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SMALL SCHOOL.  
BIG VALUE.

# The Next Epidemic: Bubbles and the Growth and Decay of Securities Regulation

ERIK F. GERDING\*

Phlebas the Phoenician, a fortnight dead,  
Forgot the cry of gulls, and the deep sea swell  
And the profit and loss.  
A current under sea  
Picked his bones in whispers. As he rose and fell  
He passed the stages of his age and youth  
Entering the whirlpool.

—T.S. Eliot, *The Waste Land*<sup>1</sup>

## I. INTRODUCTION

As U.S. investors and policymakers begin to forget the profit of the technology stock bubble and the losses of Enron, securities regulation re-enters the whirlpool. The backlash against the Sarbanes-Oxley Act<sup>2</sup> has begun in earnest. Three years after that Act was signed into law and four years after the stock market bubble burst and the Enron scandal broke, calls for relief from the new securities laws grow louder.<sup>3</sup> President Bush has

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\* Attorney in private practice, Washington, D.C. The author would like to thank Lynn Stout and Barak Orbach for commenting on an earlier draft of this article, Markus Brunnermeier for advice on recent developments in economic research on stock market bubbles, John Coffee and Howell Jackson for their comments on preliminary outlines of this article, and especially Andrea and Lucas for their patience and support. Any errors herein are my own.

<sup>1</sup> T.S. ELIOT, *THE WASTE LAND* 16 (Michael North ed., W.W. Norton & Co., 2001) (1922).

<sup>2</sup> Pub. L. No. 107-204, 116 Stat. 745 (2002) (codified in scattered sections of 11, 15, 18, 28 and 29 U.S.C.S. (LEXIS through Pub. L. No. 109-89)).

<sup>3</sup> See, e.g., Jonathan Chait, Editorial, *Was Enron Just a Dream?; Cox Will Return the SEC to Its Lax Old Ways*, L.A. TIMES, June 17, 2005, at B13, available at LEXIS, News Library, LAT File (arguing that the Bush administration aims to correct the “overreach” of the Sarbanes-Oxley Act); Pamela Gaynor, *Execs Rip Sarbanes-Oxley’s Costs, Regulations*, PITTSBURGH POST-GAZETTE, Apr. 19, 2005, at D10, available at LEXIS, News Library, PSTGAZ File; Carrie Johnson, *Higher Audit Fees, More Accountability; Sarbanes-Oxley, Three Years Later*, WASH. POST, July 30, 2005, at D1, available at LEXIS, News Library, WPOST File (describing criticism of “expense and possible overreach” of the Act and lobbying by businesses to ease the burdens of the law); Stephen Labaton, *A New Mood in Congress to Forgo Corporate Scrutiny*, N.Y. TIMES, Mar. 10, 2005, at C3, available at LEXIS, News

appointed Congressman Christopher Cox, a long time proponent of deregulation of the securities markets, as Chairman of the Securities and Exchange Commission.<sup>4</sup> Cox assumes control of an organization that has already returned to a pre-Enron agenda of liberalizing the rules of securities offerings.<sup>5</sup> This political groundswell has been accompanied by new scholarship that has questioned the effectiveness of recent laws.<sup>6</sup>

These critics of Sarbanes-Oxley era reforms are exactly right; the new securities regulations will do little to prevent future epidemics of securities fraud. But the critics are right for a reason they do not suspect. In fact, their criticism represents part of the reason that the new laws and regulations will fail to thwart future outbreaks of fraud. The backlash against the Sarbanes-Oxley Act, regardless of the merits of arguments against specific provisions of the law, represents the restarting of a historic cycle of the periodic growth and decay of securities law.

This cycle of decay and re-growth is propelled by the dynamics of stock market bubbles and the epidemics of fraud that they generate. The volumes of legal literature on the recent wave of fraud epitomized by Enron generally treat this epidemic as a product of its time.<sup>7</sup> But the parallels between the recent scandals and the securities fraud committed during historic bubbles have remained curiously under-explored in the legal literature. In fact, a survey of three centuries of stock market bubbles shows that these periods of speculative frenzy have been accompanied by outbreaks of widespread securities fraud.<sup>8</sup> These outbreaks occur not merely because the irrational investors that drive a bubble present easy prey for fraud, but more significantly because stock market bubbles cause the decay of securities law.

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Library, NYT File (describing a greater willingness by Congress to challenge financial regulations and rethink the Sarbanes-Oxley Act due to remoteness of business scandals and rising stock market); Andrew Parker, *Backlash Against the Enforcer*, FIN. TIMES, Mar. 17, 2005, at 7, available at LEXIS, News Library, FINTME File (describing industry criticism of the SEC and its enforcement efforts); Andrew Parker & Sundeep Tucker, *Sarbanes-Oxley Reforms 'Go Too Far', Says Author*, FIN. TIMES, July 8, 2005, at 6, available at LEXIS, News Library, FINTME File (describing criticisms of act by its Republican co-author, Michael Oxley); Leo Strine, *Sarbanes-Oxley's Creeping Intrusion*, FIN. TIMES, July 6, 2005, at 21, available at LEXIS, News Library, FINTME File (describing criticism of the corporate governance provisions of the Sarbanes-Oxley Act by the Vice-Chancellor of the Delaware Court of Chancery).

<sup>4</sup> Clay Risen, *Stop Loss: Out with Donaldson, In with Cox*, NEW REPUBLIC, June 20, 2005, at 10, available at LEXIS, News Library, NEWRPB File.

<sup>5</sup> Securities Offering Reform, 70 Fed. Reg. 44,722 (Aug. 3, 2005) (to be codified in scattered sections of 17 C.F.R.).

<sup>6</sup> See, e.g., Roberta Romano, *The Sarbanes-Oxley Act and the Making of Quack Corporate Governance*, 114 YALE L.J. 1521 (2005) (surveying accounting and economic research that indicates a lack of an empirical basis for many Sarbanes-Oxley era reforms).

<sup>7</sup> See *infra* Part V.A.

<sup>8</sup> Historians outside legal academia have explored the history of fraud during bubbles. For one history, see EDWARD CHANCELLOR, *DEVIL TAKE THE HINDMOST: A HISTORY OF FINANCIAL SPECULATION* (1999).

This Article explains the dynamics of how bubbles lead to the decay of securities law and argues that this decay will render not only the Sarbanes-Oxley Act, but other securities laws, ineffective in preventing future epidemics of fraud. Bubbles trigger the decay of securities law in two ways. First, bubbles generate or reinforce strong political pressures to deregulate financial markets and dilute securities regulations. This pressure manifests itself not only in efforts to roll back laws that would otherwise deter fraud, but also in under-enforcement of existing laws and resistance to proposals to address concerns about speculation or the growing risk of fraud. These effects can be characterized more generally; the dynamics of a stock market bubble reduces the incentives and capacities of regulators to address adequately the growing risk of financial fraud—including novel forms of fraud—that accompanies the bubble.<sup>9</sup> In many historical instances, political pressure has resulted in government promotion of speculation or even endorsement of fraudulent ventures during a stock market bubble.<sup>10</sup>

Second, bubbles undermine the effectiveness of even those laws that remain untouched by deregulation. Compliance with securities laws deteriorates during bubble periods because the dynamics of a bubble, particularly the mass perception that stock prices will continue to rise, erodes much of the deterrent threat of anti-fraud rules.<sup>11</sup> Bubbles thus skew the calculus of compliance for securities issuers and market intermediaries.

This Article unpacks the modes in which bubbles promote the decay of securities law. Part II provides a brief introduction to recent economic scholarship, particularly by behavioral finance scholars, into the formation of bubbles. According to behavioral finance theorists, stock market bubbles are driven by “noise traders” who make irrational investment decisions on the basis of herding behavior and behavioral biases.<sup>12</sup> These behavioral influences combine to create both a mass perception in the market that stock prices will continue to surge and a individual perception by investors that they will be able to identify the right moment to sell and escape a market downturn.<sup>13</sup>

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<sup>9</sup> See *infra* Part III.B (discussing business-friendly regulatory reforms of the 1990s). For a description of these deregulatory pressures during the 1990s, see ROGER LOWENSTEIN, *ORIGINS OF THE CRASH* 82–100 (2004). Examples of deregulation during other bubbles are provided *infra* Part III.A and the Appendix.

<sup>10</sup> See, e.g., *infra* notes 67–72 and accompanying text (describing Parliament’s complicity in the 1690s stock market boom); *infra* notes 83–89 (describing the English government’s role in the South Sea scandal); *infra* notes 124–127 (describing the Coolidge administration’s laissez-faire attitude toward corporate regulation).

<sup>11</sup> See *infra* Part V.C.

<sup>12</sup> ROBERT J. SHILLER, *IRRATIONAL EXUBERANCE* 135–68 (2000); ANDREI SHLEIFER, *INEFFICIENT MARKETS: AN INTRODUCTION TO BEHAVIORAL FINANCE* 112–74 (2000). For an early analysis of “noise trading” in the legal literature, see Donald C. Langevoort, *Theories, Assumptions, and Securities Regulation: Market Efficiency Revisited*, 140 U. PA. L. REV. 851, 858–72 (1992).

<sup>13</sup> Werner De Bondt, *Bubble Psychology*, in *ASSET PRICE BUBBLES* 205, 212 (William C. Hunter et al. eds., 2003).

Part III surveys six stock market bubbles between the 1690s and 1990s that demonstrate the high correlation between the rise of a stock market bubble and epidemics of securities fraud, the pattern of deregulation of financial markets preceding or during the formation of a bubble followed by a political, legal and re-regulatory response in the aftermath of a bubble's collapse, and how political forces lay the groundwork for future deregulation once memories of the fraud recede. Although other scholars have chronicled how historical bubbles have generated new securities laws,<sup>14</sup> the pattern of deregulation during a bubble's rise has not been thoroughly explored in the legal literature.

Part IV then offers a model that explains this trend of deregulation during the inflation of a bubble followed by re-regulation after the collapse of a bubble as a product of the interaction of the stock market and the political market for regulations. Part IV thus responds to a need for a model of the interaction of the economics and politics of a bubble suggested by a prominent behavioral finance economist.<sup>15</sup> During the formation of a bubble, three inter-related cycles—the business cycle, the cycle of investor confidence, and the political/regulatory cycle—generate feedback for one another. These cycles generate, respectively, economic growth, investor trust in the integrity of the market and deregulation, each to excess.<sup>16</sup> When a bubble bursts, these three cycles reverse and generate negative feedback through an economic downturn, a collapse of investor confidence and trust and re-regulation.<sup>17</sup> The interaction of these three cycles creates a perverse pattern of deregulation or under-regulation as bubbles form—the moment when more regulatory oversight and anti-fraud protections are needed—and re-regulation only after fraud has already occurred and the economy and investor trust have been damaged.<sup>18</sup>

Part V then analyzes how even those securities laws that are not affected by deregulation lose much of their effectiveness during a bubble, as compliance with these laws by securities issuers and market intermediaries deteriorates. Bubbles, and particularly the mass perception that stock prices will rise unabated, dilute the deterrence effect of anti-fraud rules by distorting the rational calculus of compliance of securities issuers and mar-

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<sup>14</sup> E.g., Frank Partnoy, *Why Markets Crash and What Law Can Do About It*, 61 U. PITT. L. REV. 741, 743 & n.11 (2000). See generally Stuart Banner, *What Causes New Securities Regulation? 300 Years of Evidence*, 75 WASH. U. L.Q. 849, 850 (1997); Joseph A. Grundfest, Commentary, *Punctuated Equilibria in the Evolution of United States Securities Regulation*, 8 STAN. J.L. BUS. & FIN. 1 (2002) (describing how capital market events stimulate regulation “between relatively tranquil periods of common law interpretation”); Larry E. Ribstein, Commentary, *Bubble Laws*, 40 HOUS. L. REV. 77, 77–78 (2003) (describing a historic cycle of stock market bubbles inflating then bursting, followed by increased regulation).

<sup>15</sup> SHLEIFER, *supra* note 12, at 174.

<sup>16</sup> See *infra* Parts IV.A–B.

<sup>17</sup> See *infra* Part IV.C.

<sup>18</sup> See *infra* Part IV.D.

ket intermediaries.<sup>19</sup> Furthermore, bubbles skew the extra-rational calculus of these actors by exacerbating behavioral biases; these biases further undermine deterrence of malfeasance and warp perceptions of materiality, a keystone of securities law.<sup>20</sup> Finally, even companies that seek to obey the law find compliance difficult because bubbles raise information and agency costs.<sup>21</sup>

Part VI discusses the implications of the decay of securities law during bubble periods described in Parts IV and V. Deregulation and the deterioration of securities law deterrence mean that many of the post-Enron laws and regulations are likely to have little effect on securities fraud during the next stock market bubble. These laws and regulations are likely to be rolled back, under-enforced or undermined by the dynamics of the next bubble. Part VI sets forth a research agenda for further understanding these decaying effects and designing a more robust securities law regime that would better withstand this periodic decay.

## II. BEHAVIORAL FINANCE AND THE ANATOMY OF A BUBBLE

Economists define a stock market bubble—one example of a broad set of phenomena known as “asset price bubbles”—as a pronounced and prolonged deviation in the prices of securities from their fundamental values.<sup>22</sup> The fundamental value of a security, according to most definitions in the economic literature, represents the present value of all future cash flows (i.e., dividends) from that security.<sup>23</sup> But certain theoretical<sup>24</sup> and practical<sup>25</sup> problems with this definition make a refined formulation more attractive. Other economists have defined fundamental value as the price a ra-

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<sup>19</sup> See *infra* Part V.C.1.

<sup>20</sup> See *infra* Part V.C.2.

<sup>21</sup> See *infra* Part V.C.3.

<sup>22</sup> SHLEIFER, *supra* note 12, at 154; Robert P. Flood & Peter M. Garber, *Market Fundamentals Versus Price-Level Bubbles: The First Tests*, 88 J. POL. ECON. 745, 746 (1980); Henry T. C. Hu, *Faith and Magic: Investor Beliefs and Government Neutrality*, 78 TEX. L. REV. 777, 794 (2000).

For more detailed surveys of recent economic scholarship, particularly behavioral finance scholarship, regarding stock market bubbles see for example ASSET PRICE BUBBLES, *supra* note 13; MARKUS K. BRUNNERMEIER, ASSET PRICING UNDER ASYMMETRIC INFORMATION 47–59 (2001); SHILLER, *supra* note 12.

<sup>23</sup> See, e.g., Ellen R. McGrattan & Edward C. Prescott, *Testing for Stock Market Overvaluation/Undervaluation*, in ASSET PRICE BUBBLES, *supra* note 13, at 271.

<sup>24</sup> This definition requires not only a calculation of future cash flows, but also a determination of the correct discount rate. The presence of two variables in this equation raises the “joint hypothesis problem” that has also plagued efforts to prove (or disprove) the Efficient Markets Hypothesis. See Nicholas Barberis & Richard Thaler, *A Survey of Behavioral Finance*, in 1B HANDBOOK OF THE ECONOMICS OF FINANCE 1054, 1061 (George M. Constantinides et al. eds., 2003).

<sup>25</sup> The modern practice of some technology companies of not paying dividends frustrates this fundamental analysis. Without dividends, the only potential future cash flow for an equity security is its value upon resale. These no-dividend policies make the fundamental value of these stocks highly speculative in both senses of the word.

tional investor would pay for a security if she held it to “horizon.”<sup>26</sup> Under this definition, a bubble forms when stock prices rise for a prolonged period above what investors would be willing to pay if they were to hold their securities for the long term.<sup>27</sup>

This occurs, according to behavioral finance theory, because of the irrational investment behavior of unsophisticated investors called “noise traders.”<sup>28</sup> These noise traders do not base their investment decisions on a rational calculus of the fundamentals of a stock, but instead engage in “herding” (i.e., mimicking the investment decisions of others) and adopt “positive feedback investment strategies” (i.e., chasing trends and buying securities once prices have risen and selling after prices have started falling).<sup>29</sup> Noise traders engage in these less than rational investment strategies because they suffer from behavioral biases,<sup>30</sup> including the following:

- *Overoptimism* describes how, during bubbles, noise traders possess an overly optimistic view of their own prospects in a stock market;<sup>31</sup>
- *Overconfidence* describes how noise traders overestimate their own ability to predict stock market fluctuations and time their exit before a crash;<sup>32</sup> and
- *The availability bias* describes how more recent or salient events

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<sup>26</sup> See, e.g., Franklin Allen & Gary Gorton, *Churning Bubbles*, 60 REV. ECON. STUD. 813, 815 (1993).

<sup>27</sup> See *id.*

<sup>28</sup> See *supra* note 12 and accompanying text.

<sup>29</sup> See SHILLER, *supra* note 12, at 135–68 (outlining the psychological basis for investment decisions and effect of herd behavior on capital markets); Robert J. Shiller, *Stock Prices and Social Dynamics*, 1984 BROOKINGS PAPERS ECON. ACTIVITY 457, 457 [hereinafter Shiller, *Stock Prices*] (arguing that investors make decisions because of social and behavioral factors rather than through rational, self-interested calculations). For a discussion of the psychology behind noise trader activity, see generally Robert J. Shiller, *Fashions, Fads, and Bubbles in Financial Markets*, in KNIGHTS, RAIDERS AND TARGETS 56–68 (John C. Coffee, Jr. et al. eds., 1988) [hereinafter Shiller, *Fashions*].

<sup>30</sup> For a sample of the now extensive literature on behavioral economics and its implications for law and economics, see for example Larry T. Garvin, *Adequate Assurance of Performance: Of Risk, Duress and Cognition*, 69 U. COLO. L. REV. 71, 140–70 (1998); Christine Jolls et al., *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471 (1998). For a discussion of behavioral biases leading to the formation of stock market bubbles, see De Bondt, *supra* note 13, at 210–12.

<sup>31</sup> See, e.g., J. Bradford De Long & Andrei Shleifer, *The Stock Market Bubble of 1929: Evidence from Closed-end Mutual Funds*, 51 J. ECON. HIST. 675, 697 (1991) (concluding that over-optimism of investors contributed to the 1929 stock market bubble).

<sup>32</sup> See J. Bradford De Long et al., *The Survival of Noise Traders in Financial Markets*, 64 J. BUS. 1, 5 (1991) (arguing that the overconfidence bias leads noise traders to remain in the market despite a risk of severe losses). Behavioral economists have presented substantial empirical evidence that individuals exhibit overoptimism in judging the probability of good outcomes and are overconfident in their own abilities, including their ability to estimate probabilities. See Barberis & Thaler, *supra* note 24, at 1065–66 (citing Marc Alpert & Howard Raiffa, *A Progress Report on the Training of Probability Assessors*, in JUDGMENT UNDER UNCERTAINTY 294 (Daniel Kahneman et al. eds., 1982)); Baruch Fischhoff et al., *Knowing with Certainty: The Appropriateness of Extreme Confidence*, 3 J. EXPERIMENTAL PSYCHOL. HUM. PERCEPTION & PERFORMANCE 552 (1977); Neil D. Weinstein, *Unrealistic Optimism About Future Life Events*, 39 J. PERSONALITY & SOC. PSYCHOL. 806 (1980).

tend to overly influence an individual's estimates of probabilities.<sup>33</sup> Thus a long market boom and the conspicuous gains of other investors cause noise traders to overestimate their own investment prospects. Conversely, the remoteness of the last crash or market downturn causes investors to discount the possibility of incurring heavy losses.<sup>34</sup>

Other biases, such as framing,<sup>35</sup> belief perseverance,<sup>36</sup> and anchoring,<sup>37</sup> further contribute to the suggestibility of investors and their stubborn reluctance to abandon optimism over their own prospects in the stock market despite mounting evidence to the contrary.<sup>38</sup>

The theory that these behavioral biases can lead to bubbles flies against the logic of neoclassical economics, which holds that capital markets efficiently value securities.<sup>39</sup> In particular, neoclassical economic

<sup>33</sup> See Amos Tversky & Daniel Kahneman, *Judgment Under Uncertainty: Heuristics and Biases*, 185 SCIENCE 1124, 1127–28 (1974).

<sup>34</sup> Richard J. Herring & Susan Wachter, *Real Estate Booms and Banking Busts: An International Perspective* (The Wharton Fin. Insts. Ctr., Working Paper 99-27, 1999) (on file with author); see also J. Bradford De Long et al., *Positive Feedback Investment Strategies and Destabilizing Rational Speculation*, 45 J. FIN. 379, 383 (1990) (questioning why noise traders do not learn from previous bubbles).

<sup>35</sup> Empirical research demonstrates that individuals often reach different conclusions about the same problems depending on how problems are described or framed. Faced with difficult problems, individuals frame problems for themselves often in less than rational ways and engage in what has been labeled “mental accounting.” See generally Richard S. Thaler, *Mental Accounting Matters*, in CHOICES, VALUES AND FRAMES 241 (Daniel Kahneman & Amos Tversky eds., 2000).

<sup>36</sup> Belief perseverance describes the tendency of individuals to maintain longstanding opinions even in the face of mounting contradictory evidence. Barberis & Thaler, *supra* note 24, at 1068 (citing Charles G. Lord et al., *Biased Assimilation and Attitude Polarization: The Effects of Prior Theories on Subsequently Considered Evidence*, 37 J. PERSONALITY & SOC. PSYCHOL. 2098, 2099 (1979)).

<sup>37</sup> Anchoring describes the tendency of individuals to give undue weight to their initial estimates of a probability or other measurement. See Tversky & Kahneman, *supra* note 33, at 1128.

<sup>38</sup> See De Bondt, *supra* note 13, at 208–09.

<sup>39</sup> This neoclassical logic is distilled in the Efficient Markets Hypothesis. A discussion of the Efficient Markets Hypothesis is beyond the scope of this article. For two of the many prominent contributions to the debate in the legal scholarship on the Efficient Markets Hypothesis, see generally Ronald J. Gilson & Reinier H. Kraakman, *The Mechanisms of Market Efficiency*, 70 VA. L. REV. 549 (1984) (explaining how capital and information markets work together in creating efficient securities prices); Langevoort, *supra* note 12 (discussing the widening gulf between the conceptions of market efficiency in the legal and economic literature).

Legal scholars have correctly noted that, in its strict sense, the Efficient Market Hypothesis only contends that market prices reflect all available information regarding a security and not that prices necessarily reflect that security's fundamental value. See, e.g., Jeffrey N. Gordon & Lewis A. Kornhauser, *Efficient Markets, Costly Information, and Securities Research*, 60 N.Y.U. L. REV. 761, 766–71 (1985) (drawing distinction between arguments that markets are characterized by speculative (i.e. informational) efficiency versus those discussing allocational efficiency); Lynn A. Stout, *The Unimportance of Being Efficient: An Economic Analysis of Stock Market Pricing and Securities Regulation*, 87 MICH. L. REV. 613, 615–18 (1988) (defining the Efficient Market Hypothesis and testing the assumption that stock market prices direct the distribution of capital and other resources); William K.S. Wang, *Some Arguments that the Stock Market is not Efficient*, 19 U.C. DAVIS L. REV. 341, 344 (1986) (discussing “information-arbitrage” efficiency where prices reflect all public information). Despite this distinction, the economic literature on bubbles often appears to conflate informational and allocational efficiency. See, e.g., Barberis & Thaler, *supra* note 24, at 1056 (defining “fundamental value” as “the



theory holds that (1) investors invest and trade in the capital markets in a rational manner, (2) any irrational trades are random and cancel each other out, and (3) arbitrage corrects any remaining irrational trading not cancelled out.<sup>40</sup>

Behavioral finance counters each of these assumptions in turn. First, as noted above, behavioral finance draws upon extensive research in behavioral psychology and economics to demonstrate that investors do not act with perfect rationality. Moreover, behavioral finance has documented both statistical evidence of mispricings in securities<sup>41</sup> and examples of various pricing anomalies in capital markets<sup>42</sup> that demonstrate the depth and persistence of noise trading. Experimental economists have buttressed these findings through studies that demonstrate how even relatively financially sophisticated investors can behave like noise traders in simulated stock markets; even in experiments where all future cash payments of secu-

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discounted sum of expected future cash flows” where investors are operating with all available information).

Some economists have attempted to develop models of bubbles—called “rational bubbles”—that are consistent with assumptions of rational investors and rational markets, yet produce deviations from fundamental values. But rational bubble models have failed to gain acceptance in the economic literature due to theoretical incompleteness (including a failure to specify how the initial deviations from fundamental value occur), lack of empirical support and mathematical indeterminacy. *See generally* M.C. Adam & A. Szafarz, *Speculative Bubbles and Financial Markets*, 44 OXFORD ECON. PAPERS 626 (1992) (analyzing rational bubbles and finding severe limitations); Allan H. Meltzer, *Rational and Nonrational Bubbles*, in ASSET PRICE BUBBLES, *supra* note 13, at 23, 24 (calling the rational bubble hypothesis “devoid of empirical content”).

<sup>40</sup> Ronald Gilson and Reinier Kraakman provide an excellent formulation of these three arguments that undergird the Efficient Market Hypothesis in an influential article, now almost two decades old. Gilson & Kraakman, *supra* note 39, at 579–88.

<sup>41</sup> *See* SHILLER, *supra* note 12, at 179–80.

<sup>42</sup> These anomalies include the following:

- *The closed end fund puzzle.* The prices of certain mutual funds have occasionally risen far above the net asset value of the fund, even after adjusting for tax and other considerations. This means that investors are paying more for shares in a fund than they would pay for the proportionate share of the stocks in that fund’s portfolio. *See* De Long & Shleifer, *supra* note 31, at 697 (recognizing this phenomenon in the late 1920s).
- *The twin-share anomaly.* This anomaly occurs when a given security is traded on two different markets, but the prices in those markets diverge over an extended period of time. *See* Barberis & Thaler, *supra* note 24, at 1061–63 (explaining the twin-share anomaly and noting how arbitrageurs could exploit it).
- *The IPO carve out anomaly.* After 3Com sold five percent of its shares of Palm in an initial public offering, Palm’s stock price paradoxically rose above the implicit price of its parent, 3Com. John H. Cochrane, *Stocks as Money: Convenience Yield and the Tech-Stock Bubble*, in ASSET PRICE BUBBLES, *supra* note 13, at 175–76; Owen A. Lamont & Richard H. Thaler, *Can the Market Add and Subtract? Mispricing in Tech Stock Carve-Outs*, 111 J. POL. ECON. 227, 230–31 (2003).
- *Internet name anomalies.* During the recent technology stock boom, researchers noted that shares of companies with “.com” in their name sold in public offerings for significantly higher prices statistically than those of comparable companies. Also, market news about certain companies would irrationally affect the prices of different companies with similar names of stock market ticker symbols. Yaron Brook & Robert J. Hendershott, *Hype and Internet Stocks*, 10 J. INVESTING 53 (2001), available at InfoTrac OneFile; Michael J. Cooper et al., *A Rose.com by Any Other Name*, 56 J. FIN. 2371, 2371–72 (2001).

rities and a discount value were given to all participants, investors with a business or financial background still engage in bidding wars that drive prices higher than fundamental values and create a bubble.<sup>43</sup>

Second, behavioral finance presents evidence that these biases lead investors to exhibit herd behavior, follow fads, chase trends and engage in positive feedback investment strategies.<sup>44</sup> Thus the trades of irrational investors, instead of canceling each other out, reinforce each other; this trend refutes the second contention of neoclassical scholars.<sup>45</sup>

Finally, arbitrageurs face severe limitations and risks in attempting to exploit the mispricing caused by noise traders.<sup>46</sup> In fact, arbitrageurs with

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<sup>43</sup> Ronald R. King et al., *The Robustness of Bubbles and Crashes in Experimental Stock Markets*, in *NONLINEAR DYNAMICS AND EVOLUTIONARY ECONOMICS* 183, 196–98 (Richard H. Day & Ping Chen eds., 1993); Gunduz Caginalp et al., *Overreactions, Momentum, Liquidity, and Price Bubbles in Laboratory and Field Asset Markets*, 1 *J. PSYCHOL. & FIN. MKTS.* 24, 28 (2000); David P. Porter & Vernon L. Smith, *Futures Contracts and Dividend Uncertainty in Experimental Asset Markets*, 68 *J. BUS.* 509, 513, 524–25 (1995). But these experiments did demonstrate that, when traders develop “experience” within these experimental markets (by having participated in the experiments several times), the occurrence of bubbles is reduced. See King et al., *supra*, at 199; Caginalp et al., *supra*, at 26; Porter & Smith, *supra*, at 524.

<sup>44</sup> See SHLEIFER, *supra* note 12, at 11–12.

<sup>45</sup> *Id.* at 12.

<sup>46</sup> See Barberis & Thaler, *supra* note 24, at 1058–59. First, arbitrageurs face fundamental risk; future news about a company may drive the prices against the arbitrageur’s position. *Id.* at 1058. Hedging by buying or selling substitute stocks cannot completely remove this risk given the rarity of perfect substitutes. *Id.*; SHLEIFER, *supra* note 12, at 14. In addition, substitute stocks may themselves be mispriced, which is more likely in periods of systematic, market-wide mispricing, such as bubbles. No substitutes exist for stocks or bonds as a whole, making arbitrage against market-wide mispricing impossible. SHLEIFER, *supra* note 12, at 13. Andrei Shleifer describes the huge losses that would have threatened an arbitrageur attempting to sell short during the apparent stock market-wide overvaluation during the late 1990s. *Id.* at 15–16.

Second, arbitrageurs face noise trader risk, which is the risk that noise traders will drive the prices further away from fundamental values. J. Bradford De Long et al., *Noise Trader Risk in Financial Markets*, 98 *J. POL. ECON.* 703, 705 (1990). This risk becomes pronounced should a bubble period of prolonged investor irrationality begin. See SHLEIFER, *supra* note 12, at 15–16 (describing noise trader risk faced by arbitrageurs attacking apparent overvaluation during the technology bubble); Markus K. Brunnermeier & Stefan Nagel, *Hedge Funds and the Technology Bubble*, 59 *J. FIN.* 2013, 2030–32 (2004) (providing an example of a hedge fund that was forced to liquidate after refusing to invest in technology stocks during the recent bubble). Moreover, arbitrageurs who aim to exploit (and thus correct) mispricings enjoy neither unlimited resources nor infinite time horizons. Andrei Shleifer & Robert W. Vishny, *The Limits of Arbitrage*, 52 *J. FIN.* 35, 38–43 (1997). Noise trading could be countered by the combined resources of several arbitrageurs, but arbitrageurs faces a risk of collective action failure, namely that other noise traders will not similarly trade against noise because of different information. See Dilip Abreu & Markus K. Brunnermeier, *Synchronization Risk and Delayed Arbitrage*, 66 *J. FIN. ECON.* 341–42 (2002) (labeling this risk of collective action failure as “synchronization risk”); see also Dilip Abreu & Markus K. Brunnermeier, *Crashes and Bubbles*, 71 *ECONOMETRICA* 173 (2003). Coordinated action is limited by the threat of defection and legal constraints.

Most arbitrageurs also have short horizons because they are managing the money of other investors; this creates a classic agency problem. Shleifer & Vishny, *supra*, at 37. If the arbitrageur loses considerable money in the short run trading against noise, investors and creditors may view this as a sign of the arbitrageur’s incompetence and threaten to withdraw funds or loans, respectively, forcing the arbitrageur to liquidate positions prematurely. *Id.* Arbitrageurs may be unable to outlast noise traders; economists have shown that, contrary to the assumptions of the Efficient Market Hypothesis, noise traders can persist in financial markets for extended periods. SHLEIFER, *supra*

superior information have a strong incentive to trade ahead of instead of against noise traders.<sup>47</sup> Arbitrageurs who adopt this strategy can reap enormous profits and then liquidate their positions before noise traders reverse course. Strong empirical evidence indicates that arbitrageurs in fact behave in this manner, exacerbating the severity of mispricing caused by noise trading.<sup>48</sup>

Andrei Shleifer, one of the leading behavioral finance economists, connects all of these elements of behavioral finance in a simple model of how bubbles form. Shleifer's model builds on the earlier, less mathematical and less empirical work of Charles Kindleberger.<sup>49</sup> First, a "displacement"—either an external macroeconomic or political event or good news about a specific industry—occurs that causes corporate profits to rise.<sup>50</sup> Investors with superior information make conspicuous gains as share prices in the market also rise.<sup>51</sup> Noise traders, attracted by rising share prices, enter the market and begin bidding prices even higher.<sup>52</sup> These noise traders adopt a positive feedback investment strategy (a euphemism for the 'greater fool' theory of investing).<sup>53</sup> Informed investors and arbitrageurs—known as "smart money"—anticipate noise trader demand and bid up prices in advance of noise traders, stimulating demand.<sup>54</sup> When smart money senses the market overheating, it begins to sell off.<sup>55</sup> Ultimately, noise traders follow and, once a tipping point is reached, stock prices crash.<sup>56</sup>

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note 12, at 44–46. *See generally*, J. Bradford De Long et al., *The Survival of Noise Traders in Financial Markets*, 64 J. BUS. 1 (1991). (Furthermore, even if a market crash wipes out noise traders, a new generation of noise traders could enter the market in time for a new bubble. This real possibility counters the argument of some proponents of the Efficient Market Hypothesis that the bursting of one bubble precludes future episodes of irrationality. *See* Lynn A. Stout, *The Mechanisms of Market Inefficiency*, 28 J. CORP. L. 635, 666 (2003). The risks arbitrageurs face in betting against irrational investors are not just theoretical. The Tiger Fund, perhaps the most prominent fund that refused to invest in technology stocks in the late 1990s and bet against these stocks, suffered heavy losses and was forced to close in March 2000, mere months before the peak of the NASDAQ. Brunnermeier & Nagel, *supra*, at 2032.

<sup>47</sup> SHLEIFER, *supra* note 12, at 169, 172 (describing how arbitrageurs trade ahead and facilitate noise traders).

<sup>48</sup> *See* Brunnermeier & Nagel, *supra* note 46, at 2014–16.

<sup>49</sup> *See* CHARLES P. KINDLEBERGER, *MANIAS, PANICS, AND CRASHES* 15–16 (4th ed. 2000) (defining a bubble as "an upward price movement over an extended range that then implodes"). For a summary of Kindleberger's theory, see Partnoy, *supra* note 14, at 755–57.

<sup>50</sup> SHLEIFER, *supra* note 12, at 169.

<sup>51</sup> *Id.*

<sup>52</sup> *Id.* at 154–55.

<sup>53</sup> *Id.*; *see* BURTON G. MALKIEL, *A RANDOM WALK DOWN WALL STREET* 32, 43 (1999), available at NetLibrary (discussing the "greater fool" theory of investing); *see also supra* note 29 and accompanying text. For a discussion of how the strategy of investing based on the belief that stocks can always be sold to a "greater fool" can lead to stock market bubbles, *see* JAMES SUROWIECKI, *THE WISDOM OF CROWDS: WHY THE MANY ARE SMARTER THAN THE FEW AND HOW COLLECTIVE WISDOM SHAPES BUSINESS, ECONOMIES, SOCIETIES AND NATIONS* 249–51 (2004).

<sup>54</sup> SHLEIFER, *supra* note 12, at 172.

<sup>55</sup> *See infra* note 65 and accompanying text (discussing the "pump and dump" scam).

<sup>56</sup> SHLEIFER, *supra* note 12, at 173.

### III. A BRIEF HISTORICAL SURVEY OF BUBBLES: DEREGULATION, SECURITIES FRAUD, AND RE-REGULATION

Kindleberger, Shleifer and other economists have traced this economic model through numerous prominent financial crises widely considered to have been stock market or other asset price bubbles.<sup>57</sup> But in their historical analysis, economists have generally not focused on two phenomena that suggest deep connections between bubbles and law and lawbreaking. These two phenomena—the high correlation between bubbles and episodes of widespread financial fraud, and the pattern of deregulation as a bubble inflates, followed by a sharp regulatory and political response as that bubble bursts, followed by deregulation again—demonstrate that bubbles must be understood not only in strict economic terms, but also in the legal, political and regulatory environment in which bubbles inflate and burst.

This Part surveys six historical bubbles. Part III.A discusses five bubbles from the 1690s in England to the 1960s in the United States.<sup>58</sup> Part III.B focuses on the deregulation preceding and the re-regulation following the bubble in U.S. technology stocks in the late 1990s. (The Appendix provides a chart surveying these six bubbles and four others.) For each of the six bubbles discussed in this Part (and in the bubbles analyzed in the chart in the Appendix), this historical survey focuses on two phenomena—the occurrence of widespread fraud during the rise of a stock market bubble, and the regulatory political cycle that leads up to and follows the bursting of the bubble.

First, an analysis of each historical episode reveals that the inflation of stock market bubbles have been accompanied by epidemics of widespread securities fraud. These epidemics break out during a bubble's rise, but are usually discovered only once a bubble has collapsed. The recent wave of fraud epitomized by Enron has many historical precursors. In fact, the history of bubbles from the 1690s to the 1960s coincides with the history of massive securities and financial fraud. This close correlation started with the dawn of capital markets; the first cases of securities fraud in the Anglo-American world appeared in the midst of the first two bubbles in the then emerging institution of the stock market—the English stock market boom of the 1690s and the South Sea Bubble of 1719–1720.<sup>59</sup>

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<sup>57</sup> See KINDLEBERGER, *supra* note 49, at 223–32 (listing famous price bubbles); SHLEIFER, *supra* note 12, at 169–73 (similar).

<sup>58</sup> For a historical account of speculation and fraud in the early years of the Dutch stock market, see JOSEPH DE LA VEGA, *CONFUSIÓN DE CONFUSIONES* (Hermann Kellenbenz trans., 1957) (1688).

Speculation in the Dutch stock market also spilled over into the earliest known bubble, the Dutch tulipomania of the 1630s. See CHANCELLOR, *supra* note 8, at 14–20. Because this bubble involved flower bulbs not stocks, this Article does not address the tulipomania at length.

<sup>59</sup> For a more in-depth history of speculative bubbles and the fraud that accompanies them, see generally CHANCELLOR, *supra* note 8. For a discussion of how U.S. courts have responded to bubbles,

The parallels between fraud during past bubbles and the securities fraud of the past decade suggest that if the phenomena of widespread fraud is not unique to the 1990s, then perhaps the causes of the epidemic do not stem purely from circumstances unique to that decade. Broader, cyclical economic forces—in other words, the dynamics of a bubble—may be largely to blame.

One aspect of these dynamics is examined in the second part of the analysis of each bubble. The survey below reveals a distinct pattern of deregulation preceding or during the formation of a bubble, followed by a sharp regulatory reaction once a bubble bursts. This Article uses “deregulation” as shorthand for several legal or political actions that either loosen legal constraints on market participants or, in some cases, actually directly enlist the government in the promotion of the speculative frenzy that drives the bubble.<sup>60</sup> Each bubble analyzed either follows or coincides with some combination of: (1) a period of active deregulation, (2) lax enforcement of existing financial and securities regulations, (3) reluctance—or even active political resistance to—proposals to tighten regulation of capital markets in order to dampen speculation or combat suspected fraud, or even (4) active and direct government promotion of the speculative ventures that create a bubble.

After the burst of each bubble, a sharp political reaction occurs, usually bringing sweeping regulations back to the capital markets.<sup>61</sup> But, over time, memories of the crash and bubble fade, political support for regulation wanes and deregulation again gains traction. The length of time that elapses between the re-regulation that follows the bubble and the onset of deregulation varies according to the economic severity of the bubble’s collapse.

Part IV provides a model that explains these historical patterns of deregulation and re-regulation with a political and economic analysis of the interactions between bubbles, politics and law.

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financial panics and crises in shaping the common law, see generally Daniel W. Levy, *A Legal History of Irrational Exuberance*, 48 CASE W. RES. L. REV. 799 (1998). For a cultural history of speculative crises and financial frauds in the United States, see generally STEVE FRASER, *EVERY MAN A SPECULATOR: A HISTORY OF WALL STREET IN AMERICAN LIFE* (2005).

<sup>60</sup> This broader definition of deregulation (and regulation) is more useful in a historical analysis of financial markets given that the modern financial regulatory state dates back less than a century. But before this time, sovereigns and governments did use laws and political actions to influence financial markets, albeit through a different array of tools than those used in modern times. See, e.g., *infra* text accompanying notes 67–72 (describing the English government’s role in creating the stock market bubble of the 1690s). Thus, a historical analysis of the regulation of financial markets before the 20th century must seek to uncover these modes of influence and, where appropriate, analogize to modern regulations.

<sup>61</sup> This article draws on, among other sources, a skeletal outline of political reactions to the collapse of asset price bubbles. E.g., SHLEIFER, *supra* note 12, at 170–71. This Part analyzes additional bubbles, provides more historical details on the political reactions in the wake of collapsed bubbles, and adds an analysis of the political and legal reactions to the rise of a bubble.

## A. *Survey of Bubbles from the 1690s to the 1960s*

### 1. *The 1690s English Stock Market Boom*

The 1690s witnessed both the development of one of the first regular markets for trading shares in joint stock companies and then one of history's first speculative bubbles, which developed in that new market.<sup>62</sup> An unsophisticated, newly minted investor class became easy prey for financial deceit and thus ensured that the first stock markets, particularly the nascent English stock market of the 1690s, would serve as the first venues for widespread securities fraud. Fraud in the 1690s English stock market took many forms, including the creation of "sham companies . . . launched for the enrichment of projectors," the manipulation of share prices, and the circulation of false rumors about company prospects.<sup>63</sup> The 1690s bubble sired perhaps the first incarnations of both price manipulation by groups of stock brokers,<sup>64</sup> including what is now known as the "pump and dump" scam, which describes when a group of stockholders publicly tout the baseless prospects of a company and then secretly sell their shares as the stock rises.<sup>65</sup> A new class of market professionals, known as "stock-jobbers," who would later be known as brokers, invented other market manipulating schemes that would be repeated in bubbles of later centuries, including efforts to "corner" markets of particular stocks.<sup>66</sup>

The English government was deeply—albeit indirectly—involved in the creation of the stock market and in the promotion of the speculative frenzy of the bubble. The stock market first took flight when the government created the Bank of England to borrow money from the public in small denomination loans that could be traded in a secondary market.<sup>67</sup> But the government did more than spur the creation of the capital market; many of the speculative and fraudulent ventures of the decade operated

<sup>62</sup> See CHANCELLOR, *supra* note 8, at 31–32, 47–48, 52.

<sup>63</sup> *Id.* at 48; see also STUART BANNER, *ANGLO-AMERICAN SECURITIES REGULATION* 30–31 (1998). Daniel Defoe, author of *Robinson Crusoe*, fell victim to one such scam and thereafter authored numerous pamphlets denouncing stock speculators and calling for government regulation of the market. See BANNER, *supra*, at 29–30, 32–36 (citing DANIEL DEFOE, *ESSAYS UPON SEVERAL SUBJECTS* (London, London & Westminster, 1702); DANIEL DEFOE, *THE VILLAINY OF STOCK-JOBBERS DETECTED* (London, 1701); DANIEL DEFOE, *THE ANATOMY OF EXCHANGE-ALLEY: OR, A SYSTEM OF STOCK-JOBGING* (London, 1719)).

<sup>64</sup> See BANNER, *supra* note 63, at 30–31; CHANCELLOR, *supra* note 8, at 52.

<sup>65</sup> See CHANCELLOR, *supra* note 8, at 48 (discussing the practice of "stockjobbing"); SEC, Pump and Dump Schemes, <http://www.sec.gov/answers/pumpdump.htm> (last visited Oct. 30, 2005). Early entrepreneurs of fraud took full advantage of the new technologies of the printing press and the media; economist Robert Shiller theorizes that the history of bubbles begins with the history of newspapers, as newspapers (and later television) facilitated the spread of investor beliefs about the market, especially manias and rumors. See SHILLER, *supra* note 12, at 71, 73 & 267 n.1.

<sup>66</sup> See BANNER, *supra* note 63, at 25–27, 30–31.

<sup>67</sup> See *id.* at 23.

under royal charters or government patents.<sup>68</sup> At the same time, the government was reluctant to regulate the market despite growing public outcry over speculation, fraud and market manipulation.<sup>69</sup> Government objections to the speculative frenzy and fraudulent schemes were further muted as many company promoters distributed company shares to government figures to buy their support.<sup>70</sup> Parliament considered bills to regulate the markets in 1694 and the spring of 1696, but this legislative response stalled.<sup>71</sup> The bubble burst in the summer of 1696 when stock prices plummeted, investors lost fortunes and financial crisis took hold.<sup>72</sup>

The bursting of the bubble led to both virulent public outcry against stock speculators and brokers and England's first securities laws.<sup>73</sup> In 1697, Parliament reacted to the manipulation of stock prices during the bubble by cadres of brokers by passing an act that limited the number of brokers in London to 100, all of whom were to be licensed by the Aldermen of the City of London.<sup>74</sup> This legislation required that brokers pay an annual fee for their license and prohibited them from dealing for their own account or from charging commissions above a statutory limit.<sup>75</sup>

After this initial, sharp legal response, the regulatory impulse subsided with the passage of time. In 1708, the 1697 act expired.<sup>76</sup> In 1711, Parliament considered, but failed to pass a bill to revive that act.<sup>77</sup> After 1711,

<sup>68</sup> The boom began with the spectacular success of royally chartered trading companies and was further fueled by the spectacular success of diving companies that received public "patents" to recover shipwrecks or that obtained technological patents for diving equipment. CHANCELLOR, *supra* note 8, at 34–36. Other companies soon floated shares touting patents for a wide array of other inventions. *See id.* at 37–39. *See generally* Christine Macleod, *The 1690s Patent Boom: Invention or Stock-Jobbing?*, 39 *ECON. HIST. REV.* 549 (1986) (summarizing patents enrolled during the time period 1691–1693).

<sup>69</sup> *See* BANNER, *supra* note 63, at 39 (describing how the "government's growing dependence on the credit market posed an obstacle to regulation").

<sup>70</sup> *See* CHANCELLOR, *supra* note 8, at 48–49.

<sup>71</sup> *See* BANNER, *supra* note 63, at 39.

<sup>72</sup> *See* CHANCELLOR, *supra* note 8, at 51–52.

<sup>73</sup> *See id.*

<sup>74</sup> An Act to Restrain the Number and Ill Practice of Brokers and Stock Jobbers, 1697, 8 & 9 Will. 3, c. 32; *accord* BANNER, *supra* note 63, at 39; CHANCELLOR, *supra* note 8, at 52. The lord mayor used his new licensing powers to institute quotas that capped the number of Jewish brokers and the number of foreign brokers to twelve each. BANNER, *supra* note 63, at 39.

<sup>75</sup> BANNER, *supra* note 63, at 39–40; CHANCELLOR, *supra* note 8, at 52–53. The Act also imposed tight restrictions on futures transactions by mandating that no more than three days elapse between contract formation and transfer of the securities. However, courts narrowly interpreted this restriction. BANNER, *supra* note 63, at 40. The strong political reaction against the bubble culminated in a 1695 parliamentary investigation into official corruption, leading to "the expulsion of the Speaker of the Commons, the impeachment of the Lord President of the Council, and the imprisonment of the Governor of the East India Company." CHANCELLOR, *supra* note 8, at 49.

<sup>76</sup> BANNER, *supra* note 63, at 39–40. Stuart Banner writes that when the act expired, Parliament did authorize the city of London to license brokers and impose a fee, but that this new legislation was a shadow of its predecessor. "[T]he new statute placed no limit on the number of brokers, and appears to have been intended primarily as a means of raising revenue for the city rather than curbing securities trading." *Id.* at 40.

<sup>77</sup> BANNER, *supra* note 63, at 40. The only aspect of the 1697 act that was revived in 1711, was the reestablishment of limits on broker commissions. *See id.* at 40 (citing 1711, 10 Ann. c. 19, § 121).

no new major securities laws were passed until Parliament was forced to respond to the next bubble in 1720.<sup>78</sup>

## 2. *The South Sea Bubble*

Two decades after England's first bubble, memories had faded enough to permit an even larger speculative stock market frenzy. The South Sea Bubble drew inspiration from a contemporaneous scheme and bubble in France, where organizers of a venture called the Mississippi Company convinced the French state to allow them to acquire, privatize and securitize the French national debt and all revenues from trade with the Louisiana territory.<sup>79</sup> The early wild success of these Frenchmen spurred a copycat scheme to privatize the English debt through an entity known as the South Sea Company. This complex scheme resulted in sales of South Sea shares for many times the value of the only assets of the Company, the right to receive debt payments from the English crown.<sup>80</sup> In a development that foreshadowed the role of stock options in the bubble and scandals of the late 1990s, South Sea insiders held secret shareholdings and stock options.<sup>81</sup> Just as in the 1690s, dramatic rises in stock prices and fantastic early capital gains spawned both wild speculation and imitators. Fraudulent schemes proliferated; promoters again sold stock in companies with nonexistent assets and fictitious prospects.<sup>82</sup>

Promoters of this English scheme copied not only the French strategy of securitizing national debt, but the tactics of thoroughly co-opting the government as well.<sup>83</sup> This British scheme was conducted through the South Sea Company, a stock corporation created by an Act of Parliament.<sup>84</sup> A second act, encouraged by gifts of shares to members of Parliament,

<sup>78</sup> BANNER, *supra* note 63, at 40.

<sup>79</sup> For a discussion of the Mississippi Bubble, see *infra* note 298 and accompanying text.

<sup>80</sup> CHANCELLOR, *supra* note 8, at 62. For the history of the South Sea Bubble, see JOHN CARSWELL, *THE SOUTH SEA BUBBLE* (1960); see also CHANCELLOR, *supra* note 8, at 58–95. For a more dated account of the bubble, see CHARLES MACKAY, *EXTRAORDINARY POPULAR DELUSIONS AND THE MADNESS OF CROWDS* 49–91 (Crown Trade Paperbacks, 1980) (1841).

For one economic analysis of the South Sea financial structure and the resultant bubbles, see Lary D. Neal, *How the South Sea Bubble was Blown Up and Burst: A New Look at Old Data*, in *CRASHES AND PANICS* 33 (Eugene N. White ed., 1990). For an account by an economist who argues that the South Sea episode does not meet the economist definition of a bubble because stock prices in the period could be explained by fundamental values, see PETER M. GARBER, *FAMOUS FIRST BUBBLES* 91–93, 105–07 (2000).

For an in-depth analysis of the legal response to this bubble, see BANNER, *supra* note 63, at 41, 75–87.

<sup>81</sup> *E.g.*, CHANCELLOR, *supra* note 8, at 75 (describing the activities of company co-founder John Blunt).

<sup>82</sup> See MALCOLM BALEN, *THE SECRET HISTORY OF THE SOUTH SEA BUBBLE* 89–90, 97 (2003); CHANCELLOR, *supra* note 8, at 70–71.

<sup>83</sup> For an account of the political maneuverings of the South Sea promoters to curry favor with the king and the governing party, see BALEN, *supra* note 82, at 41–44, 72, 76–77.

<sup>84</sup> CARSWELL, *supra* note 80, at 54.



approved the terms of the scheme: the company assumed the national debt and then issued additional stock into the market.<sup>85</sup> The government opposed measures introduced in Parliament to regulate the terms of converting the debt, as prominent ministers and courtiers secretly held company stock granted to them by company insiders.<sup>86</sup> (The King and the Bank of England were also prominent, albeit publicly-known, shareholders.)<sup>87</sup> The South Sea Company engaged in systematic bribery through overt distributions of stock and covert, illegal share options granted to courtiers, ministers and members of Parliament.<sup>88</sup> Aside from bribery, the government had other reasons to back the scheme, particularly a desire to reduce the national debt.<sup>89</sup>

The early success of the South Sea subscription led to an explosion of private speculative companies floating shares, many of them fraudulent.<sup>90</sup> The South Sea promoters responded to competition from the proliferation of other stock company schemes by persuading the government to pass the Bubble Act,<sup>91</sup> which prohibited the formation of new companies without authorization by an act of Parliament and prevented existing companies from engaging in activities not specified in their charter.<sup>92</sup> The South Sea directors also requested that the Attorney General issue writs of prosecution, called *Scire Facias*, against three companies for engaging in activities not authorized by their respective charters.<sup>93</sup>

The collapse of the South Sea bubble led to a passionate political reaction, including the formation of an extraordinary secret committee of Par-

<sup>85</sup> See BANNER, *supra* note 63, at 43.

<sup>86</sup> See CHANCELLOR, *supra* note 8, at 64–65.

<sup>87</sup> See BALEN, *supra* note 82, at 40; CHANCELLOR, *supra* note 8, at 68.

<sup>88</sup> CHANCELLOR, *supra* note 8, at 91; *see also* BALEN, *supra* note 82, at 76, 81–82, 89, 169, 205.

<sup>89</sup> See BALEN, *supra* note 82, at 69–76.

<sup>90</sup> *See id.* at 90, 96–97; CHANCELLOR, *supra* note 8, at 70–71.

<sup>91</sup> The official name of the Bubble Act was “An Act to Restrain the Extravagant and Unwarrantable Practice of Raising Money by Voluntary Subscription for Carrying on Projects Dangerous to the Trade and Subjects of the United Kingdom,” 1720, 6 Geo. c. 18.

<sup>92</sup> CHANCELLOR, *supra* note 8, at 82. One popular misconception is that the Bubble Act was passed in reaction to the collapse of the South Sea Bubble, when in fact it was passed before the collapse at the urging of directors of the South Sea Company. CARSWELL, *supra* note 80, at 139. These directors sought to protect their stock offerings from competition in the capital markets from other speculative ventures. CHANCELLOR, *supra* note 8, at 82.

It was only later that commentators erroneously recast the Bubble Act as a response to the collapse of the bubble. BANNER, *supra* note 63, at 75 n.129. Nevertheless, this misconception contains a kernel of insight, as the century-long duration of the Bubble Act stems from the lasting public memory of both the fraud during the bubble and the severe economic fallout from the bubble’s ultimate collapse. *See id.* at 75–79; CHANCELLOR, *supra* note 8, at 88–90. The Bubble Act therefore represents both an example of government intervention to support a bubble *and* a government response to the perceived evils of the bubble after the crash.

<sup>93</sup> CHANCELLOR, *supra* note 8, at 82. Ultimately, this tactic backfired, as these writs caused the price of these three companies to plummet, which, in turn, instigated a general market panic that quickly engulfed the South Sea Company. *Id.* at 83. South Sea share prices nose-dived and the complex Ponzi scheme created by the Company directors unraveled. *See id.* at 83–84.

liament to investigate the South Sea Company's directors, which uncovered widespread corruption.<sup>94</sup> The findings of the committee provoked street protests and unprecedented trials in the House of Commons, sanctions, and even imprisonment in the Tower of London for some of the Company's promoters and corrupted members of Parliament.<sup>95</sup> Parliament ultimately passed *ex post facto* laws to seize the profits of directors of the South Sea Company,<sup>96</sup> and the Sir John Barnard's Act, which prohibited short sales and trading in futures and options.<sup>97</sup> The South Sea bubble had such a profound effect on the English political and legal landscape that the Sir John Barnard's Act and the Bubble Act—which together stifled the formation of companies and financial innovation—remained in effect for over a century.<sup>98</sup> The repeal of these laws coincided with the rise of England's next significant bubble in 1825.<sup>99</sup>

### 3. *Gilded Age Bubbles in the United States: The Panic of 1869 and Railway Boom of 1873*

The United States experienced its own bubbles in the stock of mining companies and railroads in the two decades after the Civil War. Just as in Great Britain,<sup>100</sup> the growth of national securities markets and the industrial age spawned both tremendous financial booms and widespread swindling of shareholders and securities fraud. The American versions of these bubbles replayed many of the fraudulent schemes in Britain, such as selling shares in non-existent mines, fraudulent prospectuses, massive insider trading and self-dealing by officers and directors, and epic attempts by speculators, such as Jay Gould, to manipulate stock prices and corner the market.<sup>101</sup>

Gould and other financial “robber barons,” such as Jim Fisk, Daniel Drew and Cornelius Vanderbilt, manipulated the capital markets with the acquiescence, and, at times, the participation of lawmakers.<sup>102</sup> This acquiescence was assured due to the classic confluence of *laissez-faire* philosophy and the full array of improper influence, including bribery.<sup>103</sup> One of

<sup>94</sup> See BALEN, *supra* note 82, at 169, 175–76, 181.

<sup>95</sup> See *id.* at 207–10.

<sup>96</sup> BALEN, *supra* note 82, at 216–20.

<sup>97</sup> 1734, 7 Geo. 2, c. 8; CHANCELLOR, *supra* note 8, at 88.

<sup>98</sup> CHANCELLOR, *supra* note 8, at 88, 90. The bubble also prompted more drastic proposals to outlaw speculation and securities brokering that never passed. See *id.* at 88.

<sup>99</sup> BANNER, *supra* note 63, at 79 (citing 1825, 6 Geo. 4, c. 91). This 19th century bubble is summarized *infra* note 300 and accompanying text.

<sup>100</sup> The British bubbles of this age are described *infra* notes 301, 304 and accompanying text.

<sup>101</sup> See generally CHANCELLOR, *supra* note 8, at 169–90 (describing speculation in the mining industry and Gould's manipulation of railroad stock); ROBERT SOBEL, PANIC ON WALL STREET 115–96 (1968) (describing the major players in the postwar boom).

<sup>102</sup> See SOBEL, *supra* note 101, at 126–33.

<sup>103</sup> See CHANCELLOR, *supra* note 8, at 174–77; SOBEL, *supra* note 101, at 126–33, 167.

the most egregious examples of this behavior came when Jay Gould attempted to corner the gold market in 1869 by exploiting inside information on the monetary policy of the corrupt Grant administration.<sup>104</sup> Gould's failure in this attempt triggered the Panic of 1869.<sup>105</sup> Greatly enriched by his market manipulation, Gould shielded himself from creditors and lawsuits for breach of contract through twelve injunctions and court orders issued by judges whom he controlled.<sup>106</sup>

But railroad speculation continued, fueled by huge federal land grants to the railroad companies, which curried favor with prominent politicians through outright bribes and extending improper loans.<sup>107</sup> But the news of a series of scandals involving massive securities fraud and political corruption—most notably the *Crédit Mobilier*<sup>108</sup> and Pacific Mail Steamship Company<sup>109</sup>—shook the confidence of investors, and contributed to the crash of 1873.<sup>110</sup> This crash witnessed not only a collapse in stock prices, but also the failure of prominent brokerage houses, runs on banks, and the worst depression the nation had faced to that time.<sup>111</sup>

The Panic of 1869 prompted a Congressional investigation that exposed Gould's machinations.<sup>112</sup> The political and legal repercussions of the crash of 1873 were more severe. The Grant administration became mired in corruption scandals and the Democratic Party made large gains in the Congressional elections of 1874.<sup>113</sup> The gold standard and tighter monetary policy returned with the enactment of the Resumption of Specie Act in 1875,<sup>114</sup> and the country became gripped by what would become a decades-long conflict over whether, which, and to what extent, precious

<sup>104</sup> See CHANCELLOR, *supra* note 8, at 180–83. Even his failure to influence Grant did not derail Gould's manipulation of the gold market, which continued as other traders assumed his attempts at improper influence succeeded. See *id.* at 181–83; SOBEL, *supra* note 101, at 140–49.

<sup>105</sup> Cf. SOBEL, *supra* note 101, at 149 (treating with skepticism Gould's denial that he was "in no way instrumental in creating the panic").

<sup>106</sup> SOBEL, *supra* note 101, at 149. This boom followed a number of other railways schemes that profited due to official corruption. See, e.g., *id.* at 123–24 (describing Daniel Drew's manipulation of the Erie Railroad). Chancellor also discusses how corrupt state and local legislators in New York facilitated the cornering of stocks in two Harlem railroads in 1863 and 1864. CHANCELLOR, *supra* note 8, at 175–76.

<sup>107</sup> CHANCELLOR, *supra* note 8, at 175, 183; SOBEL, *supra* note 101, at 168.

<sup>108</sup> In the 1872 *Crédit Mobilier* scandal, Oakes Ames, a railway promoter and member of Congress, gained support for a complex scheme of graft by distributing shares in the holding company that benefited from the graft to prominent politicians, including future President James Garfield and former Vice President Schuyler Colfax. CHANCELLOR, *supra* note 8, at 175; SOBEL, *supra* note 101, at 165.

<sup>109</sup> The Pacific Mail Steamship Company scandal involved lucrative government contracts obtained through bribery of politicians. See SOBEL, *supra* note 101, at 165.

<sup>110</sup> See *id.* at 171–80 (describing Wall Street's panicked reaction to the collapse of the railroad stocks and government scandals).

<sup>111</sup> *Id.* at 175–92.

<sup>112</sup> *Id.* at 149.

<sup>113</sup> *Id.* at 195, 197; Irwin Unger, *The Business Community and the Origins of the 1875 Resumption Act*, 35 BUS. HIST. REV. 247, 252–53 (1961).

<sup>114</sup> Ch. 15, 18 Stat. 296 (1875).

metals would back the dollar.<sup>115</sup> Robert Sobel argues that beyond these specific and immediate reactions, the bursting of the 1873 economic bubble resulted in a substantial shift in the focus of American politics and law:

The 1873 panic was not merely a severe jolt to the economy; it marked the end of the era dominated by problems of slavery and secession (despite the fact that Reconstruction would continue for another four years) and the beginning of one in which monetary and class issues would occupy center stage.<sup>116</sup>

The Supreme Court was also swept up in this transformation.<sup>117</sup> The Court reacted to financial crises in the post-Civil War era by sanctioning the federal government's ability to print paper money.<sup>118</sup> The Court thus "broadened substantially the terms of the government's involvement in the economy, particularly with respect to the effect economic legislation might have on individual rights."<sup>119</sup>

#### 4. *The 1920s Stock Market*

The stock market of the roaring twenties was a fertile ground for securities fraud. The following is only the briefest of summaries of the widespread fraud during this period and the vast financial regulatory apparatus that was constructed during the New Deal to combat this fraud.<sup>120</sup> Operators of investment pools devised elaborate schemes to manipulate stock prices and insider trading was prevalent.<sup>121</sup> The primary U.S. securities laws enacted in wake of the 1929 crash were designed to combat the fraudulent and manipulative practices employed in the decade before.<sup>122</sup>

<sup>115</sup> See SOBEL, *supra* note 101, at 197–99.

<sup>116</sup> *Id.* at 193.

<sup>117</sup> See Levy, *supra* note 59, at 827–41 (analyzing the development of Supreme Court opinions handed down in reaction to the financial crises of the post-Civil War period).

<sup>118</sup> *Id.* at 834.

<sup>119</sup> *Id.* at 835. This passage refers to the Supreme Court's decisions in *Juilliard v. Greenman*, 110 U.S. 421 (1884) and *Knox v. Lee*, 79 U.S. (12 Wall.) 457 (1870). For a fascinating analysis of how the justices in these cases wrestled with reconciling federal power to deal with financial emergencies with the formalism of Court precedent that had limited government powers and elevated individual economic rights, see Levy, *supra* note 59, at 835–41.

<sup>120</sup> For excellent introductions to the booming stock market of the 1920s, including the widespread fraud of that period, and the political aftermath of the crash, see generally CHANCELLOR, *supra* note 8, at 191–232; FRASER, *supra* note 59, at 411–71.

<sup>121</sup> See, e.g., MALKIEL, *supra* note 53, at 47–49 (describing instances of investment pooling and short selling prior to the 1929 crash).

<sup>122</sup> There are several excellent historical accounts of the many mutations of securities fraud during the 1920s and how the prevention of their recurrence shaped federal securities law. See, e.g., Steve Thel, *The Original Conception of Section 10(b) of the Securities Exchange Act*, 42 STAN. L. REV. 385 (1990) (recounting the events preceding the enactment of section 10(b) and postulating that the provision was intended to grant the SEC broad powers to regulate any activity that might contribute to speculation). For accounts of how the federal securities laws were designed to combat the types of fraud of the 1920s from some of the principal architects of these laws, see William O. Douglas, *Pro-*

The investment frenzy of the 1920s flourished in a political climate that disfavored government regulation and where progressivism was in retreat.<sup>123</sup> Wall Street came to dominate the politics of the nation, and dictated public policy through what has been deemed “crony capitalism.”<sup>124</sup> Presidents Coolidge and Hoover were elected on laissez-faire platforms; in the words of Coolidge, “the business of America is business.”<sup>125</sup> Coolidge relaxed enforcement of federal antitrust laws, paving the way for a wave of mergers, and dramatically reduced taxes on the wealthy, corporations and capital gains, fueling further investment in stocks.<sup>126</sup> Largely unregulated and highly leveraged, utility companies became the subject of their own bubble.<sup>127</sup>

The collapse of the 1920s stock market and the onset of the Great Depression of course led to the greatest expansion of government regulation in U.S. history. Congress reacted to the misdeeds of Wall Street by creating the Securities and Exchange Commission, mandating the separation of commercial and investment banks in the Glass-Steagall Act,<sup>128</sup> and creating the modern securities regulatory regime, including the Securities Act of 1933,<sup>129</sup> the Securities Exchange Act of 1934,<sup>130</sup> and the Public Utilities Holding Company Act of 1935.<sup>131</sup>

##### 5. *The 1960s Boom in Conglomerate Stocks*

In a harbinger of the SEC’s fight against earnings management in the 1990s,<sup>132</sup> the mania for stocks of U.S. conglomerates in the sixties gave rise to and fed off of a number of deceptive accounting practices used to inflate earnings.<sup>133</sup> These practices became the subject of extensive securities fraud litigation after the stock prices of these conglomerates crashed.<sup>134</sup>

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*pecting the Investor*, 23 YALE L. REV. 521 (1934) (discussing the Securities Act of 1933 and its perceived shortcomings); James M. Landis, *The Legislative History of the Securities Act of 1933*, 28 GEO. WASH. L. REV. 29 (1959) (describing policymaking reaction to the 1929 crash).

<sup>123</sup> See FRASER, *supra* note 59, at 375 (characterizing the 1920s as a decade in which “government bent its efforts to serve the narrowest interests of the business classes”).

<sup>124</sup> *Id.*

<sup>125</sup> CHANCELLOR, *supra* note 8, at 197, 222–23.

<sup>126</sup> *Id.* at 193, 197.

<sup>127</sup> *Id.* at 207–08.

<sup>128</sup> Banking Act of 1933, ch. 89, 48 Stat. 162, *repealed in part by* Gramm-Leach Bliley Act of 1999, Pub. L. No. 106-102, § 101, 113 Stat. 1338.

<sup>129</sup> Ch. 38, 48 Stat. 74 (current version at 15 U.S.C. §§ 77a–77aa (2000)).

<sup>130</sup> Ch. 404, 48 Stat. 881 (current version at 15 U.S.C. §§ 78a–78lll (2000)).

<sup>131</sup> Ch. 687, 49 Stat. 838 (current version at 15 U.S.C. §§ 79 to 79z-6 (2000)).

<sup>132</sup> See generally David Millon, *Why is Corporate Management Obsessed with Quarterly Earnings and What Should Be Done About It?*, 70 GEO. WASH. L. REV. 890 (2002) (describing current literature on, and SEC efforts against, earnings management).

<sup>133</sup> For a primer on these accounting techniques, see MALKIEL, *supra* note 53, at 62–69; see also ANDREW TOBIAS, *THE FUNNY MONEY GAME* (1971).

<sup>134</sup> Securities fraud litigation involving one of the most prominent conglomerates, National Student Marketing Corp., led to a seminal decision on the liability of outside counsel for aiding and abetting securities fraud. See *SEC v. Nat’l Student Mktg. Corp.*, 457 F. Supp. 682, 701, 714–15 (D.D.C. 1978).

Although the SEC expressed concern about these practices, forceful attempts to regulate them came only after the crash.<sup>135</sup> Fraudulent schemes also benefited from a period of looser enforcement of the securities laws by the SEC dating back to the Eisenhower administration.<sup>136</sup> The Department of Justice and the Federal Trade Commission did not intervene in the mergers of the conglomerate wave because officials narrowly read their statutory authority and concluded that it did not extend to conglomerate mergers.<sup>137</sup>

After the crash of conglomerate stocks and the stocks of other “hot” companies, the SEC responded to the pervasive use of deceptive accounting practices that had been used to inflate the earnings of conglomerates after mergers by implementing a host of accounting rules, including requirements that corporations report earnings on a “fully diluted” basis in their securities filings.<sup>138</sup> The SEC also enacted an array of broker-dealer regulations and launched a broad investigation of the American Exchange in an effort to crack down on market manipulation schemes that had run rampant during the conglomerate boom.<sup>139</sup> Only in 1968 did the Federal Trade Commission announce that it would investigate the conglomerate merger movement.<sup>140</sup>

The pattern outlined in the brief capsule histories above—a laissez-faire political climate, deregulation, political corruption, and even government promotion of bubbles and epidemics of fraud during the rise of a bubble, followed by a dramatic political, legal and regulatory reaction in the wake of a bubble burst—appear in stock market bubbles other than those described above. The Appendix provides a chart summarizing these phenomena as observed in four additional stock market bubbles. These phenomena also appear outside the Anglo-American context, and can be found in the Argentine loan bubble in the 1880s<sup>141</sup> and the bubble that enveloped the Japanese economy in the late 1980s.<sup>142</sup>

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<sup>135</sup> MALKIEL, *supra* note 53, at 67. For an account of the political resistance to regulation of financial markets during this time, see DAVID L. WESTERN, *BOOMS, BUBBLES AND BUSTS IN US STOCK MARKETS* 108–09 (2004).

<sup>136</sup> JAMES BURK, *VALUES IN THE MARKETPLACE: THE AMERICAN STOCK EXCHANGE UNDER FEDERAL SECURITIES LAW* 103 (1988) (arguing that the “fiscal evisceration” of the SEC and the “recession of strict federal oversight” of the capital markets under the Eisenhower administration led to “an efflorescence of fraudulent stock issues and speculative trading abuses”).

<sup>137</sup> JAMES R. WILLIAMSON, *FEDERAL ANTITRUST POLICY DURING THE KENNEDY-JOHNSON YEARS* 36 (1995).

<sup>138</sup> MALKIEL, *supra* note 53, at 65, 67.

<sup>139</sup> WESTERN, *supra* note 135, at 109–110.

<sup>140</sup> MALKIEL, *supra* note 53, at 67.

<sup>141</sup> See SHLEIFER, *supra* note 12, at 171–73.

<sup>142</sup> See CHRISTOPHER WOOD, *THE BUBBLE ECONOMY* 164–69 (1992) (documenting how the tightly intertwined relationship of financial regulators and industry in Japan led to government policies that failed to curb market excesses). The collapse of the bubble prompted the initiation of potentially revolutionary changes in Japanese securities and financial laws. *See id.* at 163–65. *See generally* Geoffrey P. Miller, *The Role of a Central Bank in a Bubble Economy*, 18 *CARDOZO L. REV.* 1053 (1996) (discussing the Bank of Japan’s pivotal role in the creation and ultimate bursting of the Japanese

### B. *The 1990s Bubble: From a Decade of Deregulation to Sarbanes-Oxley*

Following historical form, the decade preceding the NASDAQ implosion in 2000 witnessed dramatic deregulation of the securities industry.<sup>143</sup> This deregulation occurred through both Congressional action and prominent judicial rulings. First, in 1995 and 1998 Congress, under pressure from Wall Street interest groups—large securities issuers, investment banks, accounting firms, and private securities law firms—passed two laws that placed high hurdles in the way of private securities litigation against securities issuers and financial intermediaries.<sup>144</sup> A few of the reforms implemented by the Private Securities Litigation Reform Act of 1995 (PSLRA)<sup>145</sup> included:

- raising the pleading standards for securities class actions;<sup>146</sup>
- replacing the “joint and several liability” previously imposed on defendants in private securities litigation with proportional liability, unless the defendant is found to have knowingly violated the law;<sup>147</sup>
- precluding RICO laws from being used to obtain treble damages in securities fraud cases;<sup>148</sup> and
- adopting an expansive safe-harbor for “forward-looking” information provided in securities disclosure.<sup>149</sup>

Three years after enacting PSLRA, Congress acted again to narrow the forms of relief available to plaintiffs in securities fraud litigation. Among other things, the Securities Litigation Uniform Standards Act of 1998 (SLUSA) precluded class actions alleging securities fraud from being brought in state courts.<sup>150</sup> At the end of the decade, Congress acted again, not to lower securities law liability but to change the entire landscape of the securities industry. In 1999, Congress repealed one of the centerpieces of the New Deal era securities laws, the Glass-Steagall Act, and thus erased six-decade-old legal barriers between commercial and investment banking activities.<sup>151</sup>

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economic bubble).

<sup>143</sup> See WESTERN, *supra* note 135, at 102–03; John C. Coffee, Jr., *Understanding Enron: “It’s About the Gatekeepers, Stupid”*, 57 BUS. LAW. 1403, 1409–10 (2002).

<sup>144</sup> Coffee, *supra* note 143, at 1409–10; Stephen Labaton, *Now Who, Exactly, Got Us into This?*, N.Y. TIMES, Feb. 3, 2002, at B1, available at LEXIS, News Library, NYT File.

<sup>145</sup> Pub. L. No. 104-67, 109 Stat. 737 (1995) (codified in scattered sections of 15 U.S.C. (2000)).

<sup>146</sup> PSLRA sec. 101(b), § 21D(a) (codified as amended at 15 U.S.C. § 78u-4(a) (2000)); see Joel Seligman, *Rethinking Private Securities Litigation*, 73 U. CIN. L. REV. 95, 105–06 (2004).

<sup>147</sup> Sec. 101(b), § 21D(g)(2) (codified as amended at 15 U.S.C. § 78u-4(f)(2) (2000)); see Seligman, *supra* note 146, at 107.

<sup>148</sup> Sec. 107 (amending 18 U.S.C. § 1964(c) (2000)).

<sup>149</sup> Sec. 102(a), § 27A(c) (codified as amended at 15 U.S.C. § 77z-2(c) (2000)); see Seligman, *supra* note 146, at 106.

<sup>150</sup> Pub. L. No. 105-353, sec. 101(a)(1), § 16(b), 112 Stat. 3227, 3228 (codified at 15 U.S.C. § 77p(b) (2000)); Coffee, *supra* note 143, at 1410.

<sup>151</sup> Gramm-Leach-Bliley Act, Pub. L. No. 106-102, § 101, 113 Stat. 1338, 1341 (1999) (repealing 20 U.S.C. §§ 78, 377 (1994)).

Second, some of the interest groups that pushed for the passage of these statutes were also successful in beating back or diluting attempts to impose new obligations on securities market intermediaries. The most glaring example is the accounting industry's largely successful campaign at the end of the Clinton administration to curtail SEC Chairman Arthur Levitt's attempts to restrict the scope of non-audit services that accountants could provide to clients whose financial statements they audited.<sup>152</sup> Levitt ultimately proved to be a Cassandra, as these non-audit relationships compromised the objectivity of auditors and have been blamed for the failure of accountants to adequately police the accounting of securities issuers.<sup>153</sup>

Third, prominent court rulings during the 1990s placed new restrictions on securities lawsuits and thus lowered the potential liability of securities issuers and their representatives. Two Supreme Court decisions epitomized this trend. In 1991, *Lampf, Pleva, Lipkind, Prupis & Petigrow v. Gilbertson* shortened the statute of limitations for securities fraud actions.<sup>154</sup> Then in 1994, the Court's ruling in *Central Bank of Denver v. First Interstate Bank of Denver* eliminated certain secondary liability causes of action against defendants for "aiding and abetting" primary violators of securities laws.<sup>155</sup> Beyond these high profile cases, the 1990s witnessed judicial formulation or further development of a number of different doctrines, including the "bespeaks caution" doctrine<sup>156</sup> and the "no fraud by hindsight" doctrine,<sup>157</sup> that curtailed the remedies available to plaintiffs in securities fraud cases.<sup>158</sup>

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<sup>152</sup> See Floyd Norris, *3 Big Accounting Firms Assail S.E.C.'s Proposed Restrictions*, N.Y. TIMES, July 27, 2000, at C9 [hereinafter Norris, *3 Big*], available at LEXIS, News Library, NYT File. Four accounting firms and the SEC under Levitt ultimately agreed to diluted regulations on auditor independence that imposed much milder restrictions on the non-audit services that accounting firms could provide to the clients whose financial statements they audited than were originally proposed. Floyd Norris, *Accounting Firms Accept Rule to Limit Conflicts of Interest*, N.Y. TIMES, Nov. 15, 2000, at A1 [hereinafter Norris, *Accounting Firms*], available at LEXIS, News Library, NYT File.

<sup>153</sup> See Coffee, *supra* note 143, at 1411–12. For Levitt's own account of his efforts to reform accounting practices and auditor independence and the stiff resistance he faced due to the political influence of accounting firms, see ARTHUR LEVITT WITH PAULA DWYER, TAKE ON THE STREET 128–39 (2002) and WESTERN, *supra* note 135, at 103.

<sup>154</sup> 501 U.S. 350, 359–61 (1991). The ruling bars any federal claims not filed by plaintiffs within one year of when they should have known of the alleged violation and in no event later than three years after the alleged violation. *Id.* at 360; Coffee, *supra* note 143, at 1409 & n.29.

<sup>155</sup> 511 U.S. 164, 191 (1994); Coffee, *supra* note 143, at 1409.

<sup>156</sup> See, e.g., *In re Donald J. Trump Casino Sec. Litig.*, 7 F.3d 357, 371 (3d Cir. 1993) ("[C]autionary language [in a prospectus], if sufficient, renders the alleged omissions or misrepresentations immaterial as a matter of law.").

<sup>157</sup> E.g., *DiLeo v. Ernst & Young*, 901 F.2d 624, 627–28 (7th Cir. 1990) ("[P]laintiffs may not proffer the different financial statements and rest. Investors must point to some facts suggesting that the difference is attributable to fraud.").

<sup>158</sup> See Marc I. Steinberg, *Curtailing Investor Protection Under the Securities Laws: Good for the Economy?*, 55 SMU L. REV. 347, 350–51 (2002); Lynn A. Stout, *The Investor Confidence Game*, 68 BROOK. L. REV. 407, 433 (2002). The Supreme Court created additional limitations in the 1990s on the ability of plaintiffs in private securities litigation to obtain relief. In *Gustafson v. Alloyd*, the Supreme Court limited liability under Section 12(a)(2) of the Securities Act to initial sales in connection with a



Finally, not only did the risk of private enforcement abate in the 1990s, but the risk of public enforcement actions brought by the SEC against gatekeepers also dropped, as the SEC changed its enforcement priorities.<sup>159</sup>

The fall of the NASDAQ in 2000 and the subsequent exposure of widespread corporate fraud prompted a dramatic legislative and regulative response, albeit one whose long-term effectiveness is still being hotly debated.<sup>160</sup> The Sarbanes-Oxley Act and the SEC regulations it mandated instituted a broad array of securities law and corporate governance reforms, including:

- requirements that executive officers of public companies certify the accuracy of their company's quarterly and annual SEC filings, and the existence of internal controls to ensure the integrity of company disclosure;<sup>161</sup>
- a mandate that every public company create an audit committee;<sup>162</sup>
- the establishment of the Public Company Accounting Oversight Board to oversee the accounting industry and its auditing of public company financial statements;<sup>163</sup>
- a limit on the services that auditors can perform for the companies whose public financial statements they audit,<sup>164</sup> and
- regulation of the conduct of private securities lawyers in advising

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statutory prospectus and thus precluded liability under that section for ordinary or secondary trading. 513 U.S. 561 (1995); LOUIS LOSS & JOEL SELIGMAN, *SECURITIES REGULATION* 4206–4220 (3d ed. 2004).

<sup>159</sup> Coffee, *supra* note 143, at 1410 & n.33.

<sup>160</sup> For a small sample of the legal scholarship analyzing the Sarbanes-Oxley Act of 2002 and other regulatory reactions to the epidemic of fraud epitomized by the Enron scandal, see generally William W. Bratton, *Enron, Sarbanes-Oxley and Accounting: Rules Versus Principles Versus Rents*, 48 VILL. L. REV. 1023 (2003) (criticizing the post-Enron focus on principle-based accounting standards); Lawrence A. Cunningham, *The Sarbanes-Oxley Yawn: Heavy Rhetoric, Light Reform (and It Just Might Work)*, 35 CONN. L. REV. 915 (2003) (arguing that despite being less profound than advertised, the Sarbanes-Oxley Act's sheer complexity may effect some worthwhile reform); Larry E. Ribstein, *Market vs. Regulatory Responses to Corporate Fraud: A Critique of the Sarbanes-Oxley Act of 2002*, 28 J. CORP. L. 1 (2003) (questioning whether the Sarbanes-Oxley Act will perform better than market forces in preventing fraud); Romano, *supra* note 6; Robert B. Thompson & Hillary A. Sale, *Securities Fraud as Corporate Governance: Reflections upon Federalism*, 56 VAND. L. REV. 859 (2003) (listing the Sarbanes-Oxley Act as the latest evidence of the "federalization of corporate governance"); Jeffrey N. Gordon, *Governance Failures of the Enron Board and the New Information Order of Sarbanes-Oxley* (Columbia Law Sch. Ctr. for Law & Econ. Studies, Working Paper No. 216, 2003), available at <http://papers.ssrn.com/abstract=391363> (criticizing provisions of Sarbanes-Oxley Act that require immediate "price-perfecting" disclosure of material corporate developments).

<sup>161</sup> Sarbanes-Oxley Act of 2002, Pub. L. No. 107-204, § 302, 116 Stat. 745, 777 (codified at 15 U.S.C.S. § 7241 (LEXIS through Pub. L. No. 109-89)); Management's Reports on Internal Control Over Financial Reporting and Certification of Disclosure in Exchange Act Periodic Reports, 68 Fed. Reg. 36,636, 36,637 (June 18, 2003) (codified in scattered sections of 17 C.F.R. (2005)).

<sup>162</sup> Sarbanes-Oxley Act sec. 301, § 10A(m) (codified at 15 U.S.C.S. § 78j-1(m) (LEXIS through Pub. L. No. 109-89)).

<sup>163</sup> *Id.* § 101(a) (codified at 15 U.S.C.S. § 7211(a) (LEXIS through Pub. L. No. 109-89)).

<sup>164</sup> *Id.* sec. 201(a), § 10A(g)–(h) (codified at 15 U.S.C.S. § 78j-1(g)–(h)); Strengthening the Commission's Requirements Regarding Auditor Independence, 68 Fed. Reg. 6,006, 6,010 (Feb. 5, 2003) (codified in scattered sections of 17 C.F.R. (2005)).

public corporations.<sup>165</sup>

The Sarbanes-Oxley Act represented only the first act. New regulations addressing security analyst conflicts of interest were passed by the SEC, the National Association of Securities Dealers and the New York Stock Exchange<sup>166</sup> in the wake of a widely publicized investigation into analyst practices during the 1990s by the New York State Attorney General.<sup>167</sup> SEC enforcement actions and private litigation regarding the Enron scandals also heralded substantial increases in the liability of investment banks, auditors and law firms for the actions of public companies that they advise.<sup>168</sup>

<sup>165</sup> Standards of Professional Conduct for Attorneys, 68 Fed. Reg. 6296 (codified at 17 C.F.R. pt. 205 (2005)).

<sup>166</sup> See 17 C.F.R. § 242.501(a) (2005) (requiring securities analysts to certify that views expressed in research reports reflect personal views of the analyst and to disclose any compensation or payments received for specific recommendations); Order Approving Proposed Rule Changes by the New York Stock Exchange, Inc., 68 Fed. Reg. 45,875 (Aug. 4, 2003) (approving NASD and NYSE rule changes regarding security analyst conflicts of interest).

<sup>167</sup> New York State Attorney General Eliot Spitzer launched a widely publicized investigation into the practices of stock analysts at major Wall Street firms. Spitzer's investigation found substantial evidence of analysts publicly touting the prospects of companies that they privately believed were not worthwhile investments in order to promote their firm's investment banking services to these companies. See John Cassidy, *The Investigation*, NEW YORKER, Apr. 7, 2003, at 54, available at LEXIS, News Library, NEWYRK File; Affidavit of Eric R. Dinallo, *In re Spitzer*, No. 02-401522 (N.Y. Sup. Ct. Apr. 8, 2002), at 3, available at <http://www.oag.state.ny.us/press/2002/apr/MerrillL.pdf>. This investigation culminated in a settlement where, without admitting guilt, Merrill Lynch and other large investment banks agreed to institute a system of firewalls to insulate their securities analysts from influence by their investment banking businesses and to pay multimillion dollar fines. Cassidy, *supra*.

<sup>168</sup> The SEC entered into a settlement agreement with two investment banks that advised Enron on a series of transactions that according to the SEC, "helped Enron mislead its investors by characterizing what were essentially loan proceeds as cash from operating activities." Press Release, SEC, SEC Settles Enforcement Proceedings against J.P. Morgan Chase and Citigroup (July 28, 2003), <http://www.sec.gov/news/press/2003-87.htm>. These banks agreed to pay \$255 million in fines to investors. See *id.* Although neither bank admitted guilt, limiting the precedential value of this settlement, this settlement serves as a warning of the SEC's intention to prosecute advisors of public corporations who help construct transactions designed to mislead investors.

To some extent, judicial "deregulation" also reversed course in the aftermath of the fraud epidemic. For example, a prominent ruling in the Enron litigation has held that secondary actors—including lawyers and accountants—may be held liable as primary participants in securities fraud if plaintiffs can prove these secondary actors had requisite knowledge that misrepresentations authored by these actors would be used to mislead investors. Quoting the SEC's brief, the court stated:

[W]hen a person, acting alone or with others, creates a misrepresentation [on which the investor-plaintiffs relied], the person can be liable as a primary violator . . . if . . . he acts with the requisite scienter. Moreover it would not be necessary for a person to be the initiator of a misrepresentation in order to be a primary violator. Provided that a plaintiff can plead and prove scienter, a person can be a primary violator if he or she writes misrepresentations for inclusion in a document to be given to investors, even if the idea for those misrepresentations came from someone else.

*In re Enron Corp. Sec., Derivative & ERISA Litig.*, 235 F. Supp. 2d 549, 692–93 (S.D. Tex. 2002) (citations omitted) (alterations in original).

This ruling thus sidestepped the Supreme Court's ruling in *Central Bank of Denver v. First Interstate Bank of Denver*, 511 U.S. 164, 191 (1991), that precluded "aiding and abetting" liability under Rule 10b-5 actions. See *supra* note 155 and accompanying text. If a wide number of other courts adopt this reasoning, then the scope of *Central Bank of Denver* would be dramatically limited. For reactions from the securities bar and legal scholars on this case, see Kurt Eichenwald, *A Higher Standard for Corporate Advice*, N.Y. TIMES, Dec. 23, 2002, at A1, available at LEXIS, News Library, NYT File.

#### IV. THE INTERACTION OF BUBBLES AND THE LEGAL REGIME: THREE FEEDBACK CYCLES

The historical survey above reveals a clear correlation between deregulation during the rise of a bubble and sharp political reaction and re-regulation in the aftermath of a bubble. Prominent behavioral finance economists have identified parts of this pattern, but in the words of one of them, “a full model of economics and politics of bubbles remains to be built.”<sup>169</sup> This Part presents a sketch of such a model and describes how laws, regulations and the market for laws and regulations affect and are affected by bubbles. This Part argues that bubbles not only feed off of, but also promote, the deregulation of capital markets and the under-enforcement of existing regulations. Part V analyzes how speculative bubbles also dilute the effectiveness of those securities laws that remain in effect by causing the deterioration of securities law compliance.

In turn, deregulation and deteriorated securities laws improve conditions for both an outbreak of widespread securities fraud and the further inflation of the speculative bubble.<sup>170</sup> Bubbles and regulations are thus locked in a tight, symbiotic relationship. This Part fleshes out this relationship by outlining a model of the interplay of three cycles—the business cycle, the cycle of investor confidence/investor trust and the political economy/regulatory cycle. Part IV.A describes these three cycles. Part IV.B analyzes how these cycles generate positive feedback for each other during the inflation of a stock market bubble. Part IV.C then looks at how the cycles reverse after a bubble collapses. Part IV.D concludes by analyzing how this interaction leads to procyclical regulation, or a perverse pattern of deregulation, as a bubble inflates and the risk of an epidemic of securities fraud rises, and re-regulation only after the epidemic has started, the bubble collapses and investor trust has been damaged.

##### A. *Three Cycles Described*

Of the three cycles mentioned above, the business cycle, or the macroeconomic cycle of growth and recession, is the best known and most studied.<sup>171</sup> The idea of a cycle of investor confidence and investor trust builds upon economic evidence of periodic fluctuations in investor expectations

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<sup>169</sup> SHLEIFER, *supra* note 12, at 174.

<sup>170</sup> For an alternative model of how bubbles are created by social feedback cycles, see Mitchel Y. Abolafia & Martin Kilduff, *Enacting Market Crisis: The Social Construction of a Speculative Bubble*, 33 ADMIN. SCI. Q. 177 (1988) (arguing that bubbles are socially constructed by the interaction of competing self-interest social coalitions, including speculators, brokers, bankers, the media and regulators).

<sup>171</sup> Economic research into the nature of the business cycle has a long history that is unfortunately beyond the scope of this article. For a foundational work in this field, see 1 & 2 JOSEPH A. SCHUMPETER, BUSINESS CYCLES (1939). For an analysis of economic cycles and their impact on the effectiveness of financial regulation, see Charles A.E. Goodhart, *The Historical Pattern of Economic Cycles and Their Interaction with Asset Prices and Financial Regulation*, in ASSET PRICE BUBBLES, *supra* note 13, at 467.

in the level of the economy and of the capital markets. Behavioral finance economists have labeled this phenomenon “investor sentiment” and argued that it creates the natural conditions for bubbles to grow and investors to adopt positive feedback trading.<sup>172</sup> But investor confidence also captures a deeper insight that a functioning market depends on investor trust in the integrity of that market and its institutions.

“Trust” has been the subject of a considerable body of recent legal scholarship,<sup>173</sup> and has been defined as a learned, internalized behavior where one person comes to rely on, have confidence in, and believe in the integrity of, another.<sup>174</sup> Trust reflects a willingness to be vulnerable to possible exploitation by the recipient of that trust because of internalized beliefs, and not merely because of a series of individual rational economic calculations.<sup>175</sup> In the 1990s, political theorists, psychologists, economists and legal scholars all analyzed trust as a form of “social capital” and explored how a lack of widespread trust in society—trust in government, social institutions and civil society—can hamper economic and political development.<sup>176</sup>

Lynn Stout applies this learning on trust to the securities markets, and argues that investor confidence in the fairness of the market and in the trustworthiness of market intermediaries has been dangerously eroded by the recent epidemic of corporate scandals.<sup>177</sup> If investors fear being defrauded by issuers, broker dealers, exchanges or other market intermediaries, or that the investment odds are otherwise rigged, they will no longer invest in the stock market.<sup>178</sup> But, investors can also overly trust the mar-

<sup>172</sup> See SHILLER, *supra* note 12, at 45–52, 60–62. See generally Nicholas Barberis et al., *A Model of Investor Sentiment*, 49 J. FIN. ECON. 307 (1998) (positing a mathematical model to explain the “overreaction” and “underreaction” of investors that leads to bubbles).

<sup>173</sup> See, e.g., Margaret M. Blair & Lynn A. Stout, *Trust, Trustworthiness, and the Behavioral Foundations of Corporate Law*, 149 U. PA. L. REV. 1735 (2000) (exploring how the learned, socially determined nature of trust is reflected in the structure of corporate law); Lawrence A. Mitchell, *Fairness and Trust in Corporate Law*, 43 DUKE L.J. 425 (1993) (arguing that courts and legislatures have jeopardized the integrity of corporate fiduciary law by ignoring the essential role of trust); Eric A. Posner, *Altruism, Status, and Trust in the Law of Gifts and Gratuitous Promises*, 1997 WISC. L. REV. 567, 577–78 (discussing the role of trust in gifts and relational contracts); Carol M. Rose, *Trust in the Mirror of Betrayal*, 75 B.U. L. REV. 531 (1995) (examining the resilience of trust in light of the notion that pure rationality counsels against trusting others).

<sup>174</sup> See generally Blair & Stout, *supra* note 173, at 1745–46.

<sup>175</sup> See *id.* at 1745, 1750–53.

<sup>176</sup> See, e.g., FRANCIS FUKUYAMA, *TRUST: THE SOCIAL VIRTUES AND THE CREATION OF PROSPERITY* 10–11 (1995) (arguing that trust, being necessary for people to work together for common purposes, is essential to American civil society); Karen Cook, *Trust in Society*, in *TRUST IN SOCIETY* xi, xi (Karen S. Cook ed., 2001) (discussing a national decline in trust of everything from prominent professionals to the very idea of a team or family); cf. Peter Brann & Margaret Foddy, *Trust and the Consumption of a Deteriorating Common Resource*, 31 J. CONFLICT RESOL. 615 (1987) (describing a study that examined the relationship between trust and resource consumption).

<sup>177</sup> See Stout, *supra* note 158, at 415–20 (comparing the reactions of a solely-rational investor and a “trusting investor” in light of recent corporate scandals).

<sup>178</sup> See Tamar Frankel, *Regulation and Investors’ Trust in the Securities Markets*, 68 BROOK. L. REV. 439, 443 n.17, 448 (2002) (“[Investors] care about a fair, not necessarily a level, playing field. . . . They are willing to lose fair and square but not to be taken by fraud.”).

ket and place too much confidence in securities issuers, investments, investment advice and market intermediaries. The late 1990s witnessed a multitude of schemes that exploited investors who failed to heed warning signs that getting rich quickly involved a high risk of being defrauded. Investor confidence and investor trust are inextricably linked.<sup>179</sup>

The third cycle, the political/legal/regulatory cycle, describes the pattern of increasing and decreasing levels of regulation according to demand in the political marketplace. Economists, political scientists and legal scholars have long debated and formed elaborate competing theories to explain what causes regulation and, since the 1970s and 1980s, deregulation, with various public choice theories gaining prominence.<sup>180</sup> The narrative below in Parts IV.B–C adopts an ecumenical approach, with regulation waxing and waning according to the changing interests and resources available to various political and economic groups. These interests and resources are greatly affected by economic cycles as described below. One critical factor stands out: larger, more diffuse groups, such as retail investors, encounter greater difficulty in organizing themselves for collective action, and only exert significant pressure on regulators when their interests are severely affected.

#### B. *Rise of a Bubble: Pressure to Deregulate*

The formation of a bubble involves positive feedback among the three cycles. As macroeconomic factors generate both investor wealth and profit opportunities, investor confidence in the market rises. This leads to higher stock prices, and, in turn, greater economic investment. The booming economy and surging investor confidence reinforce investor trust in market institutions. But trusting investors can become overly trusting. Because they would have little reason to question a market that provides consistent high returns to them, investors can fail to notice evidence calling into question the integrity of the market. Investors—because they suffer from behavioral biases and engage in irrational herding,<sup>181</sup> or because they rationally base their investment decisions on the decisions of other investors (a phenomenon known as an information cascade)<sup>182</sup>—observe others placing their trust in

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<sup>179</sup> See Stout, *supra* note 158, at 437.

<sup>180</sup> Economist Sam Peltzman provides one version of a public choice explanation (or what he labels the “economic theory of regulation”) for regulation and deregulation. Sam Peltzman, *The Economic Theory of Regulation After a Decade of Deregulation*, 1989 BROOKINGS PAPERS ON ECON. ACTIVITY: MICROECONOMICS 1. For a critical appraisal of public choice theory, see Mark Kelman, *On Democracy-Bashing: A Skeptical Look at the Theoretical and ‘Empirical’ Practice of the Public Choice Movement*, 74 VA. L. REV. 199 (1998).

<sup>181</sup> See *supra* note 12 and accompanying text (discussing the behavior of “noise traders”).

<sup>182</sup> An information cascade occurs when individuals make decisions in sequence, and, after observing the behavior decisions of those who acted before, it is optimal for an individual to follow that behavior regardless of his or her own information. For two influential articles in the economic literature on information cascades, see Abhijit V. Banerjee, *A Simple Model of Herd Behavior*, 107 Q. J. ECON. 797 (1992); Sushil Bikhchandani et al., *A Theory of Fads, Fashion, Custom, and Cultural*

the market and in market participants, and decide to do the same.

Since trust is a behavioral phenomenon, the behavioral biases that contribute to investor euphoria and the development of a bubble can lead to an excess of trust in the integrity of market participants, just as they can lead to excesses in market prices.<sup>183</sup> The availability bias causes individuals to underestimate the possibility of being defrauded as memories of previous epidemics of fraud and corporate scandals fade with time and rising stock prices.<sup>184</sup> Investors' overoptimism and overconfidence in their own investing abilities may mean that they discount the probability of being defrauded and overestimate their ability to detect fraud.<sup>185</sup> Similarly, the phenomena of framing, belief perseverance, and anchoring contribute to the suggestibility of investors and to their reluctance to change their opinions on the trustworthiness of the market.<sup>186</sup> Excessive trust in the integrity of the market explains why the history of bubbles is to a large extent the history of massive financial fraud.

The cycle of investor trust is mirrored by the regulatory cycle. As noted in Part III, market booms and bubbles coincide with periods of laissez-faire economic policy and financial and securities deregulation. Looser regulation may free up capital and spur economic growth. Some economists believe that a shift in government regulations or expectations of such a shift may trigger speculative bubbles.<sup>187</sup> But financial booms also affect the market for regulations; booms and bubbles generate feedback for the political economy, just as they do for the financial economy. Economic actors, particularly securities issuers and the financial industry, that stand to reap enormous gains from booms, push for deregulation of capital markets.<sup>188</sup> Booming capital markets then give these actors greater cash resources and incentives to push for more deregulation.<sup>189</sup>

As the capsule histories in Part III document, these economic interests influence government officials through a multitude of channels, ranging from outright corruption and cooptation to the modern practice of cam-

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*Change as Informational Cascades*, 100 J. POL. ECON. 992 (1992).

<sup>183</sup> See *supra* Part II. For a more detailed discussion of the ways in which behavioral biases contribute to the development of bubbles, see De Bondt, *supra* note 13, at 205–16.

<sup>184</sup> *Supra* notes 33–34 and accompanying text. See generally John C. Coffee, Jr., *What Caused Enron? A Capsule Social and Economic History of the 1990s* (Columbia Law Sch. Ctr. for Law and Econ. Studies, Working Paper No. 214, 2003), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=373581](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=373581).

<sup>185</sup> See *supra* notes 31–32 and accompanying text.

<sup>186</sup> See *supra* notes 35–38 and accompanying text.

<sup>187</sup> See generally ROBERT D. FLOOD & PETER M. GARBER, *SPECULATIVE BUBBLES, SPECULATIVE ATTACKS, AND POLICY SWITCHING* (1994) (discussing the effects of changing policy on price bubbles).

<sup>188</sup> See LOWENSTEIN, *supra* note 9, at 82–84 (discussing the financial industry's pressure on Congress to deregulate in response to the boom of the 1990s).

<sup>189</sup> See *id.* at 97 (explaining that the prosperity of Citigroup was made possible by the repeal of the Glass-Steagall Act).

paign contributions. Boom times translate into more employment opportunities for bureaucrats in the private sector and thus the revolving door spins faster. Regulators, of course, have less incentive to threaten potential future employers. The economic interests arrayed against securities and financial deregulation are few (unless deregulation would tear down barriers to entry that protect weaker firms in regulated industries) and thus regulators face little political pressure to resist deregulation.<sup>190</sup>

Yet regulators face other, less sinister pressures to acquiesce to deregulation, as a booming economy delights constituents. Therefore, once a bubble has formed, regulators face enormous pressure to refrain from pricking it for fear of upsetting the economic applecart.<sup>191</sup> Behavioral biases also afflict regulators and policymakers.<sup>192</sup> The availability bias means that, as time passes since the last financial crisis, regulators and policymakers discount the potential for new crises and the need for regulations to avert those crises. This creates a condition that scholars of international financial crises have labeled “disaster myopia.”<sup>193</sup> Regulators and policymakers may also excessively and subconsciously discount the expected future costs of a burst bubble.<sup>194</sup> Moreover, the election cycle means that the costs may be realized on another politician’s watch.

### C. *After the Bubble: The Regulatory Impulse*

At the bursting of a bubble, these three cycles reverse drastically; the business, the investor confidence/investor trust and the regulatory cycles generate negative feedback that reinforces the reversal of the other cycles. First, the stock market in free fall can devastate investor confidence in the stock market. Moreover, the implosion of a bubble, especially when combined with revelations of massive fraud, can decimate investor confidence in the integrity of the market and its institutions.<sup>195</sup>

The sharp drops in the stock prices and investor confidence can have dire spillover effects for the economy as a whole, and even infect the international economy.<sup>196</sup> In particular, the potential fallout of a bubble burst-

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<sup>190</sup> Geoffrey Miller provides an account of how these various political disincentives prevented the Japanese Central Bank from acting against the bubble that gripped that nation’s real estate and capital markets at the end of the 1980s. *See generally* Miller, *supra* note 142.

<sup>191</sup> *Id.* at 1055.

<sup>192</sup> *See* Stephen J. Choi & A.C. Pritchard, *Behavioral Economics and the SEC*, 56 STAN. L. REV. 1, 21–35 (2003) (cataloging behavioral biases afflicting the Securities and Exchange Commission).

<sup>193</sup> Jack M. Guttentag & Richard J. Herring, DISASTER MYOPIA IN INTERNATIONAL BANKING 3–4 (1986).

<sup>194</sup> This stems from a behavioral bias known as “hyperbolic discounting.” *See* Jolls et al., *supra* note 30, at 1539 (citing David Laibson, *Golden Eggs and Hyperbolic Discounting*, 112 Q. J. ECON. 443, 445–46 (1997)).

<sup>195</sup> *See* Stout, *supra* note 158, at 411–12.

<sup>196</sup> The epidemic metaphor often used to describe bubbles, contagion, reappears in the label for this phenomenon. Kindleberger gives examples of both domestic and international contagion following

ing can lead to a severe credit crunch.<sup>197</sup> The drop in share prices can force banks to call loans collateralized by stock, creating the potential for cascading credit problems.<sup>198</sup> Plummeting investor confidence affects consumer confidence, and, at times, confidence in the integrity of banks and the financial system as a whole, which can lead to runs on banks and general financial panic.<sup>199</sup> This is of course only the crudest summary of the macroeconomic effects of a burst bubble; the economic and legal literature exploring the pathways and probabilities of bubbles leading to economic contagion is voluminous.<sup>200</sup>

The collapse of a bubble also has a violent effect on the regulatory cycle, by generating a strong political reaction against speculation. Similarly, the fraud that often accompanies bubbles creates a public demand for new laws and regulations to punish malfeasance in the market. In fact, one scholar attributes most of the major developments in securities laws over the last three centuries to responses to collapsed bubbles, stock crashes and related financial crises.<sup>201</sup>

#### D. *The Result of the Three Cycles: Pro-cyclical Regulation*

These three interrelated cycles combine to create an irrational pattern of rising investor confidence when caution should prevail, and a dearth of investor confidence or even investor panic, when stocks prices have fallen to more reasonable levels and the regulatory police have already been alerted. The regulatory cycle follows a similarly perverse pattern, with less regulation at a moment of irrationality in the market and greater probability of fraud, and a sharp regulatory reaction after the damage has already been done.<sup>202</sup> There is a strong possibility that a delayed regulatory reaction could prove to be somewhat unnecessary, as the conditions that created the bubble and sapped investor confidence—particularly fraud—have already dissipated.<sup>203</sup> The market, in an apparently grossly inefficient manner, has corrected for the lack of appropriate regulatory safeguards and chastened

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the collapse of a bubble. See KINDLEBERGER, *supra* note 49, at 109–16 (discussing domestic contagion); *id.* at 117–37 (discussing international contagion).

<sup>197</sup> *Id.* at 96–97.

<sup>198</sup> See *id.* at 66–67 (describing the increase in loan calls and the “paralyz[ation]” of the credit system during the 1929 stock market crash).

<sup>199</sup> See *id.* at 105–07.

<sup>200</sup> For a collection of other articles analyzing the connection between bubbles and domestic and international financial crises, see generally ASSET PRICE BUBBLES, *supra* note 13.

<sup>201</sup> Banner, *supra* note 14, at 850.

<sup>202</sup> For an analysis of financial regulation becoming less stringent as a bubble develops and more stringent after a bubble bursts, see generally Frankel, *supra* note 178. Frankel argues that this pattern results from cycles in investor confidence in the capital markets, which in turn affect investor demand for regulation. See *id.* at 440–44. Investor demand for regulation coincides to a large degree with demand for regulation by financial institutions that want to build investor confidence in capital markets. *Id.* at 441–42.

<sup>203</sup> See *id.* at 443 (suggesting that investor confidence is directly related to shifts in stock prices).



malfeasant corporations and overly trusting investors alike.<sup>204</sup> Chastened investors remain wary of being defrauded again, and chastened issuers and market intermediaries bid to restore investor confidence.<sup>205</sup>

Commentators further argue that post-bubble regulations chill business activity and dampen capital formation at a moment when the economy is already reeling. For example, it has been argued that the Bubble Act and Sir John Barnard's Act together stifled capital formation and the development of corporate law in England for a century after the South Sea Bubble.<sup>206</sup> Similarly, the collapse of the Mississippi Bubble in France has been blamed for retarding efforts to reform French finances during the following sixty years.<sup>207</sup> These concerns echo in the rhetoric of current backlash against the Sarbanes-Oxley Act.<sup>208</sup> But, paradoxically, these regulations would be extremely difficult to remove initially due to strong public reaction against the bubble and the last epidemic of fraud.

Potentially overly obtrusive regulations not only irritate the economist's sensibility, they also sow the seeds for the cycles to repeat. When boom times return, a financial industry burdened with a multitude of regulations can make a politically persuasive argument that burdensome regulations are outdated. Memories of the last cycle—bubble and fraud—fade, and the availability bias helps to make regulation seem less appealing.

This pattern leads to what economists have termed procyclical regulation: regulations that “do not bite in booms at all, but tighten significantly during recessions.”<sup>209</sup> Procyclicality leads to regulations that are under-effective and then potentially over-effective.<sup>210</sup> Moreover, procyclicality potentially exacerbates the severity of the business cycle.<sup>211</sup> This procyclicality is worsened, because as Part V argues, bubbles not only lead to a rollback of laws, they also dilute the effectiveness of surviving laws by causing a deterioration in securities law compliance.

## V. BUBBLES AND THE DETERIORATION OF SECURITIES LAW COMPLIANCE

The deregulation spurred by the rise of a bubble described in Part IV is of course not total. Nevertheless, the rise of a bubble causes the decay of even those regulations that are unaffected by deregulation. This Part analyzes how compliance with securities laws deteriorates during the rise of a bubble, because the dynamics of a bubble, particularly the mass perception

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<sup>204</sup> *Cf. id.* at 446–48 (critiquing the market's ability to sustain investor participation following a breach of confidence).

<sup>205</sup> *Id.* at 443–44.

<sup>206</sup> CHANCELLOR, *supra* note 8, at 90.

<sup>207</sup> SHLEIFER, *supra* note 12, at 171.

<sup>208</sup> See *supra* notes 3–6 and accompanying text.

<sup>209</sup> Goodhart, *supra* note 171, at 474.

<sup>210</sup> *Id.* at 476.

<sup>211</sup> *Id.* at 474.

that stock prices will continue to rise, erodes the deterrence value of anti-fraud rules. Bubbles thus skew the calculus of compliance for both securities issuers and market intermediaries.

Part V.A presents a model of the deterrence theory of antifraud provisions in the securities laws. Several scholars, notably John Coffee, have argued that the deregulation of the 1990s undermined the deterrence effect of antifraud rules and thus was a driver of the recent epidemic of fraud.<sup>212</sup> But Part V.B takes a closer look at data on financial restatements—a rough proxy for the occurrence of securities fraud—and concludes that deregulation alone cannot explain the epidemic of fraud. A comparison of the incidence of financial restatements in the 1990s with stock market indices implies that the “irrational exuberance” of the stock market played a strong role in the outbreak of fraud.<sup>213</sup>

Part V.C then sets out a theory of how bubbles cause the deterioration of securities law compliance by issuers and market intermediaries. This theory details the modes in which the dynamics of a bubble erode the deterrent value of securities laws by changing the rational and extra-rational calculus of compliance for issuers and market intermediaries. Part V.C concludes by demonstrating that even those market participants who seek to comply with the law are frustrated by rising information and agency costs during a bubble.

Together, Parts IV and V seek to demonstrate that, by promoting deregulation of financial markets and undermining securities law compliance, the inflation of a bubble promotes securities fraud. But, before launching into the analysis, this basic argument should be placed in context. This argument focuses essentially on the supply side of fraud, i.e., the incentives of securities issuers, market intermediaries and other market participants to engage in securities fraud. Bubbles also promote the demand side of fraud, and much of the economic literature focuses on this aspect.<sup>214</sup> As Part II shows, behavioral finance economists have shown how bubbles inflate due to the speculative investing of unsophisticated, irrational investors. Over-optimism, overconfidence and a host of other behavioral biases make these noise traders attractive targets for the unscrupulous.<sup>215</sup> Behavioral biases cause investors to ignore warning signs of fraud and thus make the vast disclosure system of federal securities laws less effective. Bubbles thus

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<sup>212</sup> See, e.g., Coffee, *supra* note 143, at 1414 (describing how the elimination of the six-month holding period for exercised options enabled executives to “bail out” of an impending stock decline); Coffee, *supra* note 184, at 10 (similar).

<sup>213</sup> See SHILLER, *supra* note 12, at xii.

<sup>214</sup> According to one of the most influential economists on bubbles, Charles Kindleberger, fraud during bubbles is “demand determined” and results from the prevalence of foolhardy investors. KINDLEBERGER, *supra* note 49, at 76.

<sup>215</sup> See *supra* notes 30–38 and accompanying text.

decay the disclosure rules of federal securities law as well.<sup>216</sup>

But, securities disclosure is never rendered useless and the demand side explanation of fraud is incomplete. While investors may be less wary of fraud, no investor buys into an obviously fraudulent scheme and consents to being defrauded. Nevertheless, economic research demonstrates that the behavioral biases of noise traders are particularly robust, such that an array of policies designed to dampen the noise trading that creates bubbles have proven ineffective.<sup>217</sup> Therefore, this Article focuses on the “suppliers” of fraud, who likely would prove to be more susceptible to different incentive structures.

### A. *Deregulation and Deterrence Theory*

Several scholars have presented theories that the epidemic of fraud that followed the collapse of the technology stock bubble in 2001 stemmed from the deregulation of the securities industry (detailed in Part III.B). Most notably, John Coffee has argued that Enron and similar scandals resulted from the failure of legal deterrence to prevent gatekeepers, particularly Enron’s auditors, from acquiescing to Enron’s fraud.<sup>218</sup> Coffee’s research builds upon a long line of legal scholarship on the role of gatekeepers—intermediaries, such as auditors, stock analysts, underwriters, lawyers, and rating agencies, that lend their reputation to securities issuers and allow issuers to access capital markets—in policing those markets.<sup>219</sup> Coffee

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<sup>216</sup> Coffee, *supra* note 143, at 1409–10; Coffee, *supra* note 184, at 25.

<sup>217</sup> See *supra* note 44 and accompanying text.

<sup>218</sup> Coffee, *supra* note 143, at 1403–05, 1409–10; Coffee, *supra* note 184, at 14–21.

<sup>219</sup> For seminal works on the role of gatekeepers in policing the securities markets, see generally Stephen Choi, *Market Lessons for Gatekeepers*, 92 NW. U. L. REV. 916 (1998); Gilson & Kraakman, *supra* note 39; Victor P. Goldberg, *Accountable Accountants: Is Third-Party Liability Necessary?*, 17 J. LEGAL STUD. 295 (1988); Reinier H. Kraakman, *Corporate Liability Strategies and the Costs of Legal Controls*, 93 YALE L.J. 857 (1984) [hereinafter Kraakman, *Corporate*]; Reinier H. Kraakman, *Gatekeepers: The Anatomy of a Third-Party Enforcement Strategy*, 2 J. L. ECON. & ORG. 53 (1986) [hereinafter Kraakman, *Gatekeepers*].

Over two decades of research, scholars have employed two definitions of gatekeepers. The first definition focuses on the *certification* role of gatekeepers. This definition views gatekeepers as “reputational intermediaries who provide verification and certification services to investors.” Coffee, *supra* note 143, at 1405. For other scholarship that employs this definition, see, for example, Choi, *supra*, at 918. Under the second definition, gatekeepers *restrict access* to the market by securities issuers who do not conform to legal (and market) standards, and the gatekeeper stakes its reputation on those firms who are granted access. See Kraakman, *Gatekeepers*, *supra*, at 53 (defining gatekeepers as “private parties who are able to disrupt misconduct by withholding their cooperation from wrongdoers”).

Coffee is not alone in examining the failure of gatekeepers to police recent securities fraud. For other recent works, see, for example, Stephen J. Choi & Jill E. Fisch, *How to Fix Wall Street: A Voucher Financing Proposal for Securities Intermediaries*, 113 YALE L.J. 269 (2003); Jill E. Fisch & Kenneth M. Rosen, *Is There a Role for Lawyers in Preventing Future Enrons?*, 48 VILL. L. REV. 1097 (2003); Jill E. Fisch & Hillary A. Sale, *The Securities Analyst as Agent: Rethinking the Regulation of Analysts*, 88 IOWA L. REV. 1035 (2003); Assaf Hamdani, *Assessing Gatekeeper Liability*, 77 S. CAL. L. REV. 53 (2003); Frank Partnoy, *Barbarians at the Gatekeepers?: A Proposal for a Modified Strict Liability Regime*, 79 WASH. U. L.Q. 491 (2001).

argues that the failure of deterrence stemmed from two dynamics of the 1990s: gatekeepers suffering from conflicts of interest that misaligned their incentives,<sup>220</sup> and lower legal liability.<sup>221</sup>

The second part of Coffee's deterrence theory argues that acquiescence in corporate fraud became more attractive because a decade of deregulation lowered the legal liability of gatekeepers. As described above in Part III.B, federal securities reform laws, Supreme Court rulings, judicial doctrines, and changing SEC enforcement priorities dramatically lowered the liability of gatekeepers (and securities issuers and their officers and directors) from securities fraud litigation. Again, this lowering of liability was no accident; gatekeepers were an active force in pushing for these judicial and legislative reforms.<sup>222</sup>

This theory meshes with the historical correlation between deregulation and epidemics of fraud during the rise of a bubble demonstrated in Part III.A. It also builds on a long line of scholarship on the deterrence mechanisms of securities law in general.<sup>223</sup> Were an economist to model the deterrence theory that undergirds the antifraud rules of the securities law, the decision by a securities issuer or a market intermediary (such as a gatekeeper) on whether to commit fraud would look something like  $B < > P_d * ((P_e * L_i) + L_r)$ , where  $B$  represents the benefits to be realized from committing fraud,  $P_d$  represents the probability of the fraud being detected,  $P_e$  represents the probability of the securities laws being successfully en-

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<sup>220</sup> The competition for realizing more revenue from corporations compromised the role of gatekeepers to police their clients. Coffee, *supra* note 143, at 1414. The much-analyzed conflicts of interest in the 1990s were legion and included audit companies selling, and, ultimately, realizing most of their revenue from, non-audit services to public companies, such as consulting services, *id.* at 1415, stock analysts in investment banking firms coming under internal pressure to deliver positive ratings for companies from whom their firms were soliciting investment banking business, *id.* at 1407, and outside law firms taking equity stakes in their clients. See also John S. Dzienkowski & Robert J. Peroni, *The Decline in Lawyer Independence: Lawyer Equity Investments in Clients*, 81 TEX. L. REV. 405 (2002).

In each case, gatekeepers saw their interests become aligned more with pleasing their corporate clients and seeing stock prices rise, and less in serving their traditional role as an independent watchdog; any potential reputational losses from acquiescing to client misdeed were dwarfed by the potential business gains to gatekeepers.

This logic of misaligned incentives also explains the failure of corporate governance in the 1990s. Because executives and directors received increasing amounts of compensation through stock and stock options, they became obsessed with increasing short-term share prices to the detriment of their fiduciary roles. Coffee, *supra* note 143, at 1413–14. Thus the incentives of the “internal gatekeepers” of companies became just as corrupted as the external gatekeepers. *Id.* at 1414.

<sup>221</sup> *Id.* at 1409–10.

<sup>222</sup> See *supra* note 188 and accompanying text.

<sup>223</sup> Scholarship on deterrence theory grows out of the seminal analysis of Nobel laureate Gary Becker. See generally Gary S. Becker, *Crime and Punishment: An Economic Approach*, in ESSAYS IN THE ECONOMICS OF CRIME AND PUNISHMENT 1 (Gary S. Becker & William M. Landes eds., 1974). For an analysis of deterrence theory and the Sarbanes-Oxley Act, see Michael A. Perino, *Enron's Legislative Aftermath: Some Reflections on the Deterrence Aspects of the Sarbanes-Oxley Act of 2002* (Columbia Law Sch. Ctr. for Law and Econ. Studies, Working Paper No. 212, 2002), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=350540](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=350540).

forced,  $L_l$  represents legal liability under the securities laws, and  $L_r$  represents market, reputational and other non-legal losses.

Rational actors contemplating violating the law will do so if the benefits,  $B$ , outweigh the expected liability. Expected liability is initially contingent on the probability of fraud being detected and attributed to the actor,  $P_d$ . Expected legal liability (assuming fraud is detected) equals the legal liability under the securities laws,  $L_l$ , multiplied by the probability that a legal case will be successfully prosecuted either by the government or by private plaintiffs,  $P_e$ . The final variable,  $L_r$ , reflects the other non-legal costs that a committer of fraud would incur if the fraud is detected, regardless of the outcome of any legal claims. These costs include stock market losses and reputational loss (which is particularly important for gatekeepers, but also for issuers whose credibility in the marketplace with stock analysts and investors is prized).

Coffee's theories of misaligned incentives and under-deterrence due to deregulation focuses on the benefits received from fraud,  $B$ , and the legal liability under the securities laws,  $L_l$ . The misaligned incentives theory shows how gatekeepers had more to gain from participating or acquiescing in fraud and how deregulation lowered the value of legal liability.<sup>224</sup> But these are not the only factors at work. Part V.C discusses how the dynamics of a bubble affected the other variables in the equation and caused deterioration in compliance with securities laws.

#### B. *Data on the Timing of Fraud: Deregulation as an Incomplete Explanation*

Although Coffee's deterrence theory based on deregulation provides an extremely compelling and useful explanation that has captured the attention of policymakers, it does not fully capture the causes of the epidemic of fraud. Coffee's deterrence/deregulation theory raises two questions. First, why, when the factors behind this theory—greater conflicts of interest of gatekeepers and deregulation—occurred throughout the 1990s, did the epidemic of fraud appear only at the end of the decade? Second, was the epidemic of fraud in the 1990s really a phenomenon unique to the decade? The answers to both questions strongly suggest that another factor played a major role in driving the epidemic.

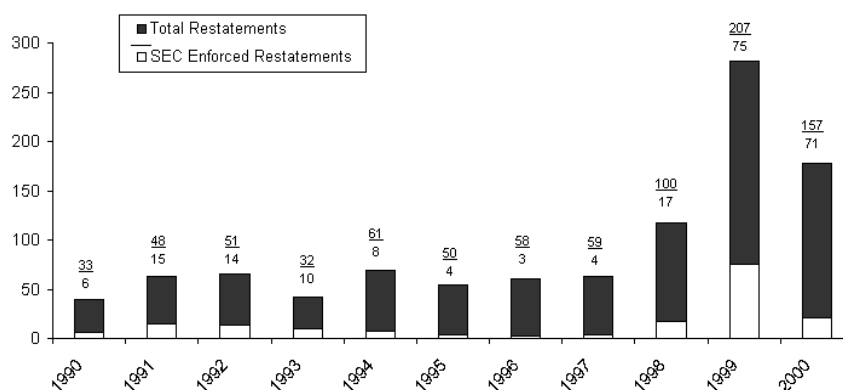
With respect to the first question, deregulation and the proliferation of conflicts of interest progressed steadily and incrementally throughout the decade.<sup>225</sup> A reasonable assumption would be that gatekeeper acquies-

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<sup>224</sup> See Coffee, *supra* note 143, at 1414–15.

<sup>225</sup> One measure of growing conflicts of interest is the increasing percentage of auditor revenue derived from non-audit services. See Coffee, *supra* note 184, at 14. Two studies that together tracked this percentage for major accounting firms in the years 1990, 1994–1996 and 1999 show a steady increase in the percentage of auditor revenue derived from non-audit services over the decade. The Panel on Audit

cence and the incidence of corporate fraud would also rise steadily and incrementally. But this does not appear to be the case. Instead, corporate fraud appears to have reached epidemic proportions only in the last years of the decade.<sup>226</sup> Financial restatements by corporations serve as a bellwether for the presence of fraud; restatements send a dire message to Wall Street about the integrity of a company's accounting and securities disclosure, and stock prices react swiftly and harshly. As Coffee notes, a number of studies of restatements during the 1990s show a sharp spike occurring at the end of the decade.<sup>227</sup> Figure 1 shows the incidence of companies restating their earnings and companies restating their financial statements as a whole from 1990 to 2000.



**Figure 1**  
Number of Restatements, 1990–2000<sup>228</sup>

The end of the decade witnessed not only a sharp rise in the number of earnings and financial restatements, but in the severity of these restatements, as witnessed by stock price losses that occurred immediately

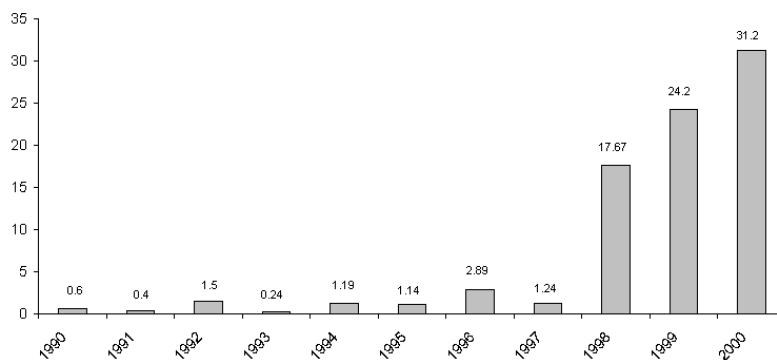
Effectiveness, Report and Recommendations 112 (2000), available at <http://www.pobauditpanel.org/download.html> (breaking down the percentage of revenue for the Big 5 accounting firms among “accounting and auditing,” “tax” and “consulting” services for the years 1990 and 1999); Andrew Crockett et al., Conflicts of Interest in the Financial Services Industry 33 (2003) (breaking down the percentage of revenue for the Big 6 accounting firms among “auditing and accounting,” “management advisory” and “tax” services for each of years 1994, 1995 and 1996). The author is not aware of any study showing the conflicts of interest for other gatekeepers spiked at any point during the decade.

<sup>226</sup> See Coffee, *supra* note 184, at 17 (showing that the number of earnings restatements by publicly held corporations skyrocketed between 1998 and 2000).

<sup>227</sup> *Id.* at 16–18.

<sup>228</sup> George B. Moriarty & Philip B. Livingston, *Quantitative Measures of the Quality of Financial Reporting*, 17 FIN. EXEC., July/Aug. 2001, at 54–55 (2001). This data was also used by Coffee, *supra* note 184, at 17 & n.27.

after the announcement of a restatement. These losses for earnings and financial restatements are depicted in Figure 2.



**Figure 2**

Market Value of Losses due to Restatements, 1990–2000 (in billions of dollars)<sup>229</sup>

This sharp spike in restatements at the end of the decade strongly suggests that another factor came into play in the late 1990s to drive the epidemic of fraud.

This paper posits that the most likely candidate is the irrational investor behavior (what Alan Greenspan deemed “irrational exuberance”)<sup>230</sup> that propelled the stock market in the late 1990s. Robert Shiller cites the historically unprecedented spike in the price to earnings ratio of the U.S. stock market from 1997 to 2000 as one measure of this exuberance (and one sign that a stock market bubble had formed).<sup>231</sup> Figure 3 displays the price/earnings ratio from 1990 to 2000 calculated, using Shiller’s data, by dividing the S&P Composite index (corrected for inflation) by the ten-year moving average real earnings on that index.

This price earnings trend strongly correlates with the trends in earnings restatements over this same decade described above. Comparing this price/earnings data to the total number of restatements from 1990 to 2000 yields a correlation coefficient of 0.898527.<sup>232</sup> Of course, the old maxim

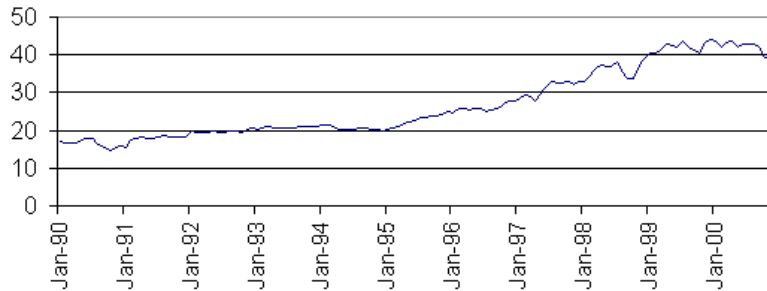
<sup>229</sup> Moriarty & Livingston, *supra* note 228, at 55.

<sup>230</sup> SHILLER, *supra* note 12, at 3–4.

<sup>231</sup> *Id.* at 7–8.

<sup>232</sup> The correlation coefficient that comparing this price/earnings data to the total market value of losses due to restatements is even higher at 0.909787. But one would expect a higher correlation in this number because rising stock prices would be reflected in both price/earnings data and the market value of losses due to restatements. Both of these coefficients reflect the correlation of (i) the average of Shiller’s twelve monthly price to earnings ratio data points for each year (as described *supra* note 234) and (ii) the annual numbers on restatements (*supra* note 228).

that correlation doesn't imply causation applies, but the data lends strong support to a conclusion that a skyrocketing stock market propelled by investor exuberance was a key driver of securities fraud.<sup>233</sup>



**Figure 3**

Price to Earnings Ratio, S&P Composite Index, 1990–2000<sup>234</sup>

This conclusion becomes stronger when one also considers the historical parallels between this wave of fraud and the outbreaks of massive fraud during previous financial bubbles described in Part III.A. The second question, whether the fraud of the late 1990s was a unique historical occurrence, must clearly be answered no. Of course, it may ultimately prove impossible to cleanly separate the effects of deregulation, conflicts of interest and an irrational stock market and then test for the relative impact of each on the level of securities malfeasance. Indeed, as Part IV argues, deregulation, corruption and stock market bubbles are tightly connected, with each dynamic reinforcing the others. But the spike of restatements at the end of the decade and the historical correlation of frauds and bubbles support a further examination of the ways in which bubbles may undermine

<sup>233</sup> Others have offered alternative theories of causation for the rise in restatements in 1998. For example, Moriarty and Livingston attribute the spike in restatements in 1998 to changing SEC enforcement priorities due to then SEC Chairman Levitt's campaign against earnings management abuses. Moriarty & Livingston, *supra* note 228, at 56. But the timing of the SEC's earnings management crusade does not fully support this theory. The SEC first began its efforts to combat earnings management in 1998, the year that Levitt gave his influential speech on the topic. *Id.*; see Arthur Levitt, Chairman, SEC, The Numbers Game, Remarks at the NYU Center for Law and Business (Sept. 28, 1998) (transcript available at <http://www.sec.gov/news/speech/speecharchive/1998/spch220.txt>). Since restatements are by nature retrospective, one would expect that, if the SEC efforts were the primary driver of restatements (and by extension the revelation of fraud) then the years affected by restatements would have dramatically increased *before* 1998.

<sup>234</sup> See *id.* at 6. For an explanation of Shiller's sources and methodology in making the calculations for price/earnings ratios, see *id.* at 257 n.2. Shiller's data on price/earnings ratio and other stock market metrics from 1990 to 2000 is available at [http://www.irrationalexuberance.com/ie\\_data.xls](http://www.irrationalexuberance.com/ie_data.xls) (last visited Oct. 26, 2005).



compliance with securities laws, even apart from deregulation.

### C. *How Bubbles Undermine Securities Regulations*

The rising stock prices and mass psychology of bubbles cause the deterioration of compliance by securities issuers and market intermediaries with securities laws in three ways. First, bubbles alter the rational calculus of compliance with securities laws, such that securities issuers and market intermediaries, such as gatekeepers, are under-deterred by antifraud rules. Second, bubbles exacerbate the behavioral biases of issuers and intermediaries, causing them to over-discount their expected liability under the securities laws. Finally, bubbles raise the costs of compliance with securities laws for market participants by increasing agency and information costs. Each of these three modes is analyzed in more detail below.

#### 1. *The Rational Calculus of Securities Law Compliance*

Bubbles radically change the calculus of compliance with securities laws for issuers, their directors and officers, and market intermediaries, such as gatekeepers. Reconsider the rough cost-benefit model for securities law compliance outlined in Part V.A:  $B < > P_d * ((P_e * L_l) + L_r)$ . On one side of the equation, bubbles cause the benefits of committing (or acquiescing in) fraud to dramatically increase and the expected liability to dramatically decrease. With soaring stock prices come soaring benefits to those market participants that hold stock. For company insiders the benefits are clear. But Coffee's misaligned incentives theory also explains how soaring benefits to insiders translates into changed gatekeeper behavior.<sup>235</sup> More directly, gatekeepers that own company stock or law firms with equity stakes in their clients have a clear interest in seeing that stock rise in value. In addition, all gatekeepers indirectly benefit from stock price increases as a booming stock market usually increases "deal flow," which leads to more transaction-based fees for gatekeepers.<sup>236</sup> All of these increased benefits from higher stock prices are enjoyed in the near term, as compared to potential liability, which, as discussed below, is incurred further in the future.

On the other side of the equation, bubbles cause securities issuers and market intermediaries to rationally discount their liability under securities laws, particularly under the antifraud regime. Steadily rising stock prices translate into a lower probability of fraud being detected or prosecuted. A market-wide rising tide of stock prices can lift the prices of even underperforming companies and submerge all but the clearest signs of fraud in individual companies. Moreover, rising prices eliminate the legal basis for

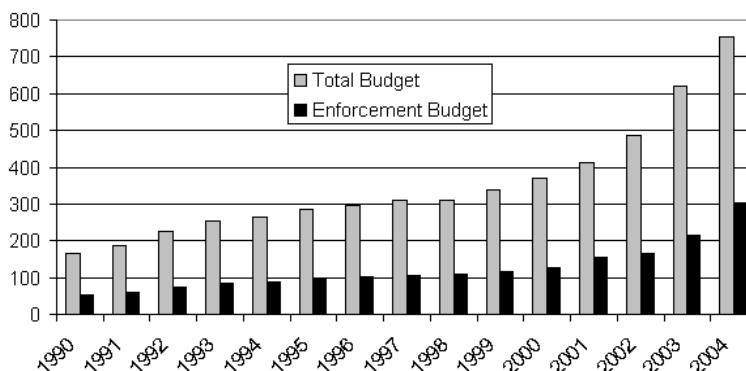
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<sup>235</sup> See *supra* note 220 and accompanying text.

<sup>236</sup> See Christine Hurt, *Moral Hazard and the Initial Public Offering*, 26 CARDOZO L. REV. 711, 719 (2005).

securities fraud actions. If prices rise continuously, investors would have difficulty proving damages, let alone meeting the anterior requirements of materiality and reliance/causation—both of which generally require a stock price drop.<sup>237</sup>

The increased volume of securities transactions during a bubble taxes the resources of the SEC and makes detection of fraud by government authorities less likely. Throughout the 1990s, the overall budget of the SEC and the agency's enforcement budget did rise; indeed it rose even more sharply in the late 1990s as the market heated. Figure 4 shows the SEC overall budget, and its budget for enforcement activities between 1990 and 2004.



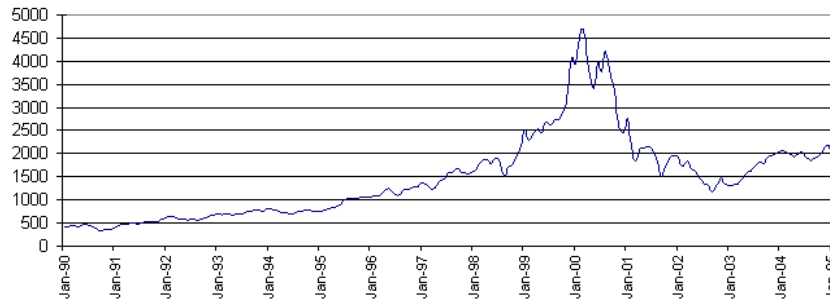
**Figure 4**

SEC Overall and Enforcement Budgets, 1990–2004 (in millions of dollars)<sup>238</sup>

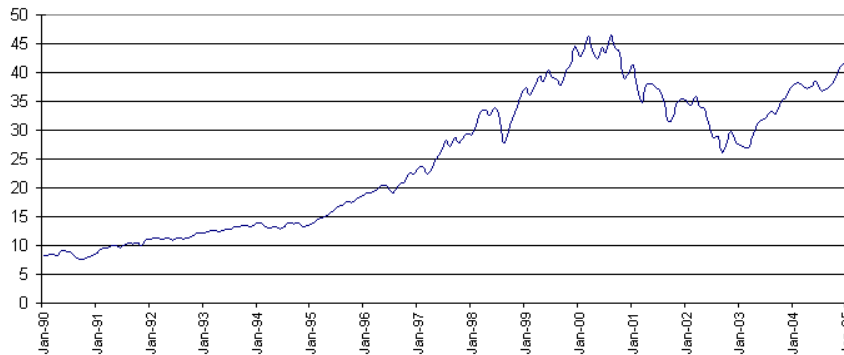
<sup>237</sup> The Supreme Court's decision in *Basic Inc. v. Levinson*, 485 U.S. 224, 244–45 (1998), established how materiality and reliance (in this case, through the “fraud-on-the-market” theory) can be proven as a preliminary matter through stock price declines.

<sup>238</sup> Data on the SEC's overall budget is taken from SEC, SEC Budget History vs. Actual Expenses, available at <http://www.sec.gov/foia/docs/budgetact.htm> (last modified Mar. 3, 2005). Data on the SEC's enforcement budget is taken from the “Prevention and Suppression of Fraud” line in the federal budget compendia for the fifteen federal fiscal years from 1990 to 2004. OFFICE OF MANAGEMENT AND BUDGET, BUDGET OF THE UNITED STATES GOVERNMENT, FISCAL YEAR 1992, at 1177 (1991); OFFICE OF MANAGEMENT AND BUDGET, BUDGET OF THE UNITED STATES GOVERNMENT, FISCAL YEAR 1993, at 1031 (1992); OFFICE OF MANAGEMENT AND BUDGET, BUDGET OF THE UNITED STATES GOVERNMENT, FISCAL YEAR 1994, at 1140 (1993); OFFICE OF MANAGEMENT AND BUDGET, BUDGET OF THE UNITED STATES GOVERNMENT APPENDIX, FISCAL YEAR 1995, at 961 (1994); OFFICE OF MANAGEMENT AND BUDGET APPENDIX: BUDGET OF THE UNITED STATES GOVERNMENT, FISCAL YEAR 1996, at 1054 (1995); OFFICE OF MANAGEMENT AND BUDGET, APPENDIX: BUDGET OF THE UNITED STATES GOVERNMENT, FISCAL YEAR 1997, at 1051 (1996); OFFICE OF MANAGEMENT AND BUDGET, APPENDIX: BUDGET OF THE UNITED STATES GOVERNMENT, FISCAL YEAR 1998, at 1112 (1997); OFFICE OF MANAGEMENT AND BUDGET, APPENDIX: BUDGET OF THE UNITED STATES GOVERNMENT, FISCAL YEAR 1999, at 1134 (1998); OFFICE OF MANAGEMENT AND BUDGET, APPENDIX: BUDGET OF THE UNITED STATES GOVERNMENT, FISCAL YEAR 2000, at 1198 (1999); OFFICE OF MANAGEMENT AND BUDGET, APPENDIX: BUDGET OF THE UNITED STATES GOVERNMENT, FISCAL YEAR 2001, at 1203 (2000); OFFICE OF MANAGEMENT AND BUDGET, APPENDIX: BUDGET OF THE UNITED STATES GOVERNMENT, FISCAL YEAR 2002, at 1215 (2001); OFFICE OF

But these increases did not keep pace with the surging stock market, particularly with the technology-heavy NASDAQ, which skyrocketed beginning in 1997 and 1998. This increase can be seen in Figure 5, showing the level of the NASDAQ Composite Index, and Figure 6, showing the level of the Dow Jones Wilshire 5000, a broader market index, for the years 1990 to 2004.



**Figure 5**  
NASDAQ Composite Index, 1990–2004<sup>239</sup>



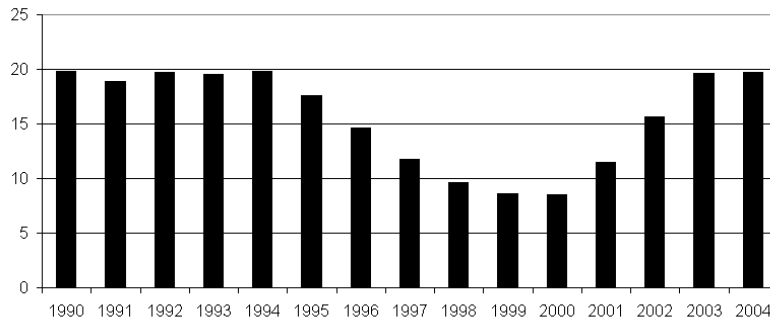
**Figure 6**  
Dow Jones Wilshire 5000, 1990–2004<sup>240</sup>

MANAGEMENT AND BUDGET, APPENDIX: BUDGET OF THE UNITED STATES GOVERNMENT, FISCAL YEAR 2003, at 1178 (2002); OFFICE OF MANAGEMENT AND BUDGET, APPENDIX: BUDGET OF THE UNITED STATES GOVERNMENT, FISCAL YEAR 2004, at 1102 (2003); OFFICE OF MANAGEMENT AND BUDGET, APPENDIX: BUDGET OF THE UNITED STATES GOVERNMENT, FISCAL YEAR 2005, at 1182 (2004); OFFICE OF MANAGEMENT AND BUDGET, APPENDIX: BUDGET OF THE UNITED STATES GOVERNMENT, FISCAL YEAR 2006, at 1220–21 (2005).

<sup>239</sup> NASDAQ Composite Index, available at <http://finance.yahoo.com/q/hp?s=%5EIXIC&a=00&b=31&c=1990&d=11&e=31&f=2004&g=m> (last visited Oct. 29, 2005).

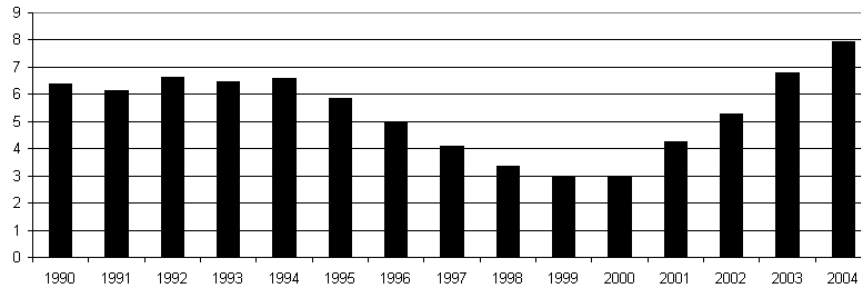
<sup>240</sup> Dow Jones Wilshire 5000 Composite Index, available at Bloomberg (search terms: “DJ Wil-

Although the SEC budget increased dramatically in 2003, the increase lagged behind both the stock market boom and its crash by several years. This becomes apparent through two simple, novel metrics obtained by dividing both the SEC overall budget and the enforcement budget respectively, by the Dow Jones Wilshire 5000. These metrics appear in Figure 7 and Figure 8.<sup>241</sup>



**Figure 7**

Ratio of SEC Overall Budget to Dow Jones Wilshire Index, 1990–2004



**Figure 8**

Ratio of SEC Enforcement Budget to Dow Jones Wilshire Index, 1990–2004

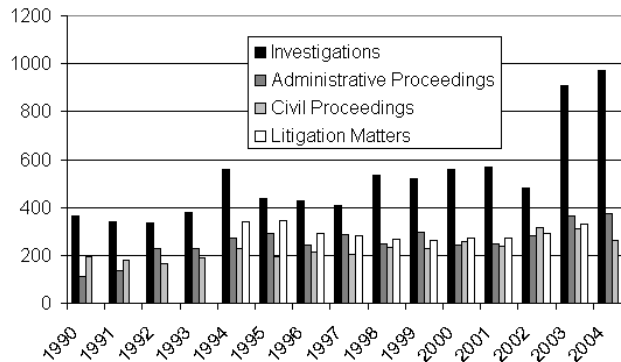
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shire 5000 TR”; range: “1/31/90” to “12/31/04”; period: monthly; market: “mid/trd”) (on file with author).

<sup>241</sup> For sake of simplicity, calculations were made by dividing the overall and enforcement budget data, see SEC, SEC Budget History vs. Actual Expenses, *supra* note 238, by the average of the Dow Jones Wilshire 5000, on the last day of each of the twelve months of the given year, see Dow Jones Wilshire 5000 Composite Index, *supra* note 240.

Figure 7 and Figure 8 show that the SEC overall and enforcement budgets kept pace with the stock market until 1996 or 1997. The market boom caused a pronounced drop in the SEC's budget relative to market growth from 1997 through 2001. Budget increases in 2002 (combined with market declines) only returned the indices to their levels at the beginning of the 1990s.

Understandably, during this period, SEC enforcement actions also failed to keep pace with the booming market. Figure 9 shows the investigations, administrative proceedings, civil or injunctive actions, and litigation actions initiated or opened in the period from 1990 to 2004.



**Figure 9**  
SEC Proceedings Opened, 1990–2004<sup>242</sup>

<sup>242</sup> OFFICE OF MANAGEMENT AND BUDGET, BUDGET OF THE UNITED STATES GOVERNMENT, FISCAL YEAR 1992, at 1177 (1991); OFFICE OF MANAGEMENT AND BUDGET, BUDGET OF THE UNITED STATES GOVERNMENT, FISCAL YEAR 1993, at 1032 (1992); OFFICE OF MANAGEMENT AND BUDGET, BUDGET OF THE UNITED STATES GOVERNMENT, FISCAL YEAR 1994, at 1141 (1993); OFFICE OF MANAGEMENT AND BUDGET, BUDGET OF THE UNITED STATES GOVERNMENT APPENDIX, FISCAL YEAR 1995, at 962 (1994); OFFICE OF MANAGEMENT AND BUDGET, APPENDIX: BUDGET OF THE UNITED STATES GOVERNMENT, FISCAL YEAR 1996, at 1055 (1995); OFFICE OF MANAGEMENT AND BUDGET, APPENDIX: BUDGET OF THE UNITED STATES GOVERNMENT, FISCAL YEAR 1997, at 1052 (1996); OFFICE OF MANAGEMENT AND BUDGET, APPENDIX: BUDGET OF THE UNITED STATES GOVERNMENT, FISCAL YEAR 1998, at 1112–13 (1997); OFFICE OF MANAGEMENT AND BUDGET, APPENDIX: BUDGET OF THE UNITED STATES GOVERNMENT, FISCAL YEAR 1999, at 1135 (1998); OFFICE OF MANAGEMENT AND BUDGET, APPENDIX: BUDGET OF THE UNITED STATES GOVERNMENT, FISCAL YEAR 2000, at 1199–1200 (1999); OFFICE OF MANAGEMENT AND BUDGET, APPENDIX: BUDGET OF THE UNITED STATES GOVERNMENT, FISCAL YEAR 2001, at 1204–05 (2000); OFFICE OF MANAGEMENT AND BUDGET, APPENDIX: BUDGET OF THE UNITED STATES GOVERNMENT, FISCAL YEAR 2002, at 1216–17 (2001); OFFICE OF MANAGEMENT AND BUDGET, APPENDIX: BUDGET OF THE UNITED STATES GOVERNMENT, FISCAL YEAR 2003, at 1179–80 (2002); OFFICE OF MANAGEMENT AND BUDGET, APPENDIX: BUDGET OF THE UNITED STATES GOVERNMENT, FISCAL YEAR 2004, at 1103–04 (2003); OFFICE OF MANAGEMENT AND BUDGET, APPENDIX: BUDGET OF THE UNITED STATES GOVERNMENT, FISCAL YEAR 2005, at 1182–83 (2004); OFFICE OF MANAGEMENT AND BUDGET, APPENDIX: BUDGET OF THE UNITED STATES GOVERNMENT, FISCAL YEAR 2006, at 1221–22 (2005).

Potential bad actors in the market place would have realized that the SEC was overtaxed and adjusted their calculations of compliance accordingly. Moreover, increased transaction volume can also create a jailbreak effect; once a tipping point is reached, each increase in the number of market participants engaging in fraudulent or questionable conduct makes enforcement exponentially more difficult. Similarly, if a significant number of any given category of market participants engage in disreputable conduct, the deterrence effect of a reputational loss drops. This dynamic particularly affects gatekeeper behavior; gatekeepers care about their reputation not only in an absolute sense, but also in a relative sense compared to the reputations of their competitors. In a game full of cheaters, the marginal reputational loss from deciding to cheat is negligible.<sup>243</sup>

Even if being caught is a certainty, fraud or misconduct may still pay. Those individuals or firms that were caught and penalized for their conduct during the late 1990s might rationally conclude that it was worth it. The multimillion-dollar penalties paid by stock analysts Henry Blodgett and Jack Grubman to the SEC pale when compared to the compensation they received both during the boom period and in golden parachutes.<sup>244</sup> Moreover, these penalties are incurred long after the benefits to malfeasance were realized. Thus the time value of money further weakens the deterrence value of liability.

## 2. Behavioral Biases and Materiality

Even if misconduct would be irrational, securities issuers and market intermediaries might still choose to engage in malfeasance because of behavioral biases exacerbated by a stock market bubble. Even financially sophisticated market players suffer from the behavioral biases that drive investor confidence and stock market bubbles.<sup>245</sup> For example, accountants, who would be expected to be both adept and conservative in estimating their own

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<sup>243</sup> Evaluating the merits of this argument requires consideration of the “race to the bottom” versus “race to the top” debate that recurs throughout corporate and securities scholarship. In other words, would the cheating of a few gatekeepers cause other gatekeepers to cheat and the market for gatekeepers to unwind? Or would other gatekeepers be able to compete and win market share by distinguishing themselves from cheaters and touting their trustworthiness? For divergent views on this question in the context of gatekeepers, see Choi, *supra* note 219, at 919 (proposing a self-tailored liability scheme as gatekeepers choice of liability level would send a signal to market on the gatekeeper’s reliability); Hamdani, *supra* note 219, at 89–90 (suggesting that market stability depends on gatekeepers’ capacity to foil unlawful conduct); Partnoy, *supra* note 219, at 492, 494–96 (arguing for strict liability for gatekeepers, as regulatory licenses enjoyed by gatekeepers reduce potential reputational loss).

<sup>244</sup> Compare SEC v. Grubman, Litigation Release No. 18,111 (Apr. 28, 2003), available at <http://www.sec.gov/litigation/litreleases/lr18111.htm> (announcing a \$15 million settlement) and SEC v. Blodgett, Litigation Release No. 18,115 (Apr. 28, 2003), available at <http://www.sec.gov/litigation/litreleases/lr18115.htm> (announcing a \$4 million settlement), with Cassidy, *supra* note 167 (reporting salary and fringe benefits enjoyed by Blodgett and Grubman during the boom period). Of course, the total liability of Blodgett and Grubman under investor litigation remains to be determined.

<sup>245</sup> See *supra* notes 41–45 and accompanying text.

potential liability in securities litigation, have been shown to suffer from the full range of behavioral biases, including overconfidence and overoptimism.<sup>246</sup> The same behavioral story that explains how behavioral biases among investors can create a bubble can also be used to tell how issuers and market intermediaries can misjudge their liability in a bubble.

Because of the availability bias, gatekeepers may believe the booming stock market will continue, and falling stock prices and shareholder suits would therefore appear remote. Overconfidence and overoptimism lead market participants to heavily discount the chances either that fraud can be detected or that they will be caught in misconduct. Other biases reinforce this thinking. The self-attribution bias, which describes how individuals attribute successes to their own personal skill yet attribute failure to bad luck or sabotage,<sup>247</sup> may lead those who commit fraud to discount the possibility of being caught. Similarly, the “hot-hand” phenomenon<sup>248</sup> causes bad actors to think that their string of success will continue. Hyperbolic discounting exacerbates the under-deterrence caused by liability for fraud being incurred after a bubble bursts, while benefits to fraud are realized immediately.<sup>249</sup> Lastly, belief perseverance and anchoring mean that market participants are unlikely to judge correctly when the market tide has turned, bringing with it the increased risk of fraud being detected and punished.<sup>250</sup>

Behavioral biases have an outsized effect on securities compliance because the amorphous legal standard of materiality lies at the heart of securities law. The Supreme Court defines materiality by reference to a reasonable investor; a fact is material if there is a substantial likelihood that its disclosure “would have been viewed by the reasonable investor as having significantly altered the ‘total mix’ of information made available.”<sup>251</sup> But this standard becomes problematic when a stock market bubble makes reasonable investors a scarce commodity. Although it is unlikely that a court

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<sup>246</sup> Robert A. Prentice, *The Case of the Irrational Auditor: A Behavioral Insight into Securities Fraud Litigation*, 95 NW. U. L. REV. 133, 154–55 (2000).

<sup>247</sup> Kent Daniel et al., *A Theory of Overconfidence, Self-Attribution, and Security Market Under- and Over-Reactions* (1997), [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2017](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2017) (analyzing the extent to which self-attribution bias and other biases affect the under-reaction and over-reaction by investors to new information).

<sup>248</sup> Thomas Gilovich et al., *The Hot Hand in Basketball: On the Misperception of Random Sequences*, 17 COGNITIVE PSYCHOL. 295, 296 (1985) (defining the “hot-hand” phenomenon as the belief that a basketball player has a better “chance of hitting a basket after one or more successful shots than after one or more misses”).

<sup>249</sup> See *supra* note 194 and accompanying text.

<sup>250</sup> See *supra* notes 36–37 and accompanying text.

<sup>251</sup> *TSC Indus., Inc. v. Northway, Inc.*, 426 U.S. 438, 449 (1976) (defining materiality in context of a fact omitted from a proxy statement); see also *Basic Inc. v. Levinson*, 485 U.S. 224, 249 (1988) (applying the *TSC Industries* standard to securities fraud cases). In *TSC Industries*, the Court articulated the standard in a second way: to prove that a statement that was omitted from disclosure was material requires, according to the Court, “a showing of substantial likelihood that, under all the circumstances, the omitted fact would have assumed actual significance in the deliberation of the reasonable shareholder.” *TSC Indus.*, 426 U.S. at 449.

would revise this objective standard during temporary periods of market irrationality,<sup>252</sup> these periods could distort the perception by market participants of what constitutes a reasonable investor. Their estimation of whether an ideal, objective reasonable investor would judge any given fact pattern to be material can become colored by the prevalence of irrationally exuberant and euphoric investors in the market.

This misperception would be reinforced because market prices serve as a gauge of materiality in fraud litigation.<sup>253</sup> Courts have accepted the conclusion that the stock market is informationally efficient—i.e., stock prices quickly reflect all new information available to the market—due to the empirical support for the Efficient Market Hypothesis.<sup>254</sup> This has led many courts to use stock price movements following the public release of information as a strong indication that that information was material.<sup>255</sup> But when corporations and gatekeepers observe stock prices soaring due to market euphoria, they could misjudge the materiality of information in the erroneous belief that euphoric investors would not care and stock prices would not plummet even if the information were disclosed.

Of course, in making materiality judgments during the drafting of disclosure or the performance of due diligence, corporations and their gatekeepers do not have the benefit of viewing market prices in hindsight after hypothetical disclosure. They are thus forced to use rules of thumb or heuristics, and the first stage of due diligence typically involves discussions between issuers and underwriter's counsel on what heuristic should be used as a proxy for materiality.<sup>256</sup> Dollar thresholds may be debated, despite that fact that the law does not set a numerical threshold on materiality. But

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<sup>252</sup> Indeed, an empirical study of securities fraud litigation by David Hoffman demonstrates that courts do not factor the considerable evidence that investors exhibit behavioral biases in making investment decisions into judicial determinations of what constitutes materiality under the reasonable investor standard. David A. Hoffman, *The "Duty" to Be a Rational Shareholder*, 90 MINN. L. REV. 536, 593 (2006). Hoffman criticizes this judicial pattern as effectively imposing a duty on shareholders to act rationally. *See id.* at 593–603.

<sup>253</sup> *See Basic*, 485 U.S. at 247 & n.25 (citing *Peil v. Speiser*, 806 F.2d 1154, 1161 (3d Cir. 1986); *Blackie v. Barrack*, 524 F.2d 891, 908 (9th Cir. 1975); *In re LTV Sec. Litig.*, 88 F.R.D. 134, 143 (N.D. Tex. 1980)).

<sup>254</sup> *See id.* at 245–47.

<sup>255</sup> For a seminal case, see *Elkind v. Liggett & Myers, Inc.*, 635 F.2d 156, 166 (2d Cir. 1980), holding that information was not material when it was insufficient by itself to trigger a downturn in price. For an early analysis of the impact of the Efficient Market Hypothesis on determinations of materiality, see generally Roger J. Dennis, *Materiality and the Efficient Capital Market Model: A Recipe for the Total Mix*, 25 WM. & MARY L. REV. 373 (1984).

<sup>256</sup> For a practical, general overview of the due diligence process written for those lawyers most likely to be conducting diligence, see generally Mark Schonberger & Vasiliki B. Tsaganos, *Top Twelve Most Frequently Asked Questions by Junior Associates Conducting Due Diligence*, in CONDUCTING DUE DILIGENCE 9–70 (Practising Law Institute 2004). For practical surveys of due diligence in securities offerings written from the perspective of underwriters' counsel, see Craig E. Chapman, *Underwriters' Due Diligence Revisited*, in CONDUCTING DUE DILIGENCE, *supra*, at 71–92; Valerie Ford Jacob, *The Due Diligence Process from the Underwriter's Perspective*, in CONDUCTING DUE DILIGENCE, *supra*, at 93–128.



setting these thresholds based on a company's stock prices would be a grave legal and logical error, particularly if the stock price is already inflated, either by frenzied speculation or fraud.<sup>257</sup> Even thresholds based on a company's earnings or asset values can be skewed by the speculation of a bubble or fraud. Again, behavioral biases shape all of these determinations, with the end result that materiality determinations are made through the filters of heuristics layered on heuristics.

### 3. *Rising Information and Agency Costs*

Even those issuers and market intermediaries that seek to comply with the law find compliance frustrated by two types of costs that rise with the inflation of a bubble. First, the increased transaction flow during a market boom translates into increased information processing costs.<sup>258</sup> These costs affect both the internal compliance function of securities issuers and, particularly, external gatekeepers.<sup>259</sup> Overworked gatekeepers can miss signs of misconduct.<sup>260</sup> The rapid growth of an issuer means that resolving accounting issues and establishing internal quality controls at that company becomes exponentially more difficult. Increased work and the accompanying pressure to close deals and satisfy clients can lead to an industry-wide decline in the professional norms critical to gatekeeping.<sup>261</sup>

Moreover, a bubble creates an inflation of agency costs. Increased workload strains quality control at issuers and gatekeeper organizations alike. Institutional controls and memory suffer as a booming economy creates alternative job opportunities and increases staff turnover. With shorter careers at firms, individuals become less invested in the long-term future of the firm and discount legal liability that the firm is not expected to realize for several years.<sup>262</sup> Individuals may choose to commit (or acquiesce to) malfeasance or shirk monitoring duties because, by the time that the costs of such

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<sup>257</sup> For a discussion of the problematic gap between the qualitative legal standard for materiality and the quantitative standards of materiality employed by the accounting profession, see Manning Gilbert Warren III, *Revenue Recognition and Corporate Counsel*, 56 SMU L. REV. 885, 898–906 (2003).

<sup>258</sup> Troy A. Paredes, *Blinded by the Light: Information Overload and Its Consequences for Securities Regulation*, 81 WASH. U. L.Q. 417, 419 (2003).

<sup>259</sup> See *id.* at 446 n.133.

<sup>260</sup> See *id.* at 440–41 (explaining that “people can only process a finite amount of information during any particular period of time . . . . [T]he decision maker’s decision quality decreases if she is given additional information.”).

<sup>261</sup> John Coates provides one example of professional norms declining during a boom, in the widespread failure of law firms to build standard anti-takeover defenses into the organizational documents of many of the new companies they advised during the late 1990s. See John C. Coates IV, *Explaining Variation in Takeover Defenses: Blame the Lawyers*, 89 CAL. L. REV. 1301, 1303, 1309 (2001).

<sup>262</sup> See James A. Fanto, *Subtle Hazards Revisited: The Corruption of a Financial Holding Company by a Corporate Client’s Inner Circle*, 70 BROOK. L. REV. 7, 28 (2004) (“[I]nvestment bankers are today little more than hired guns with weak commitments to their current employer investment bank and more loyalty to their corporate clients, whom they often bring along to any new employer”).

actions are realized, the individual will likely be employed elsewhere.<sup>263</sup> High staff turnover makes it difficult to trace responsibility for misconduct back to specific individuals. When potential misconduct is identified, the individuals that stay with firms tend to blame those employees that conveniently left the firm.<sup>264</sup> With a tighter labor market and competition for “stars,” firms become more reluctant to discipline employees.<sup>265</sup>

## VI. TOWARDS A MORE ROBUST SECURITIES LAW REGIME: A RESEARCH AGENDA

Part V argues that the compliance with securities laws deteriorates during the rise of a bubble as antifraud rules lose much of their deterrence effect during bubble times. This fluctuation in the effectiveness of securities laws is compounded by tendency of bubbles to coincide with and spur cycles of deregulation, as described in Parts III and IV; during the rise of a bubble securities regulations appear less essential and are rolled back, watered down or under-enforced due to powerful currents in the political marketplace. But when the bubble bursts, the political tide shifts and the regulatory carousel spins, bringing new regulations only after much of the damage to investors and to investor confidence in the integrity of the market has already been inflicted. Many policymakers and scholars also argue that much of the regulation after the bubble threatens to chill an already dampened climate for capital formation.<sup>266</sup>

In this light, the regulations of the Sarbanes-Oxley era have little prospect of addressing the next epidemic of securities fraud. First, these regulations are likely to be diluted by lawmakers and regulators as political pressure builds; as noted above, the first signs of the political/regulatory cycle shifting direction have appeared.<sup>267</sup> Second, the deterrent effect of these regulations will be undercut by the dynamics of the next bubble as compliance deteriorates.

One response is to accept as inevitable fluctuations in effectiveness and periodic decay of securities regulation. But accepting these fluctuations means accepting the possibility of systematic under-deterrence and potential over-deterrence of securities issuers and market intermediaries. This

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<sup>263</sup> *Id.*

<sup>264</sup> For an analysis of excuses and the assignment of blame in organizations from the perspective of social psychology and organizational behavior, see Raymond L. Higgins & C.R. Snyder, *The Business of Excuses*, in *IMPRESSION MANAGEMENT IN THE ORGANIZATION* 73, 78 (Robert A. Giacalone & Paul Rosenfeld eds., 1989) (noting that the most successful blaming strategy is to direct blame outside the organization); Nancy Bell & Phillip Tetlock, *The Intuitive Politician and the Assignment of Blame in Organizations*, in *IMPRESSION MANAGEMENT IN THE ORGANIZATION*, *supra*, at 105, 110.

<sup>265</sup> See Coffee, *supra* note 143, at 1412–13 (discussing the celebrity status of high-profile securities analysts during the 1990s boom).

<sup>266</sup> See *supra* note 3 and accompanying text.

<sup>267</sup> See *supra* notes 3–6 and accompanying text.

suboptimal result not only offends economic sensibility, it creates the potential for epidemics of fraud. Of course, one could view the bursting of the bubble as a needed tonic for the market, disciplining rash or naïve investors, including those who should have recognized the risk of being defrauded. But a glance at the history of the bubbles in Part III, from the South Seas to the 1929 stock market, reveals the enormous potential cost of resorting to this disciplinary measure. Epidemics of securities fraud carry with them the potential for a cataclysmic free fall of investor confidence in the integrity of capital markets.<sup>268</sup>

The alternative is to design a securities law regime that adapts to and addresses the decaying effects that bubbles have on deterrence and yet resists the undertow of deregulation during the rise of a bubble. This Part sets out a research agenda for further study into the interaction of stock market bubbles and legal rules that would aid in design of such a regime.

It bears noting two things that this Article does not attempt to do. First, this Article does not propose laws or regulations that would aim to prevent bubbles.<sup>269</sup> History and economic research have shown bubbles are a remarkably robust phenomena;<sup>270</sup> the human folly behind these speculative frenzies is not to be legislated away. Second, this Article does not address another regulatory approach to bubbles, namely to accept their inevitability but ensure that the national financial system is sound enough to withstand a crisis of investor confidence and a potential liquidity crunch brought on by the collapse of a bubble. This approach has been the subject of much innovative economic and legal scholarship of late that has looked at, for example, banking regulations,<sup>271</sup> international policies to thwart financial contagion among countries,<sup>272</sup> the risk

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<sup>268</sup> See Frankel, *supra* note 178, at 443–44; Stout, *supra* note 158, at 433–35.

<sup>269</sup> For a sample of proposals in the legal literature to counteract the development of bubbles, see Theresa A. Gabaldon, *John Law, with a Tulip, in the South Seas: Gambling and the Regulation of Euphoric Market Transactions*, 26 J. CORP. L. 225, 277–84 (2001) [hereinafter Gabaldon, *John Law*] (suggesting the implementation of regulations analogous to controls on gambling); Partnoy, *supra* note 14, at 783–84 (suggesting a lender of last resort remedy to control the flow of capital to prevent crashes); Theresa A. Gabaldon, *The Role of Law in Managing Market Moods: The Whole Story of Jason, Who Bought High*, 69 GEO. WASH. L. REV. 111, 125–27 (2000) (book review) [hereinafter Gabaldon, *The Role of Law*] (proposing changes to margin requirements, use of “circuit breakers,” and relaxing restrictions on short-selling, among other policies to combat speculation during a bubble).

<sup>270</sup> See generally KINDLEBERGER, *supra* note 49 (surveying history of bubbles and unsuccessful policies to avert them). For economic literature on the robustness of bubbles in experimental markets, see *supra* note 43.

<sup>271</sup> See, e.g., Jeffrey Carmichael & Neil Esho, *Asset Price Bubbles and Prudential Regulation*, in ASSET PRICE BUBBLES, *supra* note 13, at 481 (suggesting that the banking system can be influenced by using adjustments in provisioning requirements to control bubbles).

<sup>272</sup> See, e.g., Michael D. Bordo & Antu Panini Murshid, *Globalization and Changing Patterns in Crisis Transmission*, in ASSET PRICE BUBBLES, *supra* note 13, at 309 (suggesting that recent financial shocks are transmitted between advanced countries but no longer flow to emerging countries as they did in the past and that crises in emerging countries are regional due to the weakness in the banking and financial structure).

posed by new financial entities, such as hedge funds,<sup>273</sup> and hybrid financial products, including various forms of derivatives,<sup>274</sup> to economic stability. Some of this scholarship has even addressed the fact that certain regulations, such as prudential banking regulations, tend to be procyclical (that is, they exacerbate business cycles or the negative effect of business cycles rather than counter them) and investigated novel reforms to address this problem.<sup>275</sup> These topics deserve law review articles all their own.

Instead, the research agenda below is structured to think about ways to reinforce the deterrence effect of securities laws during the rise of bubbles. One could imagine market rules that would address the problems outlined in Part V.C by changing or being triggered by the market conditions that undermine the effectiveness of traditional securities deterrence. In a most radical (and therefore more unlikely) conception, these rules would function as a sort of regulatory Keynesianism; the inflation of a bubble or the superheating of capital markets would trigger regulations designed to reinforce the deterrence effect of securities laws. Then, when the market crashes or subsides, the regulatory provisions would retract to prevent the danger of chilling business activity and capital formation.

A comprehensive discussion of what these adaptive regulations would look like is beyond the scope of this Article, but the deterrence model outlined in Part V.A suggests the basic options available. Regulators could reinforce the deterrence value of securities law during bubble periods by increasing the probabilities of enforcement or detection (for example, by increasing the budget of enforcement agencies), or increasing the legal liability of issuers and market intermediaries, either by increasing damages,<sup>276</sup> by imposing new duties or standards of care on these actors, or by narrowing safe harbors.

But a full discussion of these options is premature. Five critical sets of questions must be answered before a more robust securities law regime can be designed. Together, these questions form a template for further research.

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<sup>273</sup> See, e.g., Hu, *supra* note 22, at 868–75 (discussing the bail-out of the Long Term Capital Management hedge fund).

<sup>274</sup> See, e.g., Frank Partnoy, *Financial Derivatives and the Costs of Regulatory Arbitrage*, 22 J. CORP. L. 211, 216 (1997) (suggesting that the use of derivatives to avoid regulations that seek to ameliorate market failure may create unanticipated and serious regulatory distortion and deadweight losses).

<sup>275</sup> See Carmichael & Esho, *supra* note 271, at 495–97 (analyzing how typical loan loss provisioning requirements in bank regulations can accentuate a boom and bust cycle and describing novel dynamic provisioning policies by Spanish bank regulators that are counter-cyclical).

<sup>276</sup> Frank Easterbrook and Daniel Fischel argued in an influential 1985 article that the current law limiting recoveries in private securities litigation to actual damages may lead to under-deterrence of issuers and market intermediaries. Frank H. Easterbrook & Daniel R. Fischel, *Optimal Damages in Securities Cases*, 52 U. CHI. L. REV. 611, 615–18 (1985). But punitive damages remain unavailable under federal securities laws. E.g., *Byrnes v. Faulkner, Dawkins & Sullivan*, 550 F.2d 1303, 1313 (2d Cir. 1977).

A. *Question 1: When Does Securities Regulation Require Reinforcement?*

To design adaptive securities regulations that buttress the deterrence regime, it is necessary to learn when market conditions begin to undermine securities regulations. What would be the trigger for adaptive regulations?

This question could be rephrased as, “When does a bubble begin?” But this question elicits hot debate among economists, who disagree on what constitutes a bubble.<sup>277</sup> Economists have argued over whether many of the episodes widely considered to be bubbles—including the 1929 stock market and the 1990s technology stock boom—were in fact bubbles.<sup>278</sup> More significantly, many scholars are less than sanguine on the question of whether bubbles can ever be identified *ex ante* or *in media res*.<sup>279</sup>

All of these questions, particularly the last one, stem from the fact that most economists have defined bubbles as divergences from the fundamental value of stocks. But measuring the fundamental value of stocks, as noted above in Part II, remains an elusive goal. Under the principal definition, specifying the fundamental value of a stock requires knowing its future income streams.<sup>280</sup> Some economists have noted certain indicia that the capital markets are diverging from fundamental values,<sup>281</sup> but whether these indicia are dispositive or merely probative is a disputed academic matter, and systematic research into whether these indicia can be used to test for a bubble *ex ante* or *in media res* remains to be done.

But it may not be necessary to ask the question in this manner, i.e., whether a bubble has begun in the strictest economic sense. The common thread of Part V is that extended booms in stock markets blunt the deterrence of securities law because of the mass perception of market participants that the market will continue to rise. This blunting effect thus occurs *regardless* of whether a bubble has formed in a strict economic sense, i.e., whether stock prices have diverged from a “fundamental” value. Therefore, a more refined question of when deterrence requires reinforcement

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<sup>277</sup> Compare Meltzer, *supra* note 39, at 31 (arguing that “[b]ubble explanations do not offer a consistent explanation of buyers and sellers”), with SHILLER, *supra* note 12, at 171–90 (arguing that economic data shows clear irrationalities and mispricings in capital markets that reflect existence of stock market bubbles).

<sup>278</sup> See, e.g., GARBER, *supra* note 80 (arguing that economic data suggest that the tulipomania, the Mississippi Bubble and the South Sea Bubble are not inconsistent with rational explanations or fundamental values of the assets involved); McGrattan & Prescott, *supra* note 23, at 273 (arguing that the stock market was undervalued in 1929); Lubos Pástor & Pietro Veronesi, *Was There a Nasdaq Bubble in the Late 1990s?* (Univ. of Chicago Ctr. for Research in Sec. Prices, Working Paper No. 557, 2004), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=557061](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=557061) (arguing that bubbles may not have existed in the 1920s and 1990s).

<sup>279</sup> See, e.g., Randall S. Kroszner, *Asset Price Bubbles, Information and Public Policy*, in ASSET PRICE BUBBLES, *supra* note 13, at 3, 4–7 (characterizing the practice as “quite difficult” and questioning whether policy discussions should take asset price bubbles into account).

<sup>280</sup> See *supra* note 23 and accompanying text.

<sup>281</sup> See *supra* note 42 (discussing market anomalies).

would focus on when investors or market participants believe that the market will continue to rise and whether they believe other investors are acting irrationally. If these beliefs are prevalent, many of the negative effects on securities law compliance described in Part V.C will occur.

Robert Shiller has already outlined a promising approach of employing surveys to construct investor confidence indexes that could help answer these questions.<sup>282</sup> Another line of inquiry would be to investigate whether proxies exist that can measure the mass entry of noise traders into the market. If the behavioral finance model described in Part II is correct, noise trading by unsophisticated investors that engage in “herding” drives bubbles.<sup>283</sup> One could posit that measuring influxes of first-time or otherwise unsophisticated investors into the capital markets might create an early warning system for regulators. In any event, further economic research is needed to identify which groups of investors engage in noise trading. A demographic profile of noise traders or a list of other identifying characteristics would prove most useful for policymakers.

B. *Question 2: How Can the Political Disincentives to Regulation During a Bubble be Overcome?*

Even if the appropriate conditions for implementing flexible regulations can be identified, as Part IV argues, there will be a powerful political current resisting regulations. One approach could be to have automatic regulations that are hardwired into statute or regulation to take effect when certain conditions are met. But this would require a level of drafting precision that the uncertainties and disputes mentioned above generally render impossible at the current time.

There is one proposal that could serve as an exception to this general rule. If deterrence is at least partially compromised by the SEC’s enforcement capabilities being overwhelmed during a boom market (whether bubble or not),<sup>284</sup> one solution would be to tie the SEC’s enforcement budget into market capitalization.<sup>285</sup> Of course, unless emergency appropriations are involved, there will always be a lag between a market upswing and the SEC receiving additional funds, but the lag need not be as great as that during the last decade.<sup>286</sup>

The alternative to automatic regulations is to leave the decision to im-

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<sup>282</sup> Robert J. Shiller, *Measuring Bubble Expectations and Investor Confidence* (Nat’l Bureau of Econ. Research, Working Paper No. 7008, 1999), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=154741](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=154741).

<sup>283</sup> See *supra* note 29 and accompanying text.

<sup>284</sup> See *supra* notes 238–243 and accompanying text.

<sup>285</sup> I am indebted to Lynn Stout for suggesting this idea.

<sup>286</sup> One alternative would be to fund the SEC enforcement budget through user fees, such as the fees on registration statements that help fund the SEC’s corporate finance activities. But this option would also threaten to compromise the objectivity of the SEC’s enforcement functions.

plement adaptive securities regulations in the discretion of regulators who are more insulated from the political pressure to deregulate. But are any regulators sufficiently insulated? This leads to the next research question.

C. *Question 3: Which Regulators Should be Involved in Determining when Adaptive Regulations Should take Effect?*

This question requires not only consideration of the relative political insulation enjoyed by different regulators, but an analysis of the comparative competencies of regulators in analyzing the types of economic data that would signal whether investor exuberance has reached the critical level. The ideological temperament of agencies is also crucial. An agency like the Federal Reserve may be relatively insulated from political pressure and possess unparalleled economic expertise, but its policymakers and economists remain among the most skeptical that bubbles exist, either in particular cases, or at all.<sup>287</sup>

Comparative law scholarship into how regulators in other countries have succeeded or failed to address bubbles offers a fruitful avenue for resolving the second and third questions.<sup>288</sup>

D. *Question 4: How Can Adaptive Regulations be Sufficiently Calibrated to Reinforce Deterrence?*

Reinforcing the deterrence effect of antifraud rules requires understanding the extent to which that effect is being undermined by the dynamics of a bubble. If additional deterrence is too weak, the value of adaptive regulations do not justify their complexity. On the other hand, too much additional deterrence can chill capital formation and force issuers and market intermediaries to abandon the capital markets.<sup>289</sup> Calibration requires a better sense of the extent that bubble dynamics undermine the rational calculus of compliance. Moreover, further research is needed to determine which behavioral biases affect issuers and market intermediaries and to measure the extent of their effect.<sup>290</sup>

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<sup>287</sup> See WESTERN, *supra* note 135, at 159–60 (discussing Alan Greenspan’s resistance to classifying the stock market boom of the 1990s as a bubble).

<sup>288</sup> See, e.g., Miller, *supra* note 142 (discussing the failure of the Japanese central bank to address the bubble of the 1980s).

<sup>289</sup> Howell Jackson has explored this problem of calibration in the context of additional liability that was imposed on lawyers advising thrifts after the savings and loan crisis of the 1980s. See Howell E. Jackson, *Reflections on Kaye, Scholer: Enlisting Lawyers to Improve the Regulation of Financial Institutions*, 66 S. CAL. L. REV. 1019, 1049–56 (1993).

<sup>290</sup> Some economists have noted that behavioral finance offers a long list of possible behavioral biases, but have not specified which biases affect bubbles and to what extent. See, e.g., Robert S. Chirinko, *Comments on: “Stocks as Money . . .” and “Bubble Psychology”*, in ASSET PRICE BUBBLES, *supra* note 13, at 231, 234–45 (advocating further research to measure the effects of investors’ behavioral biases on the rise and fall of stock prices). See generally Prentice, *supra* note 246 (surveying the research into behavioral biases affecting accountants).

E. *Question 5: What Legal Precedents Could be Used for Adaptive Regulations?*

Adaptive securities regulations face not only practical, but also legal challenges in that laws designed to fluctuate according to market conditions are somewhat alien to legal thought. Emergency regimes are rare in law because of deep rule of law concerns and because they may violate settled expectations.<sup>291</sup> The legal scholarship on emergency rules has flourished in the context of constitutional law and government responses to terrorism.<sup>292</sup> The jurisprudential debate on emergency constitutional rules could be used as a prompt for scholarship on emergency regimes in economic law.

Precedents do exist for emergency SEC regulations. The SEC was given the authority in the wake of the 1987 market crash to enact regulations that, during periods of “extraordinary market volatility,” would restrict trading practices that contribute to market volatility.<sup>293</sup> Furthermore, after the attacks of September 11, 2001, the SEC, pursuant to its authority under Section 12(k)(2) of the Exchange Act,<sup>294</sup> issued a number of emergency orders to stabilize the financial markets.<sup>295</sup> But, these provisions alone would not give the SEC authority to pass temporary rules during the extended period of a stock market bubble.<sup>296</sup>

New statutory authority would need to be given and an administrative

<sup>291</sup> See Bruce Ackerman, *The Emergency Constitution*, 113 YALE L.J. 1029, 1043–44 (2004) (noting that a temporary emergency state is a “desperate expedient,” but conceding that it may be preferable to a “normalization of emergency conditions”).

<sup>292</sup> See generally Ackerman, *supra* note 291 (advocating new constitutional concepts in order to preserve civil liberties in the current crisis); Eric A. Posner & Adrian Vermeule, *Accommodating Emergencies* (U. of Chicago, Public Law Working Paper No. 48, 2003), available at [http://ssrn.com/abstract\\_id=441343](http://ssrn.com/abstract_id=441343) (finding the “accommodation” view of the Constitution more persuasive than the “strict” view during national emergencies).

<sup>293</sup> Market Reform Act of 1990, Pub. L. No. 101-432, sec. 6(a), § 9(h)(2), 104 Stat. 963, 975 (codified as amended at 15 U.S.C. § 78i(h)(2) (2000)).

<sup>294</sup> 15 U.S.C. § 78l(k)(2) (2000). This section gives the SEC broad authority to pass emergency rules. Under this section, the SEC may pass orders

to alter, supplement, suspend, or impose requirements or restrictions with respect to any matter or action subject to regulation by the Commission or a self-regulatory organization under the securities laws, as the Commission determines is necessary in the public interest and for the protection of investors . . . to maintain or restore fair and orderly securities markets.

§ 78l(k)(2)(A).

<sup>295</sup> See, e.g., Emergency Order Pursuant to Section 12(k)(2) of the Securities Exchange Act of 1934, 66 Fed. Reg. 48,493 (Sept. 20, 2001) (providing that the American Stock Exchange would shift part of its operations to the floor of the New York Stock Exchange after its own building was damaged in the terrorist attacks).

<sup>296</sup> See 15 U.S.C. § 78l(k)(2)(B) (providing that rules promulgated pursuant to section 12(k)(2) can last no longer than ten business days). But a stock market bubble is not included in the Act’s definition of “emergency.” See § 78l(k)(7)(A) (“[E]mergency” means . . . a major market disturbance characterized by or constituting . . . sudden and excessive fluctuations of securities prices generally, or a substantial threat thereof, that threaten fair and orderly markets . . .”). Similarly, it would be hard to shoehorn an extended stock market bubble into the “period[] of extraordinary market volatility” required by section 9(h)(2) of the Exchange Act. § 78i(h)(2).



law mechanism for implementing adaptive securities regulations would be required. But the form of this mechanism raises provocative administrative law questions. If regulations would vary over time at an agency's discretion, would formal or informal rule making procedures be required? How would due process concerns be addressed? Of course, the more procedural requirements that are required for the enactment of adaptive regulations, the more pressure points exist for the political resistance to regulation described in Part IV.B.

This Article does not intend to suggest that these practical and legal problems are easily overcome or insurmountable, but modestly hopes to set out a research agenda and provoke further inquiry.

## VII. CONCLUSION

This Article has sought to identify a recurrent and grave problem with securities law that has not been thoroughly explored before, namely the periodic decay of securities law brought on by the inflation of a stock market bubble. A bubble—by spurring or reinforcing political pressures to deregulate financial markets and by causing the deterioration of securities law compliance—makes capital markets vulnerable to epidemics of widespread securities fraud.

There is a danger in the current legal scholarship of focusing on the trees—specific provisions of Sarbanes-Oxley—and missing the historical forest, which is populated by the failures of law to address bubbles and epidemics of fraud. The principal flaw in Sarbanes-Oxley is not in any of its provisions, but in that it represents just another episode of new securities laws designed to re-fight the last war by seeking to prevent the unique schemes just committed.

Sarbanes-Oxley is likely to be revisited and revised; if not now, then when memories of Enron and other recent scandals recede even further. The political market will inevitably shift and lay the groundwork for future deregulation of the financial markets. And securities law, which has grown so much in the last five years, will again decay with the next stock market bubble.

A failure to confront the periodic growth and decay of securities law leaves capital markets vulnerable to the next epidemic of fraud. U.S. markets may not be as fortunate with Enron's successors; the next epidemic of fraud and the next stock market bubble collapse may trigger a cataclysmic blow to investor confidence and investor trust in the integrity of the capital markets.

This Article proposes a research agenda that would shed further light on how stock market bubbles cause the decay of securities law and would provide policy building blocks for a more robust securities law regime. Without further inquiry into and dialogue on this decay, we may be con-

demned, like T.S. Eliot's Phoenician, to reenter the whirlpool and, with time picking at the collective memories of bubble and fraud in whispers, to forget alternately the profit, and then the loss.

## Appendix

Time Period	Country and Assets Affected	Prevalence of Fraud During Rise of Bubble	Legal and Political Actions Before or During Bubble	Legal and Political Response to the Crash
1690s	England, stocks	Widespread.	Royal charters granted towards numerous speculative or fraudulent ventures. Promoters give government figures stock to buy support for ventures. Parliamentary bills to regulate capital markets fail.	England's first securities laws, including limits on number of brokers in London. Laws wane over two subsequent decades. <sup>297</sup>
1719	France, shares in the Mississippi Company	Uncertain. The bubble resembled a Ponzi scheme.	Mississippi Company assumes national debt and exclusive right to French trade with Louisiana. Promoter of bubble given right to collect taxes and print money to support scheme.	Exile of promoter, execution of several confederates, and French financial reform stalled until 1787. <sup>298</sup>
1720	England, shares in the South Sea Company and other ventures	Widespread among schemes launched in response to South Sea success. Massive insider trading in South Sea shares.	South Sea Company and the privatization and securitization of national debt authorized by separate acts of Parliament. Government resisted measures to control conversion of national debt into shares of South Sea Company, as prominent ministers and courtiers secretly given Company stock by insiders. The Bubble Act is passed to eliminate competition for South Sea Company.	The Bubble Act endures for a century. Sir John Barnard's Act. Unprecedented prosecutions. <sup>299</sup>

**Table A-1.** Historical Bubbles: Episodes of Fraud During the Rise of Bubbles; Legal and Political Context.

<sup>297</sup> See *supra* Part III.A.1.

<sup>298</sup> See generally GARBNER, *supra* note 80, at 91–93; MACKAY, *supra* note 80, at 1–51. It must be noted, however, that John Law, the promoter of the Mississippi Bubble, appears to have believed that the scheme would have enriched everyone who participated. See MACKAY, *supra* note 80, at 43 (explaining that Law “had never doubted of the final success of his projects” in making France wealthy). The element of fraudulent intent may be missing in this historical episode.

<sup>299</sup> See *supra* Part III.A.2. For the reasons that the Bubble Act can be considered both an example of political support for a bubble and a political reaction to a bubble, see *supra* note 92.

Time Period	Country and Assets Affected	Prevalence of Fraud During Rise of Bubble	Legal and Political Actions Before or During Bubble	Legal and Political Response to the Crash
1820s	Britain, stock in new companies, particularly South American ventures and South American sovereign debt	False prospectuses widespread. Use of offshore contracts to evade British usury laws. Corporate payments to journalists to promote securities. “Ponzi finance”: payment of foreign loans out of capital instead of out of earnings.	Repeal of the Bubble Act. Wave of parliamentary charters granted to English companies. Members of Parliament act as directors of companies investing in South America. Cabinet refuses to intervene in bubble.	Reforms of regulations governing Bank of England. <sup>300</sup>
1845–1846	Britain, railroad stocks	Companies sell more shares than authorized. Company insiders sell forged shares. Accounting fraud and insider trading.	Parliamentary bills authorize dozens of competing railway lines. Prime Minister dilutes regulations that would have curbed new railway development to avert a glut.	Suspension of the Bank Act. Laws prohibiting dividends being paid out of capital and imposing accounting reforms. <sup>301</sup>
1869	United States, stocks	Widespread market manipulation. Jay Gould attempts to corner market.	Acquiescence or participation by lawmakers. Gould attempts to use inside information from Grant administration.	Congressional investigation into Gould. Supreme Court broadens economic powers of federal government in <i>Knox v. Lee</i> . <sup>302</sup>

**Table A-1 (continued).** Historical Bubbles: Episodes of Fraud During the Rise of Bubbles; Legal and Political Context.

<sup>300</sup> See Repeal of Bubble Act, 1825, 6 Geo. 4, c. 91; CHANCELLOR, *supra* note 8, at 100–09; H.M. HYNDMAN, *COMMERCIAL CRISES OF THE NINETEENTH CENTURY* 28–37 (2d ed. 1902).

<sup>301</sup> Joint Stock Bank Act, 1844, 7 & 8 Vict., c. 113 (prohibiting the Bank of England from increasing its issuance of notes above a set limit, in an effort to prevent inflation); see also CHANCELLOR, *supra* note 8, at 125–33, 145–46 (discussing the role of individuals and Parliament in the railway mania of the 1840s); HYNDMAN, *supra* note 300, at 59 (noting the “worthlessness” of the Bank Act of 1844 during the railway crash). Chancellor notes that many members of Parliament are thought to have sold their votes to the railway companies. See CHANCELLOR, *supra* note 8, at 133 (“One railway company boasted of commanding a hundred votes in the Commons, and members of Parliament were said to go from one railway office to another hawking their votes in support of fresh railway bills.”). This corruption extended to members of the Board of Ordinance, the body responsible for inspecting new railway proposals. See *id.* at 139; SHLEIFER, *supra* note 12, at 170 (noting the introduction of dividend restrictions and accounting reforms). For a comprehensive history of the role of English law and lawyers in promoting this railway boom and the effects of the railway expansion on English law, see RANDE W. KOSTAL, *LAW AND ENGLISH RAILWAY CAPITALISM 1825–1875* (1994).

<sup>302</sup> See *supra* notes 103–106, 112, 117–119 and accompanying text.

Time Period	Country and Assets Affected	Prevalence of Fraud During Rise of Bubble	Legal and Political Actions Before or During Bubble	Legal and Political Response to the Crash
1873	United States, railroad stocks	Crédit Mobilier and Pacific Mail Steamship scandals.	Federal land grants to railroads, many of which obtained through bribes.	Sea change in American politics as monetary and class issue take precedence.  Democrats gain in 1874 Congressional elections. 1875 Resumption of Specie Act. <i>Julliard v. Greenman</i> . <sup>303</sup>
1880s	Britain, investment company stocks and loans to South America	Alleged fraud by Argentine government.  Collusion between investment company officers and South American governments.	Active involvement of Argentine and other South American governments in soliciting, structuring and guaranteeing investments in infrastructure.  Alleged fraud by Argentine government.	Bank of England leads bail out of Baring Brothers.  Coup d'état in Argentina followed by laws restricting foreign investment. <sup>304</sup>
1920s	United States, stocks	Widespread fraud and market manipulation.	"The business of America is business."  End of the Progressive era of regulation.  Lax antitrust enforcement.	New Deal.  Passage of major securities laws including, <ul style="list-style-type: none"> <li>• Securities Act of 1933;</li> <li>• Securities Exchange Act of 1934;</li> <li>• Public Utilities Holding Company Act;</li> <li>• Glass-Steagall Act<sup>305</sup></li> </ul>
1960s	United States, "growth stocks" and "new-issues," stocks of conglomerates, "concept stocks"	Deceptive and fraudulent accounting practices.  Insider trading and market manipulation by brokers and underwriters. Scandals at AMEX.	Lax enforcement of securities and antitrust laws.	1968 FTC investigation of conglomerates.  Williams Act.  SEC attacks deceptive accounting practices.  New broker-dealer regulations.  SEC investigation of AMEX.  SEC fraud investigations of securities issuers. <sup>306</sup>

**Table A-1 (continued).** Historical Bubbles: Episodes of Fraud During the Rise of Bubbles; Legal and Political Context.

<sup>303</sup> See *supra* notes 107–111, 113–119 and accompanying text.

<sup>304</sup> See HYNDMAN, *supra* note 300, at 153–58; SHLEIFER, *supra* note 12, at 171.

<sup>305</sup> See *supra* Part III.A.4.

<sup>306</sup> See *supra* Part III.A.5.

Time Period	Country and Assets Affected	Prevalence of Fraud During Rise of Bubble	Legal and Political Actions Before or During Bubble	Legal and Political Response to the Crash
Late 1990s	United States, technology stocks	Major securities fraud scandals, including Enron, WorldCom.	<p>Securities laws lowering liability:</p> <ul style="list-style-type: none"> <li>• Private Securities Litigation Reform Act of 1995;</li> <li>• Securities Litigation and Uniform Standards Act of 1998.</li> </ul> <p>Supreme Court cases lowering securities law liability or restricting scope of securities laws:</p> <ul style="list-style-type: none"> <li>• <i>Lampf, Pleva</i>;</li> <li>• <i>Central Bank of Denver</i>.</li> </ul> <p>Development of other judicial doctrines raising bar for securities litigation claims.</p> <p>Repeal of Glass-Steagall Act.</p> <p>Resistance to proposed SEC reforms, particularly by accounting industry.</p>	<p>Sarbanes-Oxley Act and SEC regulations.</p> <p>Enforcement actions and settlements.</p> <p>New York State Attorney General investigates securities practices.</p> <p>Prosecution of officers of prominent companies.</p> <p>Wave of private securities litigation with record verdicts and settlements.</p> <p>Backlash against regulation begins several years later.<sup>307</sup></p>

**Table A-1 (continued).** Historical Bubbles: Episodes of Fraud During the Rise of Bubbles; Legal and Political Context.

<sup>307</sup> See *supra* Part III.B.