conversation with equities research analyst, July, 2003.

<sup>25</sup> See nn. 3 and 4, *supra*, for accounts of this process. See also Krigman, Shaw, and Womack, *supra* n.4. According to Jay Ritter, professor of finance at the University of Florida and a prominent expert on IPO trends and practices, “it was common for banks to tell customers in writing on what date they would publish a report giving the newly public company a positive investment rating ... In health-care and high-tech, many banks delivered the first draft of a research report on the public company when they pitched the IPO.” Bloomberg.com, Morgan Stanley Unseats Goldman in Equity Fees as IPOs Surge, February 17, 2004 (available at <http://quote.bloomberg.com/apps/news?pid=nifea&&sid=ar2iuxavGt2k>)

<sup>26</sup> SEC Investor Alert: Analyzing Analyst Recommendations, *supra*, at 2. The “roadshow” is a period of permitted marketing activities prior to effectiveness of the public offering where representatives of the issuer and the underwriter go “on the road” to promote the offering to groups of potential investors. See Securities Act Section 5. See the attached Figure B for an overview of the applicable laws and rules.

<sup>27</sup> An SEC study found that in 317 IPOs, the underwriting firm provided analyst coverage in 308 instances. Congressional Hearings, *supra* n.3, at 232. Such coverage was overwhelmingly positive. The ratio of buy to sell recommendations by brokerage analysts rose from 6:1 to 100:1 from the early 1990s to 2000. *Id.* At 5.

<sup>28</sup> As there was always a duty of honesty and accurate representation that attached to these research reports (see SEC Release No. 33-8193, *supra*), and since the SEC knew about these conflicts of interest, it does

recently pointed out, conflicts of interest are inherent to the financial services industry, which is part of the rationale for regulation in the first place.<sup>29</sup> Again, such a market for analyst research was known and commented upon throughout the 1990s, and the public offering participants who encouraged such analyst coverage were doubtless aware of the nature and extent of the conflicts. The fact that savvy purchasers of public offerings appeared to value conflicted analyst research (analysts did participate in roadshow activities, after all) implies that conflicted analysts were thought to add value in some fashion. In any event, as stock prices continued to climb through the past decade, little objection was raised to these practices.

### **B. Allegations of wrongdoing and the regulatory response**

Of course, stock prices, especially of newer issuers, began to collapse in April of 2000, and at this point the role of the analyst began to be called into question. Congress instituted hearings; the SEC began investigations into various allegations of misconduct. The general tide of sentiment turned quickly against underwriters and their analysts, as regulators and the public appeared to realize, as if for the first time, that the conflicts inherent in such analyst roles could lead to advantage-taking on the part of the analyst/underwriter. A few especially egregious, and widely-reported, instances of analyst-related misconduct played a large role in shaping public opinion.<sup>30</sup> The consensus view was now that the gains from publishing bogus reports had become too high, and the

---

follow logically that the regulators must have entertained the possibility that conflicts do not invalidate analyst research.

<sup>29</sup> See Speech by SEC Staff: Remarks Before the SIA Research Conference by Annette L. Nazarethi, Director, Division of Market Regulation, Oct. 16, 2003, available at [www.sec.gov/news/speech/spch101603sia.htm](http://www.sec.gov/news/speech/spch101603sia.htm).

<sup>30</sup> The paradigm analyst fraud case is probably that of Jack Grubman, once Salomon Smith Barney's star telecommunications analyst. In 1999, Grubman allegedly awarded positive ratings to AT&T in return for the help of an AT&T director in getting Grubman's children admitted to an elite Manhattan preschool (the board of which the AT&T director also sat on), as well as for AT&T's mandate for Salomon to underwrite an equity offering. Grubman is also alleged to have privately told important institutional investors to do the opposite of what his publicly-disseminated research reports recommended. See SEC Litigation Release No. 18438, Federal Court Approves Global Research Analyst Settlement, October 31, 2003 available at <http://www.sec.gov/litigation/litreleases/lr18438.htm>. Grubman was heavily penalized by the SEC, as was his employer, and barred from further work in the securities industry. See Global Analyst Research Settlement, *supra*; Grubman Offer of Settlement to NASD, available at [http://www.nasd.com/pdf\\_text/awc\\_grubman\\_02.pdf](http://www.nasd.com/pdf_text/awc_grubman_02.pdf).

ethical standards within the industry were too low, to keep at bay investment bankers' appetite for lucrative deals.

However, Congress and the SEC appeared to be equally, if not more, concerned about the everyday incorporation of the research analyst into investment banking and the tendency toward bias, not intentional falsehood, that might result. Put another way, conflicts themselves were a *per se* problem. Systemically positive research bias, in their estimation, exacerbated (or even caused) the stock market bubble of the 1990s and its ensuing collapse.

Ultimately, the result of this Congressional fact-finding was Section 501 of the Sarbanes Oxley Act of 2002. Section 501 calls for rules to govern analyst conflicts of interest within investment banks, to be passed by the SEC and the self-regulatory organizations (i.e., NASD and the stock exchanges). While the SEC's rulemaking went no further than requiring that analysts and their investment bank employers disclose conflicts of interest or certify to the absence of any conflicts,<sup>31</sup> the response of the NASD and the NYSE has been to actually prohibit analyst conflicts of interest in most instances. Under NYSE Rule 472 and NASD Rule 2711, the role that analysts can play in soliciting, pitching for, and marketing issues has been substantially curtailed. No longer may analysts offer (or withhold) positive research as a *quid pro quo* for investment banking business, nor can they share research reports with the subject companies prior to publication (except for fact-checking). No longer may investment bankers supervise analysts, or review their work prior to publication, nor can analyst compensation be tied to specific investment banking deals.<sup>32</sup> The rules also require that interaction between analysts and investment bankers is kept to a minimum, and interaction that is still allowed must take place in the presence of the investment banking firm's legal compliance department. Furthermore, for at least the ten securities firms involved in the Global Analyst Research Settlement, analysts are explicitly prohibited from participation in the marketing "road-show" meetings with investors.<sup>33</sup>

---

<sup>31</sup> See Regulation AC, *supra* n.17.

<sup>32</sup> The NASD/NYSE rules do allow analyst research compensation to be tied to general investment banking business, so long as disclosure of this fact is made in the research reports. See NASD Rule 2711, NYSE Rule 472.

<sup>33</sup> See Global Analyst Research Settlement, *supra* n.\_. It may well be, however, that all securities firms are prohibited from using analysts in roadshows, if this is considered soliciting investment banking business,

In short, the legislative and regulatory response has been to outlaw analyst conflicts of interest in public offerings. Neither the NYSE nor the NASD has explained why prohibition is preferable to increased enforcement or penalties for violations of already-existing duties of honesty. Their reasoning appears to be that conflicts will inevitably lead to bias, and that such bias is bad for the market.

### **C. Some initial questions regarding analyst conflicts of interest**

There are already questions that this story of underwriter malfeasance leaves unanswered. For example, why would the market have believed the analysts in the first place? Analyst conflicts of interest were known and discussed even before the tech boom of the 1990s began.<sup>34</sup> As one court recently held, conflicts of interest in analyst research were common knowledge, especially since conflicts were disclosed in the research reports themselves.<sup>35</sup>

It seems dubious that the conflicted analyst would be an effective tool to perpetrate fraud. Even if underwriters put out blatantly inaccurate research reports, other research analysts or the financial media should have been able to counteract that inaccuracy. The underwriter's analyst research report does not exist in a vacuum, after all. Independent analysts should have been able to use their independent credentials to their advantage. Analysts of other underwriting firms that did not receive the issuer's mandate should have issued unbiased (or negatively biased) reports on the issuer.<sup>36</sup> If, for example, AT&T bribes one of several covering analysts with underwriting business, the other analysts covering AT&T would still issue unbiased reports. Credible sources of

---

which is impermissible under the rules (and other provisions may be prohibitive, as well). See Testimony by NASD Chairman and CEO Robert R. Glauber Before the United States Senate Committee on Banking, Housing and Urban Affairs, May 7, 2003, available at [http://www.nasd.com/media/speeches/glauber\\_2003\\_03.asp](http://www.nasd.com/media/speeches/glauber_2003_03.asp).

<sup>34</sup> See nn. 7 and 9, supra; see also n. 7, supra, for a discussion of the pre-Sarbanes-Oxley rules and analyst disclosure requirements.

<sup>35</sup> See *In Re Merrill Lynch & Co. Inc. Research Reports Securities Litigation*, supra n.7.

<sup>36</sup> One analyst, Ashok Kumar of Piper Jaffray, did exactly that, retaliating for the loss of an underwriting mandate with negative ratings on eMachines, apparently going from lavish praise to re-christening the company "sucker.com." Peter Burrows, Sudden Change of Heart at Piper, *Business Week*, December 6, 1999 at 6. Similarly, Henry Blodgett, an analyst at Merrill Lynch, downgraded GoTo.com subsequent to Merrill Lynch losing GoTo.com's underwriting mandate. See Congressional Hearings, supra n. 3, at 60.

information should have driven out the bad, especially since ratings for analyst performance are publicly available.<sup>37</sup>

But the relative obscurity of the independent analysts shows that they did not rise to prominence on their independent credentials. Furthermore, it is doubtful whether independent analyst reports prove any more valuable than conflicted ones, and in fact it is the case that independent analysts were similarly bullish (though perhaps to a somewhat lesser degree) throughout the 1990s.<sup>38</sup> We might indeed wonder why, if ever an analyst did have a good idea, the analyst would share it with the public? The analyst would be much better off trading on the idea herself and capturing the benefits of her research.<sup>39</sup>

Even if we might suppose a group of gullible investors does exist, and that some people would be fooled into buying based on a conflicted analyst's recommendation, it is still difficult to see how an issuer could expect to profit from this. In a well-functioning market, we would expect any incremental market movement in a security caused by such gullible investors to be immediately counteracted by sophisticated investors who are aware of the security's fundamental value. The existence of even relatively few sophisticated players should prevent analysts' cheap talk from influencing prices, so that even "gullible" investors who buy stocks based on optimistic analyst reports should still be buying them at approximately the correct fair market price.<sup>40</sup>

Finally, for context, one should note how the role of the analyst has changed over time. Historically, analysts served as conduits for information from the issuer to investors. However, several things have happened since the time the 1933 Act was written to diminish (and perhaps eliminate) analysts' importance in the marketplace.

---

<sup>37</sup> See Congressional Hearings, *supra* n. 3, at 13.

<sup>38</sup> There was, it has been claimed, a positive bias among all analysts from a common desire not to "fight the tape" in a rising market. See Frontline, *Crying Foul*, *supra*, interview with Lisa Buyer, (available at <http://www.pbs.org/wgbh/pages/frontline/shows/dotcon/interviews/buyer.html>). A study has found that analysts tend to be more optimistic the greater the level of uncertainty. See Ackert, Lucy, and George Athanassakos, Prior Uncertainty, Analyst Bias, and Subsequent Abnormal Returns, *Journal of Financial Research* v20, n2 (Summer 1997): 263-73.

<sup>39</sup> This does, in fact, happen. See n. 25, *supra*. One might characterize this as a very significant adverse selection problem in the provision of research to the general public.

<sup>40</sup> There is the possibility, however, that a sufficient volume of noise trading would make arbitrage strategies too risky or too capital-intensive to bring prices fully back into line. See Shleifer, Andrei and Robert W. Vishny, The Limits of Arbitrage, *Journal of Finance*, vol. 52 no. 1, (1997) 35-55. However, as of yet no convincing evidence has shown that the 90s bull market was noise-driven; to the contrary, savvy professional investors often held overweighted tech portfolios throughout the bubble. See B.G. Malkiel, "The Efficient Market Hypothesis and its critics," *Journal of Economic Perspectives*, vol.17 (1) Winter 2003: 59-82 (2003)).

First, improvements in communications and information technology have reduced the functional usefulness of disseminating and processing information through analyst intermediaries. Second, de-regulation of trading commissions in 1975 reduced the ability of analysts to directly capture from investors the benefits created by their analyses or communicational role.<sup>41</sup> As investors were no longer paying for analyst research, analysts went from being agents of brokers, who are agents of investors, to being agents of underwriting firms, who are agents of the issuer. Third, in 2000, Regulation FD essentially outlawed analysts from serving as an informational conduit from the issuer by prohibiting intentional disclosure of material nonpublic information to analysts.<sup>42</sup> Regulation FD largely eliminated any leverage analysts might have had in prying useful information out of an issuer. So, while, once upon a time, it may have been that analysts were fundamentally useful to the capital markets, that usefulness has, for some time, been in accelerating decline.

In total, these observations cast doubt on the potential efficacy of analyst fraud—for reasons that boil down to the essential uselessness of public research analysts in the first place, whether for good or nefarious purposes. One must again ask: why did issuers and investors value analyst research in the first place? Why did analyst research play such a large role in underwriter competition?

That such questions are left unanswered by the conventional view of analyst conflicts implies that, perhaps, the role of the analyst has not been very well understood. This, in turn, raises doubts about the appropriateness of the Sarbanes-Oxley reforms that ban such conflicts. Indeed, I argue that the reforms overlook important functional roles that analyst research has played in the public offering process, which I will introduce in the next Part. Furthermore, as I will argue in Part IV, a better regulatory response would be to liberalize 1933 Act prospectus liability, or, alternatively, to increase analyst disclosure, enforcement, and possibly penalties in order to maintain control over an important conduit of information into the marketplace.

---

<sup>41</sup> See n.3 *supra*.

<sup>42</sup> Regulation FD, *supra* n. 11.

### **Part III. The analyst’s role in overcoming adverse-selection and principal-agent problems, and in promoting competition among underwriters**

It is the thesis of this paper that allowing the issuer to bargain with the underwriter for positive analyst coverage has benefits to issuers and capital formation. First, favorable preoffering research and a commitment to produce favorable post-offering research credibly communicates to investors positive nonpublic information about the issuer, which mitigates adverse selection problems faced by underwriters and issuers. Second, the underwriter’s up-front incurrence of costs through producing or committing to produce positive research overcomes principal-agent problems between the issuer and the underwriter, resulting in less money “left on the table” and greater proceeds to the issuer. Finally, bargaining over analyst research took on the form of a competitive bidding market among underwriters, and may have increased competition in the underwriting industry.

#### **A. Adverse-selection and the “lemon” problem**

An adverse selection problem arises when an issuer and its underwriter are likely to possess material nonpublic information about the issuer. Even if the information is positive, absent a way to communicate this information to investors, investors will rationally assume that the information is negative due to adverse selection incentives on the part of the issuer and underwriter (also known as the “lemon” problem<sup>43</sup>). Because of the statutory bias towards negativity in the prospectus, I propose that a major way in which issuers and underwriters communicated positive information to investors was through the publication of conflicted analyst research. Analyst research does not incur so much liability as to make disclosure prohibitive, but does incur enough liability to make truthful disclosure credible.<sup>44</sup>

---

<sup>43</sup> The “lemon” problem was first described by George A. Akerlof, “The Market for Lemons: Quality Uncertainty and the Market Mechanism,” *Quarterly Journal of Economics*, vol. 84, no. 3, 488 (1970).

<sup>44</sup> See n.75, *infra*, on the standards for finding liability for analyst research reports.

1. *Causes of the lemon problem in securities offerings*

In a public offering of securities, the 1933 Act imposes strict liability on the issuer, management, and the underwriter for material misstatements or omissions in the prospectus or in permitted writings and oral communications. Because damages are calculated as the decline in price from the price at which the securities were offered, the rule punishes only omissions or misstatements of information that would have a negative impact.<sup>45</sup> Positive information, however, is not as a practical matter required to be disclosed, and management may rationally choose not to include it, especially in the case of forward-looking information.<sup>46</sup> Management may have subjective expectations of future earnings or contingent opportunities that suggest a higher expected future value for the issuer's shares; however, positive information that is intangible, subjective, or contingent often presents a prohibitive degree of liability under the 1933 Act.<sup>47</sup> While the SEC no longer prohibits management projections and earnings expectations,<sup>48</sup> and the Private Securities Litigation Reform Act (PSLRA) sought to encourage inclusion of such forward looking statements (though, importantly, not for IPO issuers or nonreporting companies<sup>49</sup>), the consensus of the securities industry practice appears to be that the PSLRA did not work and that such information is still too dangerous to include.<sup>50</sup>

---

<sup>45</sup> 1933 Act §§5, 11, 12. See the attached Figure B for a summary of the provisions.

<sup>46</sup> This is not to say that seasoned issuers, who have shareholders relying on the issuer's public statements, are free to lie about positive information. Issuers can, and have been, found liable under Rule 10b-5 for denying positive information, such as ongoing merger negotiations. See *Basic Inc. v. Levinson*, 485 U.S. 224 (1988). Furthermore, *Blue Chip Stamps v. Manor Drug Stores*, 421 U.S. 723, (1975). However, 10b-5's scienter requirement limits liability to cases where there is an intent to deceive, defraud, or manipulate. See *Ernst & Ernst v. Hochfelder*, 425 U.S. 185 (1976). See also Paul Mahoney, *Mandatory Disclosure as a Solution to Agency Problems*, 62 *University of Chicago Law Review* 1047, (1995), fn. 215-216 and accompanying text, on how lack of a damages benchmark makes liability for an omission of positive information unlikely.

<sup>47</sup> While investors need forward looking information, namely expectations of management, to make an informed investment decision, the statutory disclosure regime compels principally backwards-looking and negative information, and discourages forward-looking and positive information. See Homer Kripke, *The SEC and Corporate Disclosure: Regulation in Search of a Purpose* (1979), at 25.

<sup>48</sup> The SEC did, in fact, essentially "outlaw" projections up until the early 1970s. See Herbert S. Wander, *Securities Law Disclosure After Sarbanes Oxley*, SJ014 ALI-ABA 547, July 24-26, 2003 at 555.

<sup>49</sup> 1933 Act §27A(b)(2)(D).

<sup>50</sup> See Kevin P. Roddy, *Seven Years of Practice and Procedure Under the Private Securities Litigation Reform Act of 1995*, SJ014 ALI-ABA 395, 476; Herbert Wander, *supra* n. 68, at 615 ("Until the 1970s, the use of forward looking disclosure was essentially outlawed. Because of the importance of predictive information and its existence -- and indeed use in private placements -- it has gradually become not only allowable but encouraged. But even with this more hospitable environment, except in self-dealing

Determinations of reasonableness of the projections are made in hindsight under the lens of litigation. Management, especially, may wish to avoid even the slightest chance of personal liability, especially in light of hostility toward indemnification agreements.<sup>51</sup>

[Insert Figure B about here. The attached Figure B depicts a typical public offering timeline, with the regulatory restrictions that apply at different times.]

The upshot of these rules and incentives is that, as legal scholars have noted, prospectuses contain a dearth of positive information of a nonhistorical nature; forward-looking statements are either overwhelmingly negative (as in the risk factor discussions) or else so vague as to be meaningless. Additionally, it should be noted that the converse of this is true: the asymmetrical liability that attaches to positive/negative disclosure may induce management to include negative statements that are, in fact, unlikely to be true. A quick look through virtually any prospectus reveals pages and pages of risk factor disclosure and disclaimers, which would be, if taken as meaningful, adequate to scare off any investor.<sup>52</sup> Since management has inside information on the relative accuracy of these negative statements, this causes adverse selection problems.

This likelihood of having positive information to convey to the market becomes greater once the underwriter begins its examination of the issuer. The underwriter may have particular expertise in the issuer's industry that the issuer itself does not have, and may recognize value in the issuer of which issuer's management was unaware. The underwriter and its counsel undertake an exhaustive examination of the issuer's finances, operations, and records, and the confirmatory results of this search may themselves be positive nonpublic information. The underwriter, at the very least, can provide an informed second opinion, or certification, of sorts.<sup>53</sup> But such information is probably

---

transactions, such as going private transactions, formal line-by-line projections are overwhelmingly not used in public disclosure or SEC filings. This is primarily attributed to the wave of securities fraud class-action suits challenging even the slightest misstatement regarding predictive expression.")

<sup>51</sup> "[A]ny arguable mistake in disclosure regarding a multitude of corporate developments could result in personal financial ruin." Wander, *supra* n. 58, at 555. Regulation S-K requires the issuer to give an undertaking against not to implement indemnification. See Regulation S-K Item 512(h).

<sup>52</sup> See Homer Kripke, *The Myth of the Informed Layman*, 28 *Business Lawyer* 631.

<sup>53</sup> See James Booth and Richard Smith, *Capital Raising, Underwriting, and the Certification Hypothesis*, 15 *J. Fin. Ec.* 261-281 (1986).

prohibited under the disclosure regulatory structure,<sup>54</sup> or else, as above, too costly in terms of potential liability.

If issuers and underwriters may have positive information about themselves that they cannot disclose in the prospectus due to overbearing liability, they face an adverse-selection, or “lemon,” problem in marketing the issuer’s securities to investors.<sup>55</sup> Given a universe of issuers, some of whom have good positive private information about themselves (the “good” issuers), and some of whom who do not (the “lemons”), investors would rationally choose to pay only a lemon price. The reason is that, with no way for investors to tell nonlemons from lemons, investors would correctly assume that only the lemons would choose to sell their shares: a good issuer, who knows that her earnings prospects are promising, would have more incentive to hang on to her shares (reaping those earnings for herself), than would the lemon issuer, making it more likely that any issuer who is selling shares is, in fact, a lemon. Investors, thus, lower the price they are willing to pay. This in turn drives any remaining good issuers from the market; investors adjust prices yet lower, and so on, until only lemons remain in the market.

That leaves us with the question: given that issuers and underwriters are likely to have positive information, but will not or cannot disclose it in the prospectus, how might the issuer and underwriter credibly convey this positive information to investors? The issuer and underwriter cannot simply tell investors the information: the 1933 Act largely prohibits communications outside the prospectus, and those that are permitted are subject to strict liability. It would not suffice to make secret, nonverifiable communications to investors, since the resultant lack of credibility renders those communications meaningless. Furthermore, the wider market would never have received that information and would not be willing to pay a price in the aftermarket that reflects that information.

---

<sup>54</sup> An example of such information could be the underwriter’s positive subjective evaluation of issuer’s management. Underwriters are not allowed (or at least the author is not aware of this ever happening), under SEC practice, to testify in the prospectus as to their belief in management’s abilities. Attempting to include such a statement in a prospectus would likely lead to suspension of registration by the SEC. See, e.g., *In Re Universal Camera Corp.*, 10 SEC 648 (1945), for an instance of soft positive disclosure leading to registration delays.

<sup>55</sup> Adverse selection problems of this sort have been described in securities markets, most notably by Frank Easterbrook and Daniel Fischel, *Mandatory Disclosure and the Protection of Investors*, 70 Va. L. Rev. 669, 673-4 (1984). Easterbrook and Fischel also note the credibility-enhancing characteristics of anti-fraud rules in overcoming such adverse selection problems. *Id.* at 677-9.

Could reputation of the underwriter solve this adverse selection problem? Probably not by itself. Reputation may play a role—reputation can serve to make cheating costly if cheating is detectable—but some verification mechanism would be required to make reputation work. Verification based on subsequent price movement will be quite limited, since myriad complications arise in attempting to determine whether cheating is taking place based on price performance alone. For starters, since underwriters are not omniscient, post-offering declines in price are not necessarily indicative of cheating. Other factors—such as price correlation among different issuers (such as those in the same industry),<sup>56</sup> agency costs within the underwriter<sup>57</sup> or short time-horizons of the underwriter’s agents,<sup>58</sup> the fact that an offering price is based on subjective estimations of nondiversifiable risk as well as expected future values,<sup>59</sup> and distortions in the market demand data available to the underwriter<sup>60</sup>—may make it difficult or impossible to detect cheating even based on aggregated data across issuers.<sup>61</sup> So reputation by itself will probably not suffice to correct the adverse selection problem.

---

<sup>56</sup> For example, Morgan Stanley touted many dot.com companies, the vast majority of which precipitously declined in the dot.com crash. The performances of these issuers are correlated with one another, making them an unreliable sample for purposes of statistical testing, and making it difficult to say whether the declines in price are indicative of systematic cheating.

<sup>57</sup> For example, Morgan Stanley’s information technology underwriting group might be regarded as an entity distinct from Morgan Stanley’s biotech underwriting group, each with its own distinct reputation. This reduces sample size and makes statistical inference more difficult.

<sup>58</sup> For example, if individual investment bankers are only concerned about making a killing and then getting out of the business, reputation of the investment banking firm probably does not matter to them. This may be one reason for the necessity of individual sanctions that can attach to an individual actor, which reputation cannot do.

<sup>59</sup> The price of a stock is determined not just by expected returns, but also by nondiversifiable risk (i.e., “beta”). This would mean that a high-quality issuer might have no better expected returns than another issuer in its class, yet would still be a relatively attractive investment (i.e., command a higher price) due to the lower level of risk associated with it. The ability to control for risk in the statistical testing of stock performance is limited. See Jay Ritter and Ivo Welch, A Review of IPO Pricing Activity, Pricing, and Allocations, 57 *Journal of Finance* 4, 1795 at 1820.

<sup>60</sup> A principal way in which underwriters determine pricing is through solicitation of nonbinding indications of interest from prospective investors (the so-called “book-building process”); underwriters use this information to approximate market demand for the issuer’s securities. This information would be incomplete and somewhat distorted—among other things, investors are reluctant to reveal their preference information, and thus demand some form of payment from the underwriter to do so in the form of a lower offering price. See Ritter and Welch, *supra* n.59, at 1804-5, for a discussion of book-building theories of issue pricing.

<sup>61</sup> The academic finance literature is itself divided on whether IPO issues tend to underperform, which stresses the difficulties in this sort of analysis. See, Ritter and Welch *supra* n.59, at 1795; Paul A. Gompers and Josh Lerner, The Really Long-Run Performance of Initial Public Offerings: The Pre-Nasdaq Evidence, 58 *Journal of Finance* 1355.

## 2. *Analyst research as credible signal of inside information*

I argue that conflicted analyst research played a vital role in correcting the adverse selection problem. Analyst research provides an observable, verifiable, and credible way for underwriters to signal that they possess positive nonpublic information about an issuer. Post-offering analyst ratings are readily observable by all parties, and they can credibly communicate such inside information through the legal liability that attaches to them. Analyst research is verifiable in court, as it may be later confirmed or debunked by documents and communications discovered in litigation, and damages awarded if fraudulent. Yet the danger of liability attaching to analyst reports is not so great as Section 11 prospectus liability.<sup>62</sup> If the underwriter possesses favorable information about the issuer that cannot be communicated through the registration statement—whether because the liability would be too great or because the regulatory disclosure regime forbids it *per se*—the underwriter can, in a sense, put its money where its mouth is by carrying through on the offering with a high analyst rating. It is essentially a method of risk arbitrage: the issuer and underwriter choose a level of liability of that will attach to their forward-looking statements that will maximize their expected utility from the offering.

Mechanically, such a system of analyst signaling would work in the following way. First, for a seasoned issuer,<sup>63</sup> underwriters will make bids for an issuer's business by publishing positive research reports on the issuer. These reports *qua* bids will tend to be

---

<sup>62</sup> Liability exists for fraudulent research under 1934 Act Section 15(c)(1) and (2), and 1934 Act Rule 15c1-2, which prohibit deceptive, manipulative, or fraudulent practices by brokers and dealers that induce, or attempt to induce, the purchase of a security. See Complaint, SEC v. Citigroup Global Markets, *supra* n.12, at paragraphs 167 to 180. Liability may also be found under 1934 Act Rule 10b-5, which similarly prohibits fraudulent behavior in connection with a security. See *In re Merrill Lynch*, *supra* n.26.

A lower level of liability might also result from the form of communication itself. Analyst research reports tend to comprise simple scalar information: either buy or sell, or a price target. On the other hand, registration statement disclosure is specific and multi-dimensional, which raises the possibility that a court looking to see whether a material misstatement had been made will treat statements on a gross, rather than net, basis. For example: a registration statement might contain a materially misleading positive inaccuracy about one aspect of the issuer's business; and it may also contain a materially misleading negative inaccuracy about a different aspect of the issuer's business. Suppose the two inaccuracies would net out in terms of price effect. Still, because there is no netting requirement under §11 of the 1933 Act, a court adjudicating a §11 claim under the 1933 Act would probably only consider the positive inaccuracy, and find the issuer liable.

<sup>63</sup> That is, an issuer that has already issued securities and is subject to the 1934 Act reporting requirement (i.e., a public company).

more positive than public information about the issuer would justify; however, the underwriter, in making the bid, will attempt to hold it to a level of optimism that may turn out to be justifiable, once the underwriter learns inside information about the issuer. Issuers and investors alike observe the bids, and the issuer picks the underwriter who, *ceteris paribus*, offers the highest bid (the issuer's choice will also depend on perceptions of underwriting abilities, its own estimation of its true worth, and other such considerations).<sup>64</sup> Once the issuer chooses the underwriter, the underwriter knows that it may be found liable for fraud if the issuer's stock performs unfavorably in the aftermarket and if the underwriter does not have justification for its positive report. The issuer and underwriter begin the offering preparations, including due diligence and work on the statutory prospectus, and the underwriter becomes availed of inside information about the issuer. At this point the underwriter will update its opinion about the issuer, namely whether or not the issuer merits the degree of positivity granted in the report, as well as whether positive after-market research coverage would be justifiable. If not, the underwriter would have the opportunity to discontinue or delay the offering. If the underwriter continues the offering, the investors take this as confirmation of the optimism of the report. Investors are aware of the reputational and legal capital that the underwriter has staked on the issuer, in light of its research and its commitment to provide ongoing research, and know that the underwriter would face high costs in the event that this issuer was, indeed, a "lemon." So investors feel more confident than they would have without the analyst research, and are willing to pay a nonlemon price for the issuer's securities.

[Insert Figure C about here. Figure C depicts such a bidding auction and how it affects the determination of a public offering price.]

---

<sup>64</sup> The issuer would not necessarily pick the highest bid. With too high a bid, the underwriter would find the prospective liability and reputational cost from the "fraudulent" research to be greater than the benefits from carrying out the offering, and would pull or delay the offering, as discussed below. The issuer realizes this *ex ante* (as does the underwriter), and so there is a tendency for bids, and accepted bids, to remain at reasonable levels. See, e.g., the attached Figure C. Underwriters who bid speciously high and then do not carry through with the offering would develop reputations for doing so, and issuers would tend to avoid these underwriters. This would help to explain why, in practice, an underwriter's failure to get an offering done after receiving the issuer's mandate causes severe reputational injury.

For issuers in IPOs, the lack of public information on a pre-IPO issuer could make the publication of a preoffering research report impossible.<sup>65</sup> In the IPO case, issuers will choose the underwriter based on the research coverage that the underwriter has given to other issuers in its industry in the past, having observed the underwriter's research publications, and based on the level of research that the underwriter promises to deliver to the issuer.<sup>66</sup> The effect of this is the same as in the seasoned issuer case, as issuers and investors will both expect favorable research coverage following the offering. The underwriter bids on the basis of its past record, and so the public infers that the underwriter is awarded the issuer's mandate on the basis of its promise to do the same for the issuer.

What happens when the inside information that the underwriters learn is negative, or insufficiently positive to justify the optimism of the research report? The underwriter would most likely pull the offering. Assume that the underwriter publishes or promises research as before, wins the mandate, and commences the investigatory process. The underwriter determines that its optimistic research report would be unjustified and fraudulent. The underwriter faces the following choice: (1) the underwriter can go through with the offering, and face the possibility that the issuer's stock price will decline and the underwriter will be sued successfully for fraud (also incurring reputational costs), or (2) the underwriter can pull the offering, in which case the underwriter suffers loss of the offering proceeds and possibly reputational harm in the eyes of issuers. *Ex ante*, so long as adequate fraud penalties are in place, the underwriter would choose to pull the offering.<sup>67</sup>

---

<sup>65</sup> Many pre-IPO issuers do have significant information already public, if they are traded in foreign localities or are a subsidiary or division of a public issuer; in such a case, pre-IPO research is possible, and these issuers would be more akin to seasoned issuers for purposes of this model.

<sup>66</sup> In some cases, at least, promises of favorable research may have been even more explicit: "it was common for banks to tell customers in writing on what date they would publish a report giving the newly public company a positive investment rating ... In health-care and high-tech, many banks delivered the first draft of a research report on the public company when they pitched the IPO." Bloomberg.com, Morgan Stanley Unseats Goldman in Equity Fees as IPOs Surge, February 17, 2004 (available at <http://quote.bloomberg.com/apps/news?pid=nifea&&sid=ar2iuxavGt2k>).

<sup>67</sup> Why wouldn't the underwriter choose to offer a lemon issuer at a lower price and renege on the positive research coverage commitment? The reason is that to do so would be indistinguishable from cheating. Issuers and investors would view failure to provide such coverage as a breach; because the information gleaned by the underwriter would not be observable to anyone but the underwriter, and *ex post* determinations of pricing fairness are difficult to make, failure to provide the promised research reports will rationally be interpreted as opportunistic behavior.

Thus, analyst research plays a role in disseminating nonpublic information to the market, allowing an underwriter to credibly signal that its issuer is not a “lemon.” There is a conundrum of sorts in this analysis: if analyst research were completely unregulated (and not subject to reputational penalties) such research would be without value: it is not credible, and no one would pay any attention to it.<sup>68</sup> It would also be completely harmless, as no one would ever act upon it. It is precisely because of the potential liability that attaches to analyst research that it acts as a credible signal, and allows for the opportunity to defraud investors by those who would abuse the signal’s credibility; however, the ability to abuse the system is self-limiting, since as more fraud occurs, less credibility is given to analyst reports. The danger, then, is not really that investors might be defrauded; the danger is that the information signal, and the ability of the market to efficiently allocate capital, would become weak if potential liabilities are not high enough to deter fraudulent manipulation of the signal.

#### **B. Principal-agent problems between the issuer and underwriter, and front-loading costs**

One might ask why a credible commitment between the underwriter and issuer is needed up-front. The answer is that the issuer probably has a higher net gain from solving the adverse-selection problem than does the underwriter. The gain from solving the adverse selection problem is a higher offering price. These gains, however, accrue primarily to the issuer. On the other hand, solving the adverse selection problem is costly, in that it requires taking on potential liability. These costs are borne primarily by the underwriter. The underwriter, then, would prefer *not* to solve the adverse-selection problem, at least relative to the degree the issuer would desire—and this presents a classic agency problem. Thus, we would expect that issuers might not agree to undertake a public offering without a credible *ex ante* commitment from the underwriter to work toward a higher offering price.

---

<sup>68</sup> See Morgan and Stocken, *supra* n.19; Robert Forsythe, Russell Lundholm, and Thomas Rietz, Cheap Talk, Fraud, and Adverse Selection in Financial Markets: Some Experimental Evidence, *Review of Financial Studies*, Vol. 12, No. 3, (Autumn 1999), 481-518, (providing experimental evidence that anti-fraud rules—unsurprisingly—provide allocative improvements over cheap talk).

1. *Different incentives of principal and agent*

Assuming that the issuer's management has incentives in line with that of the issuer (such as through substantial stock ownership in the issuer), we would expect the issuer generally to seek the highest offering price possible for a given number of shares, perhaps even in excess of the "correct" market price. Issuers get the bulk of the offering proceeds, and an issuer's shareholders face dilution costs from an offering price that is too low. If we view the legal liability regime as making the issuer, in effect, a strict-liability guarantor of the price of its securities in the offering,<sup>69</sup> we would expect that an issuer, if risk-neutral, would prefer to set the price for its shares at whatever would maximize proceeds. In the event that the price was to decline, the issuer would only have to give back the amount of that decline; however, absent transactions costs or litigation penalties, the issuer would be no worse off than if it had "correctly" set the price at the level of the subsequent decline in the first place.

The underwriter, on the other hand, has a different set of incentives altogether, and will tend to underprice the offering relative to what the issuer desires. The underwriter generally receives a set percentage (usually seven percent) of the total issue amount as a fee.<sup>70</sup> However, despite its upside being so limited, the underwriter faces the same amount of potential liability as the issuer does.<sup>71</sup> The underwriter also faces certain costs from seeking a higher price that the issuer does not face: the underwriter may incur liability for statements made in the course of marketing activities and in recommending the stock to investors, such as in the analyst report that helps to solve the adverse selection problem, for which the issuer may not be held responsible. Furthermore, once

---

<sup>69</sup> This is obviously an abstraction from the 1933 Act §11 standard of liability (§11 requires the investor-plaintiff to show a material misstatement or omission in the statutory prospectus in order to recover the decline in offering price), but it is a conservative abstraction for purposes of this argument.

<sup>70</sup> See Jay Ritter and Hsuan-Chi Chen, *The Seven Percent Solution*, 55 *Journal of Finance* 3 (2000) 1105-1131. The NASD, as a rule, would generally not allow underwriting commissions to exceed 10%. See NASD Rule 2710.

<sup>71</sup> Section 11 provides for damages equal to the decline in price below the offering price, and the underwriter may be found liable up to the full amount of the securities that the underwriter underwrote. The underwriter does have the benefit of the due diligence defense (as does the issuer's management), as well as customary indemnification agreements from the issuer. But these defenses and protections may be difficult to rely upon. See, e.g., *Escott v. Barchris Construction Corp.*, 283 F.Supp. 643 (1968) (describing an underwriter's responsibility of due diligence), *Globus v. Law Research Service, Inc.*, 418 F.2<sup>nd</sup> 1276 (1969) (voiding an underwriter's indemnification agreement where the underwriter had knowledge of a material misstatement).

the underwriting agreement has been signed between issuer and underwriter, the underwriter has agreed to be, in effect, the purchaser of last resort of the issuer's securities, meaning that if the price of the shares is set too high to attract enough buyers, the underwriter is on the hook for the remaining purchase amount. The underwriter faces significant reputational liability if it is unable to successfully syndicate and sell a deal: future issuers would be led to question the underwriter's commitment, connections, and marketing savvy. Finally, the underwriter may have the opportunity to recover some of the money that is "left on the table" from its institutional investors through continued relationships with those institutional investors and in the form of kickbacks or tie-ins.<sup>72</sup> Foregoing these gains represents an opportunity cost to the underwriter.

## 2. *Contracting difficulties*

We are left with a situation in which issuers would systematically choose a higher offering price than would underwriters. Also, underwriters would choose to spend less effort and resources in getting a high price than issuers would like them to spend. The issuer, then, would want to contract with the underwriter *ex ante* to deliver a high price for the securities, and underwriters might compete for issuers' business by promising higher prices. In a competitive market, the issuer would choose the underwriter who promised the highest offering price.

But problems arise in drafting and enforcing such a contract. Naming a precise price up-front may be impossible: valuation is difficult to achieve because there may be no adequate market test of the issuer's securities. Underwriters themselves might have only a vague expected value of the issuer's securities, and would rely on the book-building process to approximate a demand curve. All this might make it impossible for the underwriter to commit to an offering price ahead of time.<sup>73</sup>

---

<sup>72</sup> See Ritter and Welch, *supra* n. 73 at 1808-15; see also, e.g., SEC Citibank Complaint, *supra* n.12.

<sup>73</sup> In practice, the formal "underwriting agreement" is almost entirely for the benefit of the underwriter. Such agreements do not specify or commit to an offering price, and they are generally not signed until immediately prior to effectiveness and distribution of the securities, making the *ex ante* legal commitment to underwrite at all fairly insignificant. See Larry Soderquist and Theresa Gabaldon, *Securities Regulation*, 5<sup>th</sup> Edition (2003) at 35.

Difficulties arise in observing outcomes and, hence, enforcing such a contract. Since the underwriter is a repeat player, we might think that the issuer could look to reputation and past performance with previous issuers in selecting an underwriter; an underwriter would want to preserve its reputation in order to attract future business, and thus the underwriter would have an incentive not to cheat. Recent industry offerings might yield some targets in terms of financial ratios or pricing fundamentals. The precision of such targets is limited, however, and the same impediments to a reputational solution arise as in the adverse-selection problem.<sup>74</sup>

We might ask whether the issuer can monitor the underwriter's selling and marketing efforts directly. For example, an issuer might look at over-subscription levels, but over-subscription could be susceptible to manipulation since it is a function, in part, of the costs the underwriter has incurred in marketing the security to investors. The underwriter controls the marketing and syndication activities, and efforts in this regard may not be observable by the issuer.

Compounding this is the fact that issuers are probably at a general informational disadvantage compared to underwriters. Issuers, especially first-time issuers, may not be as sophisticated as the underwriter. In contrast, underwriters are repeat-players in the offering game, and usually have extensive expertise and networks on which to rely. Because of this, it is possible that underwriters possess inside information about an issuer's prospects that even the issuer is not aware of. Issuers will be less aware of demand for the issuer's securities, and may be less informed about market conditions as a whole. In short, there are immediate fundamental limits on the issuer's ability to monitor the underwriter's efforts on its behalf and to ensure contractual compliance—even assuming a satisfactory contract could be drafted.

The issuer, then, may find itself in a position where an *ex ante* contract specifying terms of pricing is difficult or impossible to draft, and probably unmonitorable and unenforceable. What is an issuer to do?

---

<sup>74</sup> See *supra* nn. 69-74 and accompanying text. The same issues that make it difficult or impossible for investors to determine, based on post-offering price performance, whether they are being "cheated" by the underwriter (i.e., whether the offering has been overpriced) also make it difficult or impossible for issuers to determine whether offerings have been underpriced.

3. *Analyst research as up-front commitment and incurrence of costs*

I argue that conflicted analyst research has provided at least a partial solution to this problem. The underwriter can commit to the issuer to seek a higher price prior to the offering by incurring some of the costs of seeking a higher offering price up-front. Underwriters do this by issuing a favorable research report (for seasoned issuers) and by credibly committing to provide positive research coverage in the post-offering environment (for both seasoned issuers and IPOs). This has the effect of observably committing the underwriter to solving the adverse-selection problem ahead of time if the offering is to go through.<sup>75</sup> It also means that the underwriter has, again in a highly observable fashion, already incurred some degree of its costs up-front.<sup>76</sup>

Once the underwriter has made its commitment or issued its preoffering report, the underwriter has already told investors, in effect, that the underwriting will go through only if the underwriter learns positive nonpublic information about the issuer. This has the effect of raising demand for the offering, and hence, all things being equal, raising the offering price. This could be conceptualized as a cost the underwriter has incurred up-front. Additionally, if the underwriter were not to follow through with positive aftermarket research, investors and issuers would take this as evidence of underwriter cheating (investors would interpret this as the underwriter mitigating its fraud exposure for selling a lemon), and the underwriter would thenceforth find itself relegated to lemon-underwriter status. So, this upfront commitment has also increased the costs to the underwriter of not following through on its commitment to support with positive research. In effect, it has taken away the option of the underwriter to price low on a good issuer.

Alternatively, suppose that the public signal does not exist. If the underwriter learned positive nonpublic information about the issuer, the underwriter could, conceivably, expend effort and liability in other ways to convince investors that the issuer

---

<sup>75</sup> The issuer and investors alike will at this point realize that the underwriter, as per the analysis in Part III.A above, will not carry through with the offering unless the issuer is a nonlemon.

<sup>76</sup> The preoffering research is observable since it is made public. The commitment to publish favorable research in the aftermarket is observable by the issuer, obviously, since the underwriter makes the commitment to the issuer directly. Investors infer the existence of the commitment through the underwriter's past actions—giving positive research coverage to issuers it has underwritten—and because investors know that the issuer will have chosen the underwriter who promises the most favorable coverage.

is not a lemon. However, these efforts may be largely unobservable to the issuer, and are almost entirely unobservable to other would-be issuers.<sup>77</sup> Again, reputation would be insufficient on its own to compel as much effort from the underwriter. The underwriter would then have little incentive to undertake these efforts (the intuition being that if one cannot get credit for doing something good, there is little point in doing it at all), especially in light of the potential fraud liability that it might face by issuing positive research on the issuer. The underwriter would simply price at the level that maximizes its own utility.

[Figure D depicts the underwriter's strategic pricing behavior.]

Thus, in order for the issuer to be certain that the underwriter will attempt to get a good price for the issuer's shares, the underwriter must commit itself up-front by incurring substantial costs. The underwriter also increases, in effect, the penalties it will pay for breaching on its commitment to the issuer sending an *ex ante* signal to investors that the issuer is not a lemon.

### **C. Competition among underwriters: a corollary benefit?**

As Parts III.A and III.B describe, the analyst research signal appears to have benefited primarily the issuer, sometimes at the direct expense of the underwriter. As Part II described, analyst research was offered for underwriting business in what appeared to be a competitive bidding market. Accordingly, there is some reason to believe that conflicted analyst research may have helped improve competition among underwriters.

Underwriters competed with one another for underwriting business by offering up positive research to issuers. *Ceteris paribus*, the underwriter offering the most positivity would win the mandate.<sup>78</sup> As described above, analyst research is costly. These costs

---

<sup>77</sup> For example, an underwriter might call prospective investors to tell them the positive nonpublic information, and credibility would attach to those communications by virtue of liability under Section 12(a)(2) of the 1933 Act. But these communications would not be observable to outsiders, and more widely observable disclosure (such as a press release) would be prohibited outside of the prospectus. See 1933 Act §5.

<sup>78</sup> See Krigman, Shaw, and Womack, *supra* n. 4.

were borne principally, if not entirely, by the underwriters. The incurrence of such costs upfront tends to be undesirable from an underwriter's point of view, and desirable from the issuer's point of view. If underwriters do not compete on other grounds, the absence of a market for conflicted analyst research makes underwriters better off, and issuers worse off. So, one might conjecture that, if competition in the underwriting business is not otherwise particularly strong, then the NASD/NYSE prohibition of conflicted analyst research would essentially mandate that underwriters collude in a form of price fixing and anti-competitive behavior.

Whether underwriters compete on terms other than analyst research is difficult to say. Some academic studies and journalistic investigations do question the competitiveness of underwriting markets, and from their findings it does not appear that underwriters compete on price.<sup>79</sup> Underwriting commissions are highly stable at seven percent for public offerings in the United States.<sup>80</sup> Very large offerings, or offerings where the issuer has particular leverage over the underwriter, will sometimes have lower underwriting commissions, but otherwise pricing seems to be set.<sup>81</sup> By way of comparison, offerings outside of the U.S., especially Asia, tend to have dramatically lower underwriting commissions, as do U.S. offerings of debt.<sup>82</sup> But in general, underwriters appear to be quite resistant to price competition,<sup>83</sup> even if they do not explicitly conspire to collude.<sup>84</sup> In any event, it is open for debate, at least, whether underwriters currently do, or will, compete on price.

---

<sup>79</sup> See Chen and Ritter, *supra* n. 87; "IPO firms face probe of 7% fee—U.S. Antitrust group questions a standard," *The Wall Street Journal*, May 3, 1999, at C1; Roger Lowenstein, "Street's Incredible Unshrinking Spread," *The Wall Street Journal*, April 10, 1997 at C1 (quoting an unnamed "head of underwriting" at an investment bank as saying "we'd be cutting our own throats to compete on price."). But c.f. Mukesh Bajaj, Surmon Mazumdar, Andrew Chen, and Atulya Sarin, *Competition in IPO Underwriting: Time Series Evidence*, working paper (2003) (finding some evidence of competitive price response when adjusting for changing market conditions).

<sup>80</sup> Chen and Ritter, *supra* n. 87, note that in 90 percent of IPOs of between \$20 and \$80 million in the period from 1995 to 1998, underwriting spreads were highly concentrated at exactly seven-point-zero percent.

<sup>81</sup> See Lowenstein, *supra* n. 97, in discussing cheaper discounts garnered by Berkshire Hathaway and AT&T's Lucent offering.

<sup>82</sup> Chen and Ritter, *supra*.

<sup>83</sup> Lowenstein, *supra* n. 97, recounts the story of a small issuer who offered three separate underwriters an eight percent commission if the offering went well, and six percent if it went badly. All three underwriting firms refused to deviate from the seven percent standard.

<sup>84</sup> The U.S. Justice Department's antitrust division did investigate investment banks for fixing underwriting pricing, but was unable to find any evidence of an explicit agreement not to compete. See Randall Smith,

Besides price and analyst research, underwriters might compete on the basis of other factors such as reputation, extent of distribution network, prestige, and ability to provide after-market support.<sup>85</sup> However, this may not be competition *per se*: an underwriter with the highest level of prestige and biggest distribution network, for instance, may simply receive the mandates for the most lucrative offerings, and would therefore enjoy a higher degree of monopolistic rents than other underwriters; put another way, the fact that there might be an underwriter pecking order, and some degree of jockeying within that pecking order, does not mean that underwriters are earning only competitive returns. Additionally, the ability of the issuer to monitor the extent to which the underwriter draws on its distributional network, or spends its reputational capital, or provides aftermarket support—all costly actions—may be limited, meaning that competition along these lines is limited as well. In any event, given the somewhat dubious nature of underwriter competition, prohibiting competition in terms of analyst research would appear to exacerbate any noncompetitive tendencies that do exist.

From a public-choice perspective, it is interesting to note who, exactly, implemented the prohibition on analyst conflicts of interest. The Sarbanes-Oxley Act itself did not call for such a prohibition. Nor did the SEC rules (Regulation AC) seek to prohibit analyst conflicts and research *quid pro quos*, either. The SEC rulemaking would have only required conflicts to be clearly disclosed. On the other hand, the NASD, the NYSE, and the Global Research Analyst Settlement *did* prohibit these conflicts in their entirety.<sup>86</sup> One should be aware that investment banks are one of the chief constituencies of the NASD and the NYSE, and they also were a party to the Global Research Analyst Settlement. Is it possible to suggest, then, that the underwriters might have been glad to be rid of the market for analyst research?<sup>87</sup> This could be a case of the regulators doing

---

“U.S. Ends Probe Into Underwriting Fees Charged by Securities Firms for IPOs,” *The Wall Street Journal*, April 9, 2001 at C11.

<sup>85</sup> To the extent that underwriters do compete along these dimensions, it would appear to be a form of long term competition; in the short term, features such as prestige and the extent of the distributional network are likely fixed, so that underwriters cannot compete for specific deals along these lines.

<sup>86</sup> See NYSE Rule 472; NASD rule 2711; Global Settlement, *supra* n. 35.

<sup>87</sup> This would not be the first time that investment banks were able to influence rulemaking to their advantage. See Paul Mahoney, *The Political Economy of the Securities Act of 1933*, *Journal of Legal Studies*, vol. 30 (concluding that several provisions of the 1933 Act served to protect established investment banks from upstart competition).

exactly what the regulated want. Analyst jobs are currently being scaled back,<sup>88</sup> and those that remain are being largely outsourced or sent overseas.<sup>89</sup> Conflicted analyst research may well have been a thorn in the side of investment bankers, costly not just in terms of the salaries of the hundreds or thousands of analyst personnel, but also in the legal and reputational exposure that it incurred. While it is difficult to say conclusively that the analyst reforms represent regulatory capture, it is a distinct possibility that they make investment banks better off.

#### **Part IV. Ramifications of this model and the effect of the Sarbanes-Oxley Regulations**

Part III of this paper outlines ways in which failings of the current regime of securities regulation have been mitigated through publication of conflicted analyst research. The model developed in Parts III.A and B describes a system in which an inability to disclose positive information using statutory means has led to analyst research serving as an informational conduit to investors, and where uncertainty about correct pricing and a lack of transparency in the public offering system make it difficult for underwriters to commit to serve issuers' best interests; in both cases, analyst research provides a device to overcome limitations of the statutory or institutional structure. Part III.C briefly discusses how conflicted analyst research may have improved competitiveness in the underwriting industry. In this Part IV, I will discuss how well the system of analyst signaling actually worked, and how it could be improved upon.

##### **A. How well did the system of analyst signaling work?**

In the system that prevailed up until the Sarbanes-Oxley reforms, conflicted analysts signaled valuable information to the market. However, there are two inherent

---

<sup>88</sup> The Wall Street Journal reported that 29% of 800 companies surveyed reported some loss of analyst coverage in 2003. Ken Brown, Heard on the Street, Why Cuts in Analyst Coverage May be Good for Investors, Wall Street Journal, November 28, 2003.

<sup>89</sup> One (rather self-serving) response of investment banks to the new analyst conflict rules is to begin exporting research jobs overseas, largely to India, where costs are significantly lower. See Khozem Merchant and David Wells, Banks Move Analysts' Work to India, Financial Times, August 20, 2003.

dangers to such a signaling model. First, conflicted analyst research may be subject to fraudulent manipulation: where gains are sufficiently high, or the analyst/underwriter does not believe (whether correctly or not) that it will be subject to significant legal or reputational penalties, analysts and underwriters might choose to commit fraud. Second, and more importantly, the analyst research signal might be a very noisy signal, and may do a bad job of signaling information that could be more efficiently communicated in some other fashion.

Some fraud undoubtedly did occur in recent years: allegations against individual analysts such as Henry Blodget, Mary Meeker, and Jack Grubman (each of whom appears to have published research contrary to their personal opinions), as well as against their employers, leave little doubt about that. However, the conclusion of certain legal actions, such as the Global Analyst Research Settlement, which resulted in fines of \$1.4 billion, the banning of characters such as Grubman and Blodget from the securities industry, and ongoing legal actions all provide some evidence that the verification and enforcement mechanisms do, in fact, work. Furthermore, analyst fraud is self-limiting, since as the market learns that the analyst signal is unreliable (as would be the case if, for instance, potential liabilities were too small or the possibility of enforcement too remote), the market will cease to treat the analyst signal as credible. Among underwriters as a group, if a particular underwriter is found to have cheated, that underwriter will lose the benefit of having a credible analyst signal, and would be avoided by issuers since that underwriter is no longer able to overcome adverse selection problems.

A more worrisome issue is that conflicted analyst research may be a noisy and inefficient signal. The signal itself is often quite imprecise: price targets and buy, hold, or sell recommendations may do a poor job of conveying complex, multidimensional information to the marketplace, and the signal, being sent prior to the underwriter's discovery of material nonpublic information, cannot be tailored to the exact facts that the underwriter uncovers.<sup>90</sup> From the investor's perspective, properly calculating the incentives of the analysts, issuers, and underwriters may be costly or difficult. Poorly

---

<sup>90</sup> For example, in Figure C, the underwriter who wins the bidding competition, CSFB, has a private valuation of 95, but is only able to sell the securities for 90. This effect, however, would disappear as more underwriters compete for the issuer's mandate, and if the issuer is also able to discern correct private valuation when it chooses the underwriter.

informed investors, for example, might overestimate the penalties imposed upon underwriters for fraud, and infer a stronger signal of issuer quality than is proper. The situation becomes exacerbated if we suppose that the issuer can make additional side-payments to the underwriter to increase the underwriter's incentives to commit fraud.<sup>91</sup> In short, there are many ways in which this signaling system is not ideal.

## **B. How might the system be improved?**

A first-best solution to inefficiencies in the public offering process would be to allow the issuer and underwriter to publicly state the hitherto nonpublic information, subject to fraud liability, as opposed to the current regime of strict liability. Legislation along the lines of the PSLRA would be sufficient to accomplish this, so long as the new legislation made liability for forward looking statements subject to a clear fraud or scienter requirement.<sup>92</sup> Alternatively, and perhaps more simply, §12(a)(2) of the 1933 Act could be amended to require a showing of scienter to prove liability on the basis of misrepresentations in a “free writing.”<sup>93</sup> The underwriter would then be free to distribute a statement disclosing the positive information and the underwriter's subjective opinion. Either alternative would enable public communication of inside information in a robust and accountable fashion.

But if such a first-best solution is not readily forthcoming from Congress and the SEC (which, given the current political climate, seems to be the case), then a more incremental solution would be to attempt to strengthen the analyst signal, rather than

---

<sup>91</sup> An example of this is Jack Grubman receiving entry for his children in an elite nursery school. See n. 25, supra. Another example is the receipt by Phua Young, a former Merrill Lynch analyst, of private investigative services (to spy on his fiancé) from Tyco. See, Mark Maremont and Chad Bray, In Latest Tyco Twist Favored Analyst Got Private Eye Gratis, *The Wall Street Journal*, January 21, 2004. Market participants would not be able to take into account under-the-table payoffs such as this without explicit disclosure by the investment bank.

<sup>92</sup> The PSLRA standard of liability—which has been interpreted by the courts to be something less than strict liability but something more than fraud—for forward looking statements has not so far been successful in encouraging issuers and underwriters to include such forward looking information. See Wander, nn. 58, 61, and 62 supra.

<sup>93</sup> Since free writings (i.e., writings that are by preceded by or sent with a §10 prospectus) are not public, there would also have to be some further statutory amendment to provide for filing or publication of free writings, and an expanded definition of who may sue under §12(a)(2) (currently, purchasers may only sue those from whom they bought, so aftermarket purchasers would not have a §12(a)(2) claim against the issuer/underwriter without some further adjustment).

eliminate it entirely. If incidences of fraud appear to be too common such that investors are unwilling to rely on the analyst signal, then raising expected fraud liabilities could be a solution. Yet, as noted above, underwriter fraud ought to be self-limiting, in that it behooves underwriters and analysts to maintain reputations for credible signaling;<sup>94</sup> the risk of raising expected penalties too high is that it would deter disclosure of positive information and compound adverse-selection problems. One good measure along these lines is to make enforcement and penalties more readily predictable and standardized, since investors and analysts would operate under less uncertainty; this would militate toward consolidating and centralizing prosecutions at the federal level, and increasing the role that the SEC and the exchanges play in policing the securities industry.

Similarly, more disclosure of analyst incentives could help to strengthen the analyst signal; disclosure has the advantage of not being particularly costly, and not deterring beneficial behavior. If analysts are required to disclose in the report itself how analyst compensation is determined, and any other significant incentive conflicts, then this helps to minimize noise in the signal resulting from incentive uncertainty. It might also be a good idea to restrict side-payments, such as direct payments from the issuer to the analyst or the tying of underwriting business to other investment banking business, since these side-payments may make investors' *ex ante* cost-benefit calculations more difficult.

The actual reform implemented under the aegis of the Sarbanes-Oxley Act is flat-out prohibition of analyst conflicts of interest.<sup>95</sup> This prohibition, absent an overhaul of the liability provisions that deter disclosure of positive information, is almost certainly counterproductive. The benefits that conflicted analyst research provided—namely, overcoming adverse selection and principal-agent problems, and increasing competition among underwriters—have been rolled back in their entirety. Prohibiting conflicted analyst research likely hurts issuers and investors by stemming the flow of credible information into the market, and may actually help underwriters by permitting (indeed, forcing) them to collude against competition. This is a result that is almost certainly

---

<sup>94</sup> See John Lott, The Level of Optimal Fines to Prevent Fraud When Reputations Exist and Penalty Clauses are Unenforceable, *Managerial and Decision Economics*, vol. 17 (4) 363-380 (1996).

<sup>95</sup> See nn. 37-41 *supra* and accompanying text on the NYSE and NASD reforms.

counter to the intent of Congress, and which is detrimental to the functioning of the U.S. capital markets.

## **Part V. Conclusion**

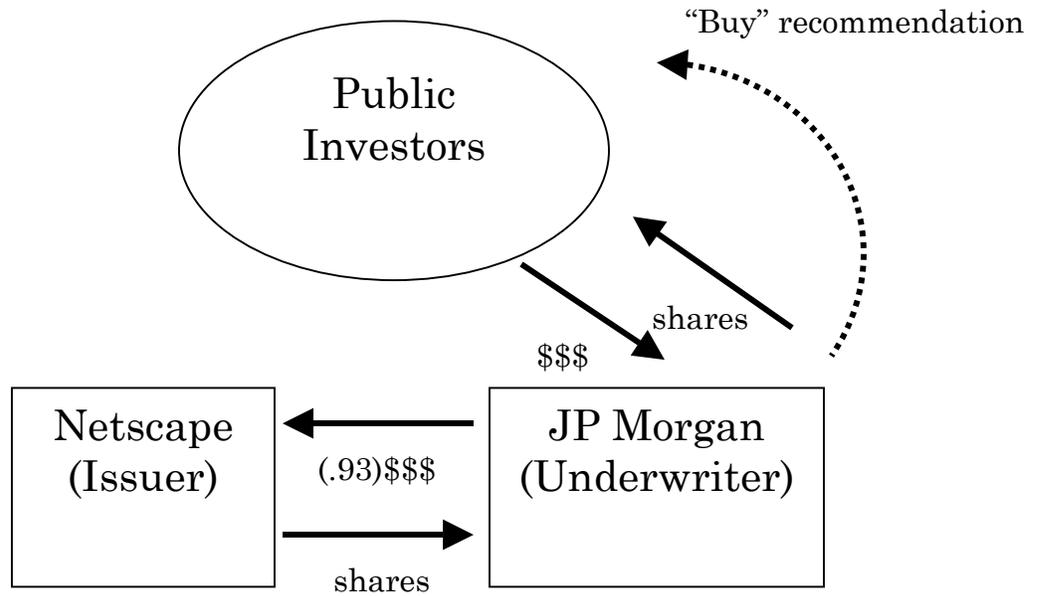
This paper argues that conflicted analyst research provided significant benefits to the market. The analyst signal provided a way to communicate positive information that would have otherwise been deterred by the liability provisions of the 1933 Act. Investors could then make investment decisions based upon better information, and better-quality issuers are able to raise more capital.

Also, the ability of the underwriter to publish or commit to publish analyst research prior to the offering provides a way to solve the principal-agent problem: the underwriter can credibly commit to exert effort and incur costs to obtain a higher offering price. This helps to correct the inability to contract as to price and effort that arises from limited information and limited opportunity of the issuer to monitor. Correcting the principal-agent problem results in issuers being more willing to issue their securities.

Finally, there is some reason to think that conflicted analyst research was a form of healthy competition in the underwriting industry. Since the underwriting industry may not be subject to competition in other dimensions, the market for conflicted analyst research may have resulted in a diminishment in the level of oligopoly rents that underwriters were able to charge.

While the analyst signal provided significant benefits, it was not perfect: the signal itself was somewhat noisy. An optimal solution would be to institute wider reforms in the disclosure and liability provisions of the 1933 Act to fix the negative bias of statutory disclosure. Barring such a first-best solution, incremental reforms along the lines of increased analyst disclosure and fraud liability may yield benefits in strengthening the signal. However, the Sarbanes-Oxley reforms go so far as to prohibit conflicted analyst research altogether. Prohibition is certainly not a good solution, as it results in the reinstatement in full of the adverse selection, principal-agent, and anti-competitive problems that currently plague the securities industry.

**Figure A: Example of typical public offering mechanics**



Netscape (the issuer) desires to do a public offering. To that end, Netscape engages JP Morgan (the underwriter) to underwrite a sale of Netscape's securities to the public.

Netscape issues shares to JP Morgan (the underwriter). JP Morgan buys the shares from Netscape at 93% of the expected public offering price. JP Morgan sells the shares to the public (the public investors) for 100% of the public offering price, pocketing the other 7% (the underwriter's commission). Investors now own Netscape's shares.

JP Morgan's research analyst may also issue a "buy" recommendation on the securities before and/or after the offering.

**Figure B: Public offering timeline and regulatory structure**

Steps in a public offering	Applicable regulation
1. Issuer first considers doing a public offering.	<p>The 1933 Act, §5 prohibits offers and sales of securities by the issuer or the issuer’s agents. “Offer” includes publicity or other activities that may “condition the market” for the issuer’s securities. This effectively precludes any publicity that is not in the ordinary course of business or that does not fall under a specific exempting provision of the 1933 Act.</p> <p>Illegal offers or sales result in the offeree or purchaser having a right of rescission under §12(a)(1).</p>
2. Issuer engages an underwriting firm.	The underwriting firm also becomes subject to the §5 prohibition of publicity regarding the issuer or the offering. The underwriter, and its analyst, are now allowed to have access to material nonpublic information, but cannot make that information public.
3. Issuer files a preliminary prospectus (a/k/a “red herring” or §10(b) prospectus) with the SEC.	<p>Sales of securities are prohibited. Written offers are allowed only by means of the preliminary prospectus.</p> <p>Oral offers of securities, however, are now permitted. This includes the “roadshow,” which consists of the issuer and the underwriter going on the road to make presentations to potential buyers. These communications are subject to antifraud liability (Rule 10b-5) and material misstatement strict liability (§12(a)(2)).</p>
4. Issuer files final prospectus (a/k/a §10(a) prospectus) with SEC. SEC declares registration effective.	<p>Offers and sales of securities are now permitted. Purchasers must receive a final prospectus before securities or confirmations of sale may be delivered.</p> <p>Content of the prospectus is subject to §11 strict liability for material misstatements or omissions, if the price of the security declines below the offering price. Management and the underwriter, but not the issuer, have an affirmative due diligence defense where they can escape liability by showing that they conducted a reasonable investigation into the accuracy of the disclosure.</p>
5. Analysts begin (or reinitiate) research coverage of the issuer. Issuer files ongoing periodical public reports.	<p>Analyst research is subject to anti-fraud liability under 1934 Act §15(c) and Rule 10b-5.</p> <p>Issuer reports are also subject to anti-fraud liability.</p>

**Figure C: Hypothetical example of bidding auction for AT&T underwriting mandate**

Underwriter/ analyst	Preoffering research report <i>qua</i> bid (observable)	Underwriter’s private valuation of AT&T with inside information (not observable)	Price at which public would occur, if
JP Morgan	50	85	50
<b>CSFB</b>	<b>90</b>	<b>95</b>	<b>90</b>
Merrill	100	80	No offering
Lehman	85	80	No offering
MSDW	70	100	70

In this simplified example, underwriter/analysts bid for the issuer's (here, AT&T's) underwriting business by publishing positive analyst research. These bids are based only on publicly available information. After the bidding stage, the mandated underwriter will gain access to the issuer's inside information, but will be prohibited under law from publishing such information. Investors can observe the preoffering research report *qua* bid, but not the underwriter's private valuation of the issuer.

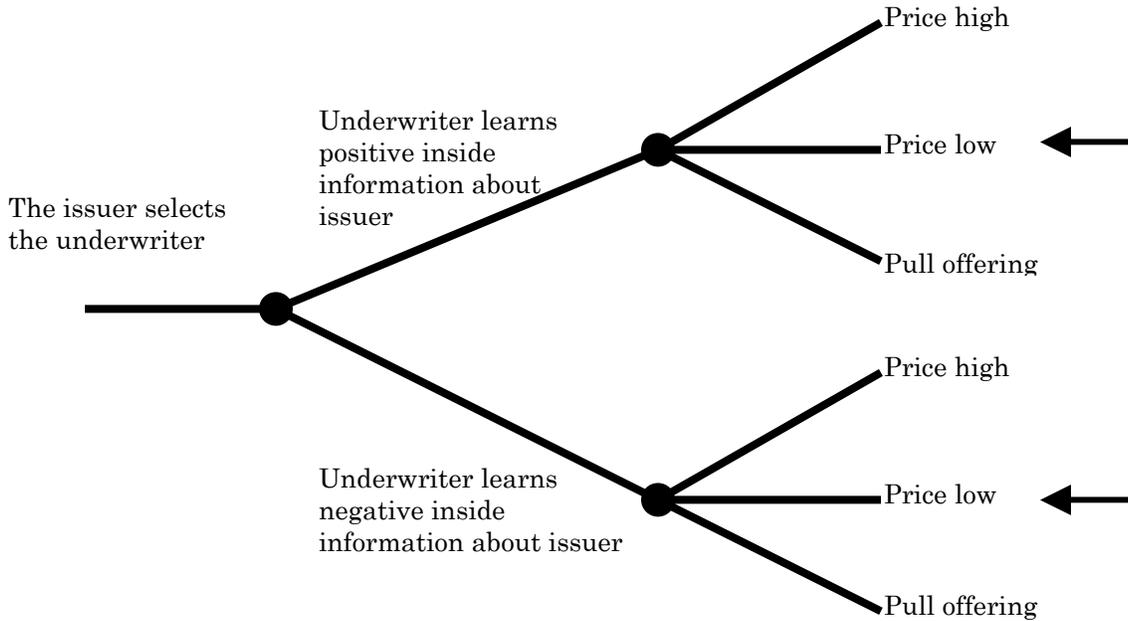
Neither the high private valuation (MSDW) nor the high bid (Merrill) will win in this example. High private valuations, such as MSDW's, are of little use to the issuer: the 1933 Act's prohibition on communications to the public prohibits the underwriter from credibly signaling its private valuation to investors. MSDW, assuming *arguendo* that it receives the mandate, would only be able to sell the securities for the publicly quoted price of 70; that is because the quoted price of 70 is the only information that the investors would credibly receive.

Bids in excess of private valuation, such as Merrill's and Lehman's, are not viable: should either win the mandate, both Merrill and Lehman, because of the consequent fraud liability, would be unwilling to go forward with an offering based on what is an unjustifiable price target, and the offering would be killed—an action that is costly both to the underwriter (future issuers will infer that the underwriter was unable to “do the deal”) and to the issuer (investors would infer that the underwriter had learned negative information about the issuer). Thus, underwriters would attempt not to bid too high, while issuers would try to select an underwriter whose bid the issuer feels is reasonable. If AT&T were to pick Merrill, then the offering would be killed, and AT&T would have to try again in the next iteration of the game with a different underwriter (though AT&T and Merrill would have both suffered reputational loss). *Ex ante*, AT&T might eschew Merrill's bid in favor of CSFB's if, based on AT&T's own assessment of the situation, AT&T felt that 100 was unlikely to prove to be sustainable; this does, however, depend on how accurately the issuer is able to value itself.

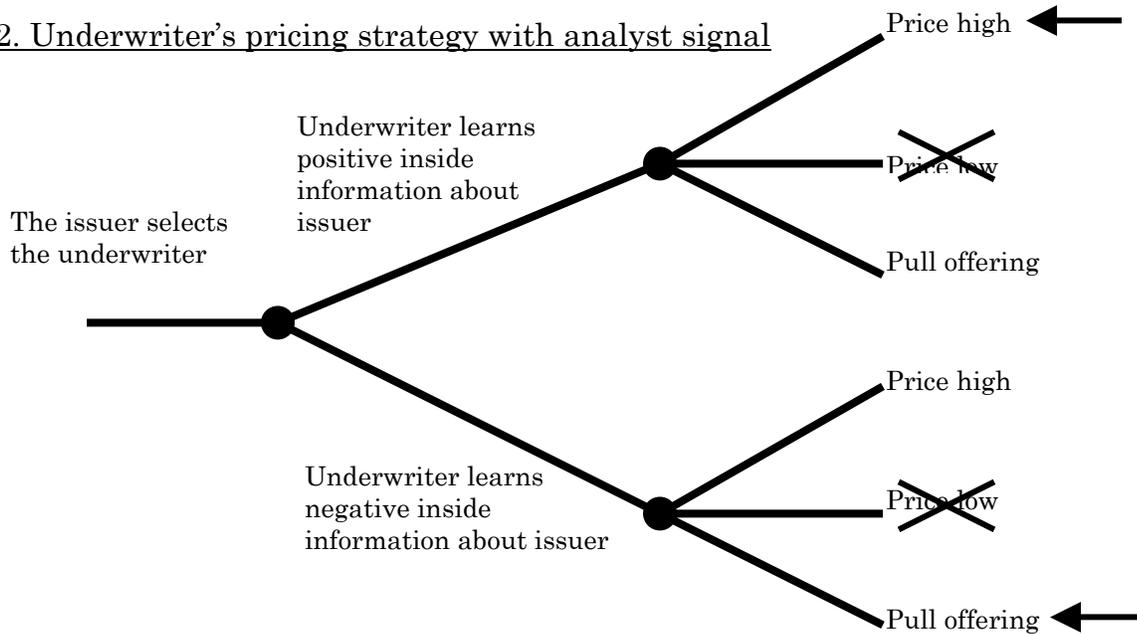
The ultimate winner (CSFB) is the bidder who has the highest bid that is exceeded by her private valuation of the issuer.

## Figure D: Underwriter pricing behavior

### 1. Underwriter's pricing strategy without analyst signal



### 2. Underwriter's pricing strategy with analyst signal



This Figure D depicts how the underwriter's pricing strategy changes depending on whether the underwriter has given out a preoffering analyst research signal. Signaling preoffering makes it costly for the underwriter to price the issuer's securities at a low level ("low" being defined as the price that would otherwise maximize the underwriter's *ex post* utility). The arrows indicate the underwriter's choice of price in each contingent state of the world.

Readers with comments should address them to:

James C. Spindler  
University of Chicago Law School  
1111 East 60th Street  
Chicago, IL 60637  
[jspindler@law.uchicago.edu](mailto:jspindler@law.uchicago.edu)

Chicago Working Papers in Law and Economics  
(Second Series)

1. William M. Landes, Copyright Protection of Letters, Diaries and Other Unpublished Works: An Economic Approach (July 1991)
2. Richard A. Epstein, The Path to *The T. J. Hooper*: The Theory and History of Custom in the Law of Tort (August 1991)
3. Cass R. Sunstein, On Property and Constitutionalism (September 1991)
4. Richard A. Posner, Blackmail, Privacy, and Freedom of Contract (February 1992)
5. Randal C. Picker, Security Interests, Misbehavior, and Common Pools (February 1992)
6. Tomas J. Philipson & Richard A. Posner, Optimal Regulation of AIDS (April 1992)
7. Douglas G. Baird, Revisiting Auctions in Chapter 11 (April 1992)
8. William M. Landes, Sequential versus Unitary Trials: An Economic Analysis (July 1992)
9. William M. Landes & Richard A. Posner, The Influence of Economics on Law: A Quantitative Study (August 1992)
10. Alan O. Sykes, The Welfare Economics of Immigration Law: A Theoretical Survey With An Analysis of U.S. Policy (September 1992)
11. Douglas G. Baird, 1992 Katz Lecture: Reconstructing Contracts (November 1992)
12. Gary S. Becker, The Economic Way of Looking at Life (January 1993)
13. J. Mark Ramseyer, Credibly Committing to Efficiency Wages: Cotton Spinning Cartels in Imperial Japan (March 1993)
14. Cass R. Sunstein, Endogenous Preferences, Environmental Law (April 1993)
15. Richard A. Posner, What Do Judges and Justices Maximize? (The Same Thing Everyone Else Does) (April 1993)
16. Lucian Arye Bebchuk and Randal C. Picker, Bankruptcy Rules, Managerial Entrenchment, and Firm-Specific Human Capital (August 1993)
17. J. Mark Ramseyer, Explicit Reasons for Implicit Contracts: The Legal Logic to the Japanese Main Bank System (August 1993)
18. William M. Landes and Richard A. Posner, The Economics of Anticipatory Adjudication (September 1993)
19. Kenneth W. Dam, The Economic Underpinnings of Patent Law (September 1993)
20. Alan O. Sykes, An Introduction to Regression Analysis (October 1993)
21. Richard A. Epstein, The Ubiquity of the Benefit Principle (March 1994)
22. Randal C. Picker, An Introduction to Game Theory and the Law (June 1994)
23. William M. Landes, Counterclaims: An Economic Analysis (June 1994)
24. J. Mark Ramseyer, The Market for Children: Evidence from Early Modern Japan (August 1994)
25. Robert H. Gertner and Geoffrey P. Miller, Settlement Escrows (August 1994)
26. Kenneth W. Dam, Some Economic Considerations in the Intellectual Property Protection of Software (August 1994)
27. Cass R. Sunstein, Rules and Rulelessness, (October 1994)

28. David Friedman, More Justice for Less Money: A Step Beyond *Cimino* (December 1994)
29. Daniel Shaviro, Budget Deficits and the Intergenerational Distribution of Lifetime Consumption (January 1995)
30. Douglas G. Baird, The Law and Economics of Contract Damages (February 1995)
31. Daniel Kessler, Thomas Meites, and Geoffrey P. Miller, Explaining Deviations from the Fifty Percent Rule: A Multimodal Approach to the Selection of Cases for Litigation (March 1995)
32. Geoffrey P. Miller, Das Kapital: Solvency Regulation of the American Business Enterprise (April 1995)
33. Richard Craswell, Freedom of Contract (August 1995)
34. J. Mark Ramseyer, Public Choice (November 1995)
35. Kenneth W. Dam, Intellectual Property in an Age of Software and Biotechnology (November 1995)
36. Cass R. Sunstein, Social Norms and Social Roles (January 1996)
37. J. Mark Ramseyer and Eric B. Rasmusen, Judicial Independence in Civil Law Regimes: Econometrics from Japan (January 1996)
38. Richard A. Epstein, Transaction Costs and Property Rights: Or Do Good Fences Make Good Neighbors? (March 1996)
39. Cass R. Sunstein, The Cost-Benefit State (May 1996)
40. William M. Landes and Richard A. Posner, The Economics of Legal Disputes Over the Ownership of Works of Art and Other Collectibles (July 1996)
41. John R. Lott, Jr. and David B. Mustard, Crime, Deterrence, and Right-to-Carry Concealed Handguns (August 1996)
42. Cass R. Sunstein, Health-Health Tradeoffs (September 1996)
43. G. Baird, The Hidden Virtues of Chapter 11: An Overview of the Law and Economics of Financially Distressed Firms (March 1997)
44. Richard A. Posner, Community, Wealth, and Equality (March 1997)
45. William M. Landes, The Art of Law and Economics: An Autobiographical Essay (March 1997)
46. Cass R. Sunstein, Behavioral Analysis of Law (April 1997)
47. John R. Lott, Jr. and Kermit Daniel, Term Limits and Electoral Competitiveness: Evidence from California's State Legislative Races (May 1997)
48. Randal C. Picker, Simple Games in a Complex World: A Generative Approach to the Adoption of Norms (June 1997)
49. Richard A. Epstein, Contracts Small and Contracts Large: Contract Law through the Lens of Laissez-Faire (August 1997)
50. Cass R. Sunstein, Daniel Kahneman, and David Schkade, Assessing Punitive Damages (with Notes on Cognition and Valuation in Law) (December 1997)
51. William M. Landes, Lawrence Lessig, and Michael E. Solimine, Judicial Influence: A Citation Analysis of Federal Courts of Appeals Judges (January 1998)
52. John R. Lott, Jr., A Simple Explanation for Why Campaign Expenditures are Increasing: The Government is Getting Bigger (February 1998)

53. Richard A. Posner, *Values and Consequences: An Introduction to Economic Analysis of Law* (March 1998)
54. Denise DiPasquale and Edward L. Glaeser, *Incentives and Social Capital: Are Homeowners Better Citizens?* (April 1998)
55. Christine Jolls, Cass R. Sunstein, and Richard Thaler, *A Behavioral Approach to Law and Economics* (May 1998)
56. John R. Lott, Jr., *Does a Helping Hand Put Others At Risk?: Affirmative Action, Police Departments, and Crime* (May 1998)
57. Cass R. Sunstein and Edna Ullmann-Margalit, *Second-Order Decisions* (June 1998)
58. Jonathan M. Karpoff and John R. Lott, Jr., *Punitive Damages: Their Determinants, Effects on Firm Value, and the Impact of Supreme Court and Congressional Attempts to Limit Awards* (July 1998)
59. Kenneth W. Dam, *Self-Help in the Digital Jungle* (August 1998)
60. John R. Lott, Jr., *How Dramatically Did Women's Suffrage Change the Size and Scope of Government?* (September 1998)
61. Kevin A. Kordana and Eric A. Posner, *A Positive Theory of Chapter 11* (October 1998)
62. David A. Weisbach, *Line Drawing, Doctrine, and Efficiency in the Tax Law* (November 1998)
63. Jack L. Goldsmith and Eric A. Posner, *A Theory of Customary International Law* (November 1998)
64. John R. Lott, Jr., *Public Schooling, Indoctrination, and Totalitarianism* (December 1998)
65. Cass R. Sunstein, *Private Broadcasters and the Public Interest: Notes Toward A "Third Way"* (January 1999)
66. Richard A. Posner, *An Economic Approach to the Law of Evidence* (February 1999)
67. Yannis Bakos, Erik Brynjolfsson, Douglas Lichtman, *Shared Information Goods* (February 1999)
68. Kenneth W. Dam, *Intellectual Property and the Academic Enterprise* (February 1999)
69. Gertrud M. Fremling and Richard A. Posner, *Status Signaling and the Law, with Particular Application to Sexual Harassment* (March 1999)
70. Cass R. Sunstein, *Must Formalism Be Defended Empirically?* (March 1999)
71. Jonathan M. Karpoff, John R. Lott, Jr., and Graeme Rankine, *Environmental Violations, Legal Penalties, and Reputation Costs* (March 1999)
72. Matthew D. Adler and Eric A. Posner, *Rethinking Cost-Benefit Analysis* (April 1999)
73. John R. Lott, Jr. and William M. Landes, *Multiple Victim Public Shooting, Bombings, and Right-to-Carry Concealed Handgun Laws: Contrasting Private and Public Law Enforcement* (April 1999)

74. Lisa Bernstein, The Questionable Empirical Basis of Article 2's Incorporation Strategy: A Preliminary Study (May 1999)
75. Richard A. Epstein, Deconstructing Privacy: and Putting It Back Together Again (May 1999)
76. William M. Landes, Winning the Art Lottery: The Economic Returns to the Ganz Collection (May 1999)
77. Cass R. Sunstein, David Schkade, and Daniel Kahneman, Do People Want Optimal Deterrence? (June 1999)
78. Tomas J. Philipson and Richard A. Posner, The Long-Run Growth in Obesity as a Function of Technological Change (June 1999)
79. David A. Weisbach, Ironing Out the Flat Tax (August 1999)
80. Eric A. Posner, A Theory of Contract Law under Conditions of Radical Judicial Error (August 1999)
81. David Schkade, Cass R. Sunstein, and Daniel Kahneman, Are Juries Less Erratic than Individuals? Deliberation, Polarization, and Punitive Damages (September 1999)
82. Cass R. Sunstein, Nondelegation Canons (September 1999)
83. Richard A. Posner, The Theory and Practice of Citations Analysis, with Special Reference to Law and Economics (September 1999)
84. Randal C. Picker, Regulating Network Industries: A Look at *Intel* (October 1999)
85. Cass R. Sunstein, Cognition and Cost-Benefit Analysis (October 1999)
86. Douglas G. Baird and Edward R. Morrison, Optimal Timing and Legal Decisionmaking: The Case of the Liquidation Decision in Bankruptcy (October 1999)
87. Gertrud M. Fremling and Richard A. Posner, Market Signaling of Personal Characteristics (November 1999)
88. Matthew D. Adler and Eric A. Posner, Implementing Cost-Benefit Analysis When Preferences Are Distorted (November 1999)
89. Richard A. Posner, Orwell versus Huxley: Economics, Technology, Privacy, and Satire (November 1999)
90. David A. Weisbach, Should the Tax Law Require Current Accrual of Interest on Derivative Financial Instruments? (December 1999)
91. Cass R. Sunstein, The Law of Group Polarization (December 1999)
92. Eric A. Posner, Agency Models in Law and Economics (January 2000)
93. Karen Eggleston, Eric A. Posner, and Richard Zeckhauser, Simplicity and Complexity in Contracts (January 2000)
94. Douglas G. Baird and Robert K. Rasmussen, Boyd's Legacy and Blackstone's Ghost (February 2000)
95. David Schkade, Cass R. Sunstein, Daniel Kahneman, Deliberating about Dollars: The Severity Shift (February 2000)
96. Richard A. Posner and Eric B. Rasmusen, Creating and Enforcing Norms, with Special Reference to Sanctions (March 2000)

97. Douglas Lichtman, Property Rights in Emerging Platform Technologies (April 2000)
98. Cass R. Sunstein and Edna Ullmann-Margalit, Solidarity in Consumption (May 2000)
99. David A. Weisbach, An Economic Analysis of Anti-Tax Avoidance Laws (May 2000, revised May 2002)
100. Cass R. Sunstein, Human Behavior and the Law of Work (June 2000)
101. William M. Landes and Richard A. Posner, Harmless Error (June 2000)
102. Robert H. Frank and Cass R. Sunstein, Cost-Benefit Analysis and Relative Position (August 2000)
103. Eric A. Posner, Law and the Emotions (September 2000)
104. Cass R. Sunstein, Cost-Benefit Default Principles (October 2000)
105. Jack Goldsmith and Alan Sykes, The Dormant Commerce Clause and the Internet (November 2000)
106. Richard A. Posner, Antitrust in the New Economy (November 2000)
107. Douglas Lichtman, Scott Baker, and Kate Kraus, Strategic Disclosure in the Patent System (November 2000)
108. Jack L. Goldsmith and Eric A. Posner, Moral and Legal Rhetoric in International Relations: A Rational Choice Perspective (November 2000)
109. William Meadow and Cass R. Sunstein, Statistics, Not Experts (December 2000)
110. Saul Levmore, Conjunction and Aggregation (December 2000)
111. Saul Levmore, Puzzling Stock Options and Compensation Norms (December 2000)
112. Richard A. Epstein and Alan O. Sykes, The Assault on Managed Care: Vicarious Liability, Class Actions and the Patient's Bill of Rights (December 2000)
113. William M. Landes, Copyright, Borrowed Images and Appropriation Art: An Economic Approach (December 2000)
114. Cass R. Sunstein, Switching the Default Rule (January 2001)
115. George G. Triantis, Financial Contract Design in the World of Venture Capital (January 2001)
116. Jack Goldsmith, Statutory Foreign Affairs Preemption (February 2001)
117. Richard Hynes and Eric A. Posner, The Law and Economics of Consumer Finance (February 2001)
118. Cass R. Sunstein, Academic Fads and Fashions (with Special Reference to Law) (March 2001)
119. Eric A. Posner, Controlling Agencies with Cost-Benefit Analysis: A Positive Political Theory Perspective (April 2001)
120. Douglas G. Baird, Does Bogart Still Get Scale? Rights of Publicity in the Digital Age (April 2001)
121. Douglas G. Baird and Robert K. Rasmussen, Control Rights, Priority Rights and the Conceptual Foundations of Corporate Reorganization (April 2001)
122. David A. Weisbach, Ten Truths about Tax Shelters (May 2001)

123. William M. Landes, What Has the Visual Arts Rights Act of 1990 Accomplished? (May 2001)
124. Cass R. Sunstein, Social and Economic Rights? Lessons from South Africa (May 2001)
125. Christopher Avery, Christine Jolls, Richard A. Posner, and Alvin E. Roth, The Market for Federal Judicial Law Clerks (June 2001)
126. Douglas G. Baird and Edward R. Morrison, Bankruptcy Decision Making (June 2001)
127. Cass R. Sunstein, Regulating Risks after ATA (June 2001)
128. Cass R. Sunstein, The Laws of Fear (June 2001)
129. Richard A. Epstein, In and Out of Public Solution: The Hidden Perils of Property Transfer (July 2001)
130. Randal C. Picker, Pursuing a Remedy in *Microsoft*: The Declining Need for Centralized Coordination in a Networked World (July 2001)
131. Cass R. Sunstein, Daniel Kahneman, David Schkade, and Ilana Ritov, Predictably Incoherent Judgments (July 2001)
132. Eric A. Posner, Courts Should Not Enforce Government Contracts (August 2001)
133. Lisa Bernstein, Private Commercial Law in the Cotton Industry: Creating Cooperation through Rules, Norms, and Institutions (August 2001)
134. Richard A. Epstein, The Allocation of the Commons: Parking and Stopping on the Commons (August 2001)
135. Cass R. Sunstein, The Arithmetic of Arsenic (September 2001)
136. Eric A. Posner, Richard Hynes, and Anup Malani, The Political Economy of Property Exemption Laws (September 2001)
137. Eric A. Posner and George G. Triantis, Covenants Not to Compete from an Incomplete Contracts Perspective (September 2001)
138. Cass R. Sunstein, Probability Neglect: Emotions, Worst Cases, and Law (November 2001)
139. Randall S. Kroszner and Philip E. Strahan, Throwing Good Money after Bad? Board Connections and Conflicts in Bank Lending (December 2001)
140. Alan O. Sykes, TRIPs, Pharmaceuticals, Developing Countries, and the Doha "Solution" (February 2002)
141. Edna Ullmann-Margalit and Cass R. Sunstein, Inequality and Indignation (February 2002)
142. Daniel N. Shaviro and David A. Weisbach, The Fifth Circuit Gets It Wrong in *Compaq v. Commissioner* (February 2002) (Published in *Tax Notes*, January 28, 2002)
143. Warren F. Schwartz and Alan O. Sykes, The Economic Structure of Renegotiation and Dispute Resolution in the WTO/GATT System (March 2002, *Journal of Legal Studies* 2002)
144. Richard A. Epstein, HIPAA on Privacy: Its Unintended and Intended Consequences (March 2002, forthcoming *Cato Journal*, summer 2002)

145. David A. Weisbach, *Thinking Outside the Little Boxes* (March 2002, *Texas Law Review*)
146. Eric A. Posner, *Economic Analysis of Contract Law after Three Decades: Success or Failure* (March 2002)
147. Randal C. Picker, *Copyright as Entry Policy: The Case of Digital Distribution* (April 2002, *The Antitrust Bulletin*)
148. David A. Weisbach, *Taxes and Torts in the Redistribution of Income* (April 2002, Coase Lecture February 2002)
149. Cass R. Sunstein, *Beyond the Precautionary Principle* (April 2002)
150. Robert W. Hahn and Cass R. Sunstein, *A New Executive Order for Improving Federal Regulation? Deeper and Wider Cost-Benefit Analysis* (April 2002)
151. Douglas Lichtman, *Copyright as a Rule of Evidence* (May 2002, updated January 2003)
152. Richard A. Epstein, *Steady the Course: Property Rights in Genetic Material* (May 2002; revised March 2003)
153. Jack Goldsmith and Cass R. Sunstein, *Military Tribunals and Legal Culture: What a Difference Sixty Years Makes* (June 2002)
154. William M. Landes and Richard A. Posner, *Indefinitely Renewable Copyright* (July 2002)
155. Anne Gron and Alan O. Sykes, *Terrorism and Insurance Markets: A Role for the Government as Insurer?* (July 2002)
156. Cass R. Sunstein and Adrian Vermeule, *Interpretation and Institutions* (July 2002)
157. Cass R. Sunstein, *The Rights of Animals: A Very Short Primer* (August 2002)
158. Cass R. Sunstein, *Avoiding Absurdity? A New Canon in Regulatory Law* (with Notes on Interpretive Theory) (August 2002)
159. Randal C. Picker, *From Edison to the Broadcast Flag: Mechanisms of Consent and Refusal and the Propertization of Copyright* (September 2002)
160. Eric A. Posner, *A Theory of the Laws of War* (September 2002)
161. Eric A. Posner, *Probability Errors: Some Positive and Normative Implications for Tort and Contract Law* (September 2002)
162. Lior Jacob Strahilevitz, *Charismatic Code, Social Norms, and the Emergence of Cooperation on the File-Swapping Networks* (September 2002)
163. David A. Weisbach, *Does the X-Tax Mark the Spot?* (September 2002)
164. Cass R. Sunstein, *Conformity and Dissent* (September 2002)
165. Cass R. Sunstein, *Hazardous Heuristics* (October 2002)
166. Douglas Lichtman, *Uncertainty and the Standard for Preliminary Relief* (October 2002)
167. Edward T. Swaine, *Rational Custom* (November 2002)
168. Julie Roin, *Truth in Government: Beyond the Tax Expenditure Budget* (November 2002)
169. Avraham D. Tabbach, *Criminal Behavior: Sanctions and Income Taxation: An Economic Analysis* (November 2002)

170. Richard A. Epstein, In Defense of “Old” Public Health: The Legal Framework for the Regulation of Public Health (December 2002)
171. Richard A. Epstein, Animals as Objects, or Subjects, of Rights (December 2002)
172. David A. Weisbach, Taxation and Risk-Taking with Multiple Tax Rates (December 2002)
173. Douglas G. Baird and Robert K. Rasmussen, The End of Bankruptcy (December 2002)
174. Richard A. Epstein, Into the Frying Pan: Standing and Privity under the Telecommunications Act of 1996 and Beyond (December 2002)
175. Douglas G. Baird, In Coase’s Footsteps (January 2003)
176. David A. Weisbach, Measurement and Tax Depreciation Policy: The Case of Short-Term Assets (January 2003)
177. Randal C. Picker, Understanding Statutory Bundles: Does the Sherman Act Come with the 1996 Telecommunications Act? (January 2003)
178. Douglas Lichtman and Randal C. Picker, Entry Policy in Local Telecommunications: *Iowa Utilities* and *Verizon* (January 2003)
179. William Landes and Douglas Lichtman, Indirect Liability for Copyright Infringement: An Economic Perspective (February 2003)
180. Cass R. Sunstein, Moral Heuristics (March 2003)
181. Amitai Aviram, Regulation by Networks (March 2003)
182. Richard A. Epstein, Class Actions: Aggregation, Amplification *and* Distortion (April 2003)
183. Richard A. Epstein, The “Necessary” History of Property and Liberty (April 2003)
184. Eric A. Posner, Transfer Regulations and Cost-Effectiveness Analysis (April 2003)
185. Cass R. Sunstein and Richard H. Thaler, Libertarian Paternalism Is Not an Oxymoron (May 2003)
186. Alan O. Sykes, The Economics of WTO Rules on Subsidies and Countervailing Measures (May 2003)
187. Alan O. Sykes, The Safeguards Mess: A Critique of WTO Jurisprudence (May 2003)
188. Alan O. Sykes, International Trade and Human Rights: An Economic Perspective (May 2003)
189. Saul Levmore and Kyle Logue, Insuring against Terrorism—and Crime (June 2003)
190. Richard A. Epstein, Trade Secrets as Private Property: Their Constitutional Protection (June 2003)
191. Cass R. Sunstein, Lives, Life-Years, and Willingness to Pay (June 2003)
192. Amitai Aviram, The Paradox of Spontaneous Formation of Private Legal Systems (July 2003)
193. Robert Cooter and Ariel Porat, Decreasing Liability Contracts (July 2003)
194. David A. Weisbach and Jacob Nussim, The Integration of Tax and Spending Programs (September 2003)

195. William L. Meadow, Anthony Bell, and Cass R. Sunstein, Statistics, Not Memories: What Was the Standard of Care for Administering Antenatal Steroids to Women in Preterm Labor between 1985 and 2000? (September 2003)
196. Cass R. Sunstein, What Did *Lawrence* Hold? Of Autonomy, Desuetude, Sexuality, and Marriage (September 2003)
197. Randal C. Picker, The Digital Video Recorder: Unbundling Advertising and Content (September 2003)
198. Cass R. Sunstein, David Schkade, and Lisa Michelle Ellman, Ideological Voting on Federal Courts of Appeals: A Preliminary Investigation (September 2003)
199. Avraham D. Tabbach, The Effects of Taxation on Income Producing Crimes with Variable Leisure Time (October 2003)
200. Douglas Lichtman, Rethinking Prosecution History Estoppel (October 2003)
201. Douglas G. Baird and Robert K. Rasmussen, Chapter 11 at Twilight (October 2003)
202. David A. Weisbach, Corporate Tax Avoidance (January 2004)
203. David A. Weisbach, The (Non)Taxation of Risk (January 2004)
204. Richard A. Epstein, Liberty versus Property? Cracks in the Foundations of Copyright Law (April 2004)
205. Lior Jacob Strahilevitz, The Right to Destroy (January 2004)
206. Eric A. Posner and John C. Yoo, A Theory of International Adjudication (February 2004)
207. Cass R. Sunstein, Are Poor People Worth Less Than Rich People? Disaggregating the Value of Statistical Lives (February 2004)
208. Richard A. Epstein, Disparities and Discrimination in Health Care Coverage; A Critique of the Institute of Medicine Study (March 2004)
209. Richard A. Epstein and Bruce N. Kuhlik, Navigating the Anticommons for Pharmaceutical Patents: Steady the Course on Hatch-Waxman (March 2004)
210. Richard A. Epstein, The Optimal Complexity of Legal Rules (April 2004)
211. Eric A. Posner and Alan O. Sykes, Optimal War and *Jus Ad Bellum* (April 2004)
212. Alan O'Neil Sykes, The Persistent Puzzles of Safeguards: Lessons from the Steel Dispute (May 2004)
213. Luis Garicano and Thomas N. Hubbard, Specialization, Firms, and Markets: The Division of Labor within and between Law Firms (April 2004)
214. Luis Garicano and Thomas N. Hubbard, Hierarchies, Specialization, and the Utilization of Knowledge: Theory and Evidence from the Legal Services Industry (April 2004)
215. James C. Spindler, Conflict or Credibility: Analyst Conflicts of Interest and the Market for Underwriting Business (July 2004)