LOOKING FOR THE DOG THAT DIDN'T BARK: DO INCREASED SEC BUDGETS REDUCE RATES OF SECURITIES FRAUD?

John C. Calhoun[*†]

ABSTRACT

After the 2007-2008 financial crisis, the American public demanded that bankers be held responsible for their crimes. One byproduct of this widespread furor was a much-enhanced budget for the Securities and Exchange Commission (SEC), the federal agency responsible for investigating and enforcing securities law violations. Over five years later, many commentators—both within and beyond Wall Street—maintain that the newly beefed-up SEC is no better at deterring or detecting securities fraud. This may be because the SEC is "in the pocket of" big banks or because the financial incentives for bankers to break the law are simply too high. Despite hundreds of millions of additional dollars spent, no systematic evidence exists on whether marginal increases in SEC budgets decrease rates of securities fraud—a stunning omission given the amount of money at stake. This Article fills this crucial gap by pulling together and reviewing the disparate evidence of whether increased SEC budgets actually decrease rates of securities fraud, or whether enhancing the SEC's budget is a costly sideshow.

* Attorney, Choate Hall & Stewart LLP. Yale Law School, J.D. (2015), University of Oxford, Oriel College, M.Sc., Economic History (2012), University of Richmond, B.A., Philosophy (2009).

† The author thanks Professor Jonathan Macey for his invaluable supervision of this project. The author also thanks the editorial staff at the Vermont Law Review for their careful and thoughtful editing.

INTRODUCTION

It is a good time to be a Wall Street regulator. Although the U.S. economy has rebounded in absolute terms since the 2008 financial crisis, the crisis itself ravaged the economy. The unemployment rate rose from 5% around the start of the crisis in December 2007 to 10% in October 2009—representing a loss of approximately fifteen million jobs.[1] The crisis, and the ensuing "Great Recession," threw the U.S. economy 17% below its 1955-2008 trend growth rate of 3.4%—a negative economic shock that rivals the ones caused by each world war.[2] In large part due to reduced growth, the U.S. national debt exploded to approximately $20 trillion.[3]

The crisis shattered what little confidence the public had in Wall Street. The average American mostly blames Wall Street for the crisis: 72% of Americans believe that banks were major contributors to the financial crisis.[4] Only 9% of Americans report that they have confidence in the people running Wall Street.[5] More Americans believe that Wall Street hurts the economy than there are those who believe it helps.[6] Anger towards banks remains high seven years after the crisis: only one-third of Americans polled in August 2014 had a favorable view of Wall Street.[7]

Americans are not only still angry at banks, but they also continue to feel insecure. Despite the economic recovery, the percentage of Americans

---

1. U.S. BUREAU OF LAB. STAT., BLS SPOTLIGHT ON STATISTICS: THE RECESSION OF 2007-2009, at 2 (2012).

2. MARTIN WOLF, THE SHIFTS AND THE SHOCKS: WHAT WE'VE LEARNED—AND HAVE STILL TO LEARN—FROM THE FINANCIAL CRISIS 30 (2014).

3. *See generally*, *U.S. National Debt Clock*, BRILLIG.COM, http://www.brillig.com/debt_clock/ (last visited Dec. 8, 2016) (providing daily calculations of the outstanding public debt).

4. PEW RESEARCH CTR., *Causes and Consequences of the Financial Crisis* (Oct. 15, 2008), http://www.people-press.org/2008/10/15/section-2-causes-and-consequences-of-the-financial-crisis.

5. *US Economic Confidence Index, (Weekly)*, GALLUP, http://www.gallup.com/poll/125735/economic-confidence-index.aspx (last visited Dec. 8, 2016).

6. PEW RESEARCH CTR., *Section 2: Beyond Red vs. Blue: The Political Typology* 42 (June 26, 2014), http://www.people-press.org/files/2014/06/6-26-14-Political-Typology-release1.pdf.

7. Nick Timiraos, *WSJ/NBC Poll: Congress More Unpopular than Wall Street*, WALL ST. J. (Aug. 6, 2014, 6:40 AM), http://blogs.wsj.com/washwire/2014/08/06/wsjnbc-poll-congress-more-unpopular-than-wall-street.

who identify as middle class has dropped substantially since the crisis began (from 61% in 2008 to 51% today).[8] Meanwhile, the percentage of Americans who identify as working class has increased from 33% to 48%.[9] The crisis contributed to, or at least sped up, the hollowing of the working middle class—over the last 40 years, employment in low- and high-skill jobs increased over twice as much as traditional middle-class jobs.[10] Since the crisis, the number of middle-class jobs has declined in absolute terms, even as the number of low- and high-skilled jobs has grown.[11] Young Americans who find jobs will, by past trends, make approximately 15-20% less over their lifetimes than they would have made if the recession had not occurred.[12] The scarring experience of something like the Great Recession makes people more risk-averse for the rest of their lives.[13] Half of Americans continue to believe that the federal government has not done enough to avoid another financial crisis.[14]

Congress and the President have responded to voters' pain and anxiety in a number of ways. President Obama railed against "fat-cat bankers," while Congress demanded what former Treasury Secretary Tim Geithner calls "Old Testament justice" against Wall Street.[15] More substantively, Congress passed the Dodd-Frank Wall Street Reform and Consumer Protection Act,[16] the Bank of International Settlements agreed on higher Basel III capital and leverage ratios,[17] and the Department of Justice and the

---

8. Frank Newport, *Fewer Americans Identify as Middle Class in Recent Years*, GALLUP (Apr. 28, 2015), http://www.gallup.com/poll/182918/fewer-americans-identify-middle-class-recent-years.aspx.

9. *Id.*

10. Jason R. Abel & Richard Deitz, *Job Polarization in the United States: A Widening Gap and Shrinking Middle*, FED. RES. BANK N.Y.: LIBERTY STREET ECONOMICS (Nov. 21, 2011), http://libertystreeteconomics.newyorkfed.org/2011/11/job-polarization-in-the-united-states-a-widening-gap-and-shrinking-middle.html.

11. *Id.*

12. Lisa Kahn, *The Long-Term Labor Market Consequences of Graduating from College in a Bad Economy*, 17 J. LAB. ECON. 303, 309 (2010).

13. Ulrike Malmendier & Stefan Nagel, *Depression Babies: Do Macroeconomic Experiences Affect Risk Taking?*, 126 Q.J. ECON. 373, 378 (2011).

14. PEW RESEARCH CTR., *Public Has Mixed Views About Government Regulation of Banks* (Nov. 20, 2013), http://www.pewresearch.org/fact-tank/2013/11/20/public-has-mixed-views-about-government-regulation-of-banks.

15. TIMOTHY F. GEITHNER, STRESS TEST: REFLECTIONS ON FINANCIAL CRISES 178 (1st ed. 2014) (explaining that "Old Testament justice" referred to the public's desire for the government to refuse to bail out the banks).

16. Brady Dennis, *Congress Passes Financial Reform Bill*, WASH. POST (July 16, 2010), http://www.washingtonpost.com/wp-dyn/content/article/2010/07/15/AR2010071500464.html.

17. Dan Ryan & Alison Gilmore, *Regulatory Brief: Basel III Capital Rules Finalized by Federal Reserve: But Much More to Come for the Big Banks*, PRICE WATERHOUSE COOPER FINANCIAL SERVICES (JULY 2013), http://www.pwc.com/us/en/financial-services/regulatory-services/publications/assets/fs-reg-brief-basel-iii-capital-rules.pdf. A Basel III leverage ratio is "the

Securities and Exchange Commission (SEC) sought unprecedented fines from banks.[18]

Yet many question if the post-crisis response has truly made markets safer and stronger. Many think Dodd-Frank is too complex,[19] whereas others—including former Secretary Geithner—argue that major provisions of the Act, like the Volcker Rule, are unnecessary and harmful to economic growth.[20] Others claim that the Basel III and Federal Reserve capital ratios and leverage limits are woefully inadequate.[21] Even the Department of Justice's populist-friendly criminal and civil settlements with Wall Street banks have come in for criticism, whether for being too opaque,[22] undermining government legitimacy,[23] or reflecting institutional incompetence.[24]

'capital measure' (the numerator) divided by the 'exposure measure' (the denominator) and is expressed as a percentage." Basel Committee on Banking Supervision, *Basel III Leverage Ratio Framework and Disclosure Requirements*, BANK FOR INT'L SETTLEMENTS (Jan. 2014), http://www.bis.org/publ/bcbs270.htm.

18. *Corporate Settlements in the United States: The Criminalization of American Business*, THE ECONOMIST (Aug. 28, 2014) [hereinafter *Criminalization of American Business*], http://www.economist.com/news/leaders/21614138-companies-must-be-punished-when-they-do-wrong-legal-system-has-become-extortion.

19. *The Dodd-Frank Act: Too Big Not to Fail*, THE ECONOMIST (Feb. 18, 2014), http://www.economist.com/node/21547784.

20. GEITHNER, *supra* note 15, at 414 (arguing that the Volcker Rule's ban on proprietary trading is both unnecessary, because proprietary trading played no meaningful role in causing the financial crisis, and harmful, because the Rule will impair market development).

21. *See* ANAT ADMATI & MARTIN HELLWIG, THE BANKERS' NEW CLOTHES: WHAT'S WRONG WITH BANKING AND WHAT TO DO ABOUT IT 186 (2013) (discussing how Basel III and its leverage ratio are inadequate); WOLF, *supra* note 2, at 226–27 (discussing the impact of Basel III on financial institutions).

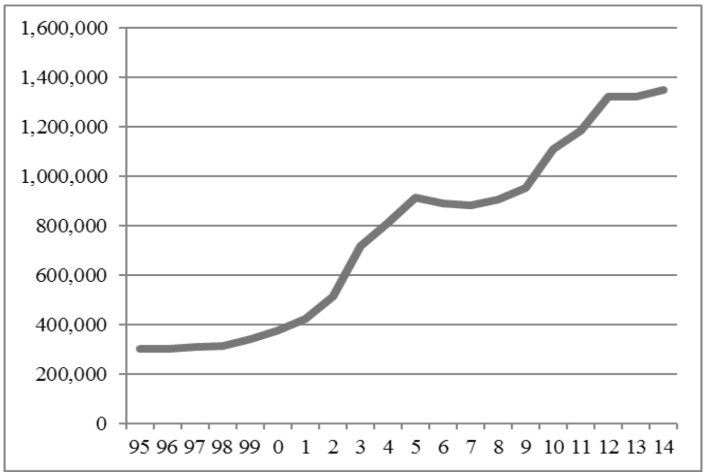
22. *Criminalization of American Business*, *supra* note 18; BRANDON L. GARRETT, TOO BIG TO JAIL: HOW PROSECUTORS COMPROMISE WITH CORPORATIONS 2 (2014).

23. JONATHAN R. MACEY, THE DEATH OF CORPORATE REPUTATION: HOW INTEGRITY HAS BEEN DESTROYED ON WALL STREET 242 (2013); GARRETT, *supra* note 22, at 6–7.

24. Vauhini Vara, *Overselling the Settlement*, NEW YORKER (Aug. 25, 2014), http://www.newyorker.com/business/currency/overselling-settlement.

Another, less discussed, Congressional response to the crisis has been an increase in the SEC's budget,[25] graphed below:

Figure 1: SEC Budget, 1995-2014, in millions



While Congress frequently increased the SEC's budget over the last 20 years, the increase since 2008 is pronounced. Even adjusted for inflation, the SEC's budget has increased by over a third since 2008. In our age of fiscal austerity, this is a striking budgetary increase. Mary Jo White, the current SEC Commissioner, justified the SEC's 2014 budget request as necessary to ensure that the SEC can hire

> additional financial economists to perform economic analyses and research in support of the Commission's activities. Specifically, RSFI [(the Division of Risk, Strategy, and Financial Innovation)] would seek economists with expertise in analyzing high frequency trading data and market structure and practices, executive compensation and related areas of corporate governance, and credit-default swaps in support of Dodd-Frank Act required rulemakings.[26]

---

25. *Frequently Requested FOIA Document: Budget History – BA vs. Actual Obligations ($ in 000s)*, U.S. SEC. & EXCHANGE COMMISSION, https://www.sec.gov/foia/docs/budgetact.htm (last modified Mar. 2, 2016).

26. *Testimony on SEC Budget Before the Subcommittee on Financial Services and General Government, Committee on Appropriations, United States House of Representatives* (May 2013) (statement of Mary Jo White, Chair, SEC) [hereinafter White Testimony]. In 2013, the SEC changed the name of RSFI to the "Division of Economic and Risk Analysis." Press Release, U.S. Sec. & Exchange

Although far from uncontroversial, the SEC's requests for expanded budgets receive ample support on Capitol Hill. For example, Democratic Senator Tom Udall expressed his support for a recent SEC budget increase by claiming "[t]he SEC has been engaged in the development of critical new rules to better protect investors and hold Wall Street accountable for its actions . . . ."[27]

The SEC's justification for an increased budget is that, with more resources, the SEC can be more vigilant in regulating Wall Street and can afford to prosecute more securities malefactors.[28] The SEC not only argues that more money for the SEC thus leads to less illegality—but it also claims that an increased SEC budget promotes market development because a reduction in securities illegality enhances trust in markets. If the SEC and its supporters are right, increasing the SEC budget is a clear win-win.

However, the benefits of increasing the SEC's budget are uncertain. Neither proponents nor opponents of increased SEC budgets marshal convincing empirical evidence. No one has evaluated all at once the evidence on the effects of increased marginal expenditure on the SEC. All that exists is a small subfield of related, yet largely isolated, scholarship.[29] No one has conducted a coherent review of the extant literature. There has also been far too little scrutiny of the research methods used in the field's leading papers.

This paper will fill this important gap by reporting the results of a comprehensive literature review on the costs and benefits of increased

---

Commission, SEC Renames Division Focusing on Economic and Risk Analysis (June 6, 2013) https://www.sec.gov/News/PressRelease/Detail/PressRelease/1365171575272.

27. Mark Schoeff Jr., *Senate Subcommittee Gives SEC Full Funding Request*, INVESTMENT NEWS (June 24, 2014, 2:38 PM), http://www.investmentnews.com/article/20140624/FREE/140629961/senate-subcommittee-gives-sec-full-funding-request.

28. *See*, Mark Schoeff Jr., *House Passes SEC Budget with Amendment Preventing Fiduciary Efforts*, INVESTMENT NEWS (July 16, 2014, 12:04 PM), http://www.investmentnews.com/article/20140716/FREE/140719940/house-passes-sec-budget-with-amendment-preventing-fiduciary-efforts ("I have deep concerns that the level of funding under the House Appropriations bill will harm America's investors by forcing the agency to limit its enforcement, examination and regulatory activities precisely at a time that the SEC should be building additional expertise and developing new technologies to better oversee our rapidly changing markets"). Research showing a strong correlation between SEC budget increases and increases in SEC enforcement activity partially supports this claim. I discuss this research in Parts II and III.

29. Terrence Blackburne, Regulatory Oversight and Reporting Incentives: Evidence from SEC Budget Allocations (Jan. 2014) (unpublished Ph.D. dissertation, Univ. of Penn.) (on file with the University of Pennsylvania); Roger Nelson Silvers, The Valuation Impact of Sec Enforcement Actions on Non-Target Foreign Firms (Sept. 1, 2012) (unpublished Ph.D. dissertation, Univ. of Mass., Amherst) (on file with ScholarWorks@UMass Amherst); Tim Lohse & Christian Thomann, *Are Bad Times Good News for the Securities and Exchange Commission* 3 (Max Planck Inst. for Tax L. & Pub. Fin., Working Paper No. 11, 2014).

appropriations for public enforcement of securities laws, with specific focus on the SEC. The review focuses on two questions, both of which probe the SEC's two chief arguments in favor of increasing the SEC's budget:

> a) Do increased SEC budgets promote economic growth and market development?
>
> b) Do increased SEC budgets reduce illegality in the markets?

The review concludes that the best available evidence suggests that, at the margin, greater investments in SEC budgets do not promote market development. The literature on whether increased SEC budgets meaningfully reduce securities illegality tilts slightly towards "no," but, more importantly, is very unclear either way. Much room remains to improve the empirical literature and, by doing so, more confidently answer both questions.

In Part I of this paper, I briefly summarize how I structured and conducted the literature review. Part II reports the results for Question A—does an increased SEC budget promote market development and growth? (market development effects). Part III answers Question B—do increased SEC budgets accomplish their first-order goal of reducing the rate of securities fraud and related illegality? I conclude the paper in Part IV with a brief discussion of the policy implications of my review, as well as suggestions for further research.

I. RESEARCH METHODS

A literature review is only as objective as its method.[30] To avoid bias, I followed best practices and structured my literature review in three stages. In the first stage, I gathered all the relevant research without closely reading any of the contributions or scrutinizing research methods. I collected the relevant papers in two ways.

First, to ensure I found all the relevant materials, I went through the bibliography of each of the most prominent articles in the field. I then added those articles to my database before going through those articles' bibliographies in the same way. I continued this process through four "generations" of articles.

---

30. *See, e.g.*, ANDREW BOOTH ET AL., SYSTEMATIC APPROACHES TO A SUCCESSFUL LITERATURE REVIEW 23 (2012) (stating that the method is more important than the outcome); CHRIS HART, DOING A LITERATURE REVIEW 1 (1998) (noting that research literary reviews rely on discussion of research techniques).

Second, to avoid overly narrow sampling by exclusively relying on my first method, I conducted a number of keyword searches on LexisNexis, Lexis Advance, Westlaw, HeinOnline, SSRN, NBER, Wiley, ScienceDirect, Google Scholar, Bloomberg, IMF.com, WorldBank.com, Bank of International Settlements, US Federal Reserve, and UK Financial Services Authority.[31] Then I conducted the same four generations of bibliography scraping described above on the articles I collected from keyword searches. Between these two methods, I am confident I identified all, or almost all, of the relevant material.

After gathering all the articles, I began evaluating them. I coded each article in three ways: relevance, conclusion, and quality. The "relevance" category sorted articles based on which of the two questions the article addressed. The "conclusion" category reported each article's conclusions. For this category, I report the full nuance of each article's conclusions—I did not force a narrow coding on a paper with a highly hedged, or nuanced, conclusion. The "quality" category incorporated two variables: (1) how persuasive were the empirical or theoretical data on which the article drew its conclusions?; and (2) to what extent did the article's analysis, however sophisticated, bear on the specific questions about the SEC in particular? For example, an excellent paper exploring the effects of increased budgets for public enforcement of securities laws in Australia would receive a similar "quality" score as a less impressive paper exploring the same effects in America. Even though the Australia-focused paper had slightly better research methods, the SEC-focused paper relates more directly to my review's two questions. I also eliminated articles with research method defects. I mention such articles in two cases because those articles are widely cited.

Once I completed individual evaluations of each article, I began my review synthesis. I weighted articles with "Very Good" or "Good" quality scores more highly in the synthesis than articles with "Moderate" or "Low" scores. Although I concluded that a mathematical weighting was inappropriate for a task as nuanced as a literature review, I gave more persuasive credence to articles with higher quality scores. I grouped these conclusions together and identified the areas of agreement and contrast. On both questions, the literature revealed clear, albeit discrete, patterns. I report results for both questions below.

---

31. Key words and phrases included, but were not limited to: "SEC budget increases," "SEC effectiveness," "public enforcement securities law[s]," "financial protection budgets/law[s]," "securities law[s]," etc.

II. DO INCREASED SEC BUDGETS PROMOTE MARKET DEVELOPMENT AND ECONOMIC GROWTH?

A. Summary

The literature suggests with a reasonable degree of confidence that, at the margin, increases in the SEC's budget do not lead to proportionately large increases in either market development or economic growth. Like every other scarce good, money for public enforcement of securities regulation is subject to diminishing marginal returns. While many developing countries would reap more than one dollar of benefit from each additional dollar they spend on securities regulation, the U.S. already invests enough in the SEC (and related regulatory entities) that further marginal increases likely do not provide a positive return.

B. Direct Evidence

This conclusion seems to run in the face of two of the most sophisticated and frequently cited papers on the effects of public securities enforcement and market development. These papers earned the only two "Very Good" coding for quality of research methods, and thus the review starts with their results.

The first, by Christensen et al., looks at the capital market effects of two new European Union (EU) securities regulations in the early 2000s.[32] The study has two main strengths that make it a particularly excellent analysis. First, it takes advantage of the natural experiment that occurred when different EU countries implemented and began enforcing the same laws, but at different times. Second, it takes into account cross-sectional variation in the strictness of implementation, enforcement, and prior regulation, to more accurately code the independent variable (enforcement timing and rate) for each country. The authors found that more resources for enforcing the new securities laws, as well as more subjective measurements of how strictly the laws were enforced, are both positively correlated with market liquidity.[33] In other words, the more countries spent on enforcing both laws, the more those countries' capital markets developed.

---

32. Hans B. Christensen et al., *Capital-Market Effects of securities Regulation: Hysteresis Implementation and Enforcement* 1 (Nat'l Bureau of Econ. Research, Working Paper No. 16737, 2011), http://www.nber.org/papers/w16737.pdf (looking at the effects of the Market Abuse Directive (MAD), addressing insider trading and market manipulation, and the Transparency Directive (TPD), addressing corporate reporting and disclosure).

33. *Id.* at 6–7.

The second high-quality paper on public securities enforcement, by Ashwini Agrawal, looked at similar effects for "blue sky" securities fraud statutes across every U.S. state.[34] Agrawal took advantage of the staggered passage of these statutes to estimate the causal effects on firm financing and broader investment activity. Agrawal also factored in how stringently each state enforced its securities statutes, albeit less sophisticatedly than the Christensen et al. article. Agrawal found that, on average, the evidence "strongly support[s]" the conclusion that stronger securities laws, as well as stronger public enforcement, positively correlate with investment activity, market valuation of firms, and state economic growth.[35]

The two highest-quality papers on public securities enforcement and market development conclude, with a fair degree of confidence, that increased public securities enforcement promotes market growth. Yet neither piece captures exactly the scope of this review's specific question—do increases in specifically the SEC's budget promote market development? The biggest limitation of both papers is that they do not focus on U.S. federal securities regulation; Christensen compares EU countries, whereas Agrawal compares U.S. states. The different focuses temper how much either Christensen et al.'s or Agrawal's results should adjust our Bayesian priors.

However, Eleswarapu and Venkataraman argue in their 2006 paper that trends in securities enforcement and market development observed in EU countries (like those observed in Christensen et al.) are likely to apply equally well to the U.S.[36] The authors looked at the trading and borrowing costs for 412 New York Stock Exchange (NYSE) listed American Depository Receipts from 44 countries.[37] Importantly, to control for the different marginal returns for developed countries (which already have fairly well-developed securities enforcement regimes) and developing countries (which tend not to have as well-developed securities enforcement regimes), the 44-country sample included many developed countries. The authors also controlled for firm-level determinants of trading and investment costs, thereby reducing the possibility that results are skewed at the micro-level. Eleswarapu and Venkataraman find that, across the world and including the U.S., robust public securities enforcement (including the

34. Ashwini K. Agrawal, *The Impact of Investor Protection Law on Corporate Policy and Performance: Evidence from the Blue Sky Laws*, 107 J. FIN. ECON. 417, 417 (2013) (describing blue sky laws as "state securities fraud statutes").

35. *Id.* at 434.

36. Venkat R. Eleswarapu & Kumar Venkataraman, *The Impact of Legal and Political Institutions on Equity Trading Costs: A Cross-Country Analysis*, 19 REV. FIN. STUD. 1081, 1083 (2006).

37. *Id.*

efficiency and integrity of the judicial system) positively correlates with national-level market liquidity.[38] Partly because some of the 44 countries in the authors' sample do not keep good records of enforcement activity, the authors had to proxy the rigorousness of public securities enforcement by the size of the enforcement budget. This is probably not the best measurement. Christensen et al. and Agrawal used more sensitive measurements, like injunction rates and formal investigation rates. But, the sweep of Eleswarapu and Venkataraman's data earns it a "Good" (as opposed to "Very Good") rating.

However, others have challenged Eleswarapu and Ventakaraman's findings. In their 2010 paper, Bruno and Claessens regress statistics on over 30 countries' market development indices against more nuanced statistics on public enforcement of securities laws (e.g., numbers of injunctions, formal investigations, fines levied, etc.).[39] They find confirmation of the diminishing marginal returns hypothesis with which this Part began—for countries like the U.S., which already have a relatively robust and active public enforcement regime, more enforcement seems to corrode market development.[40] Most worryingly, more aggressive SEC enforcement hurts relatively well-governed companies that, thanks to their scrupulous rule-following, are likely to incur the largest additional marginal compliance costs in response to more rigorous enforcement of new or existing laws.[41]

Both papers address whether, when one looks at a large subset of countries, increased public securities enforcement is broadly consistent with increased market development. Since both papers attempt to answer the same question over roughly the same periods, what explains their opposite conclusions?

The chief difficulty in determining to what extent the Eleswarapu and Ventakaraman papers and the Bruno and Claessens papers cancel each other out is determining the relative merit of the former's controlling for firm-level trading and compliance costs, relative to the latter's more nuanced treatment of how to measure the rigorousness and size of public securities enforcement. Both papers, as mentioned above, draw on the same raw data. The different results seem to spring from these two relative strengths (and corresponding weaknesses).

Ultimately, there is insufficient research to resolve this question decisively. A future area of promising research, which one could probably

38. *Id.*

39. Valentina Bruno & Stijn Claessens, *Corporate Governance and Regulation: Can There Be Too Much of a Good Thing?*, 19 J. FIN. INTERMEDIATION 461, 466 (2010).

40. *Id.* at 463.

41. *Id.* at 480.

do using the Eleswarapu data set, is to see how much the Eleswarapu analysis changes if you ignore firm-level trading costs.

All of the existing empirical work on public securities enforcement and market development is either unhelpfully focused away from the SEC, or is contradictory in such a way as to leave us without a clear answer. This suggests trying other ways of approximating, through the literature, the overall impact of increased SEC budgets on market development.

C. Indirect Evidence

One way to try to resolve the ambiguities of the existing research on public securities enforcement and market development is to look at how companies respond to increased enforcement. There are two seemingly plausible theories that predict how companies respond at the margin.[42] Does greater enforcement cause companies to clean up their books, earn more market trust, and thus find it cheaper and easier to secure the capital they need to expand? Or does more aggressive and comprehensive public securities enforcement at some point lead companies to exit the market, partially or altogether?

Thanks in large part to the last 50 years of advancement in communications and transportation technology, as well as to the increasing dominance of the service industries instead of manufacturing industries, today's corporations are highly mobile.[43] Rather than tolerate onerous regulations or high taxes, corporations can choose to move to more "business friendly" countries and yet still sell goods and services in the U.S.[44] In this way, at the margin, increased public securities enforcement could hamper market development.

The recent spate of inversion deals illustrates these possibilities. In order to avoid high corporate tax rates and allegedly onerous regulation (including SEC regulation), many U.S. corporations have recently attempted to complete *inversions*. Inversions are purchases or mergers with foreign corporations that allow the U.S. corporation to establish a home base of operations outside the U.S.[45] Companies that have recently

---

42. Vidhi Chhaochharia & Yaniv Grinstein, *Corporate Governance and Firm Value: The Impact of the 2002 Governance Rules*, 62 J. FIN. 1789, 1790 (2007); Christensen, *supra* note 32, at 4.

43. *See* THOMAS L. FRIEDMAN, THE WORLD IS FLAT: A BRIEF HISTORY OF THE TWENTY-FIRST CENTURY 209 (1st ed. 2005) (discussing the rise of outsourcing).

44. *Id.* (giving an example of why Dell has gone international); MARTIN WOLF, WHY GLOBALIZATION WORKS 272 (2004) (explaining cost-shifting).

45. Vanessa Houlder et al., *Tax Avoidance: The Irish Inversion*, FIN. TIMES (Apr. 29, 2014, 5:47 PM), http://www.ft.com/cms/s/2/d9b4fd34-ca3f-11e3-8a31-00144feabdc0.html.

attempted inversions include Pfizer,[46] Burger King,[47] and Endo Health Solutions.[48] Clearly, firms are alert to the advantages of lower taxes and less regulation, and are willing to pursue those advantages aggressively.

The best available academic research, which looks at the history of inversions and other means of corporate capital mobility, supports the notion that the recent spate of attempted inversions is no aberration. Both of the "Good" articles on this topic conclude that, for the U.S., increased investments in public securities enforcement, which in turn usually leads to more enforcement activity, probably increase corporate capital flight from the U.S.

The first article looks at the effects on the market capitalization of different-sized U.S. firms after time-series-adjusted increases in SEC enforcement activity after the passage of the Sarbanes-Oxley Act (SOX).[49] The authors find that, counterintuitively, large firms that are *less* compliant with the SOX's requirements have higher market capitalization, whereas large firms that are *more* compliant with all of SOX's requirements have lower market capitalization.[50] This time-series-adjusted finding raises two related concerns about SEC enforcement and market development—first, it seems that stricter SEC enforcement regimes encourage firms to comply with regulations in a way that reduces firms' market capitalization.

The second, even more worrying, implication of this finding is that some firms can get away with ignoring certain SEC-enforced requirements, which in turn raises questions about the effectiveness of SEC enforcement in the first place. Although there is only one paper probing this question directly, it concludes that this concern is legitimate—while stricter securities *laws* facilitate market development,[51] stricter public securities

---

46. *Id.*

47. Barney Jopson et al., *Curbs on Tax Inversions Fail to Convince*, FIN. TIMES (Sept. 23, 2014, 10:59 PM), https://www.ft.com/content/0d8444fa-4338-11e4-be3f-00144feabdc0.

48. David Gelles, *Health Care Deal Is Latest to Seek Corporate Tax Shelter Abroad*, N.Y. TIMES (Nov. 6, 2013), http://dealbook.nytimes.com/2013/11/06/health-care-deal-is-latest-to-seek-corporate-tax-shelter-abroad/.

49. Chhaochharia & Grinstein, *supra* note 42, at 1789.

50. *Id.*

51. On the narrower question of the effects only of stricter securities laws, as opposed to more robust and aggressive enforcement of those laws, other quality literature suggests that the strictness of laws also does affect market liquidity. However, as is the case with the literature on the effects of different levels of enforcement, conclusions contradict. *Compare* Douglas Cumming et al., *Exchange Trading Rules and Stock Market Liquidity*, 99 J. FIN. ECON. 651, 669–70 (2011) (detailing considerations and findings on trading rules and activity), *with* Laura Nyantung Beny, *Do Insider Trading Laws Matter? Some Preliminary Comparative Evidence* 4 (William David Inst., Working Paper No. 741, 2005) (describing study of 22 countries and findings about stock prices and liquidity), *and* R. David McLean et al., *Why Does the Law Matter? Investor Protection and Its Effects on Investment,*

enforcement regimes (as measured by numbers and rates of enforcement activities) impede market development.[52] The authors theorize that this counterintuitive result is due to two things: (1) securities enforcement has inherent limits (e.g., regulators do not know about all the infractions, and industry players know that regulators do not know about all the infractions); and (2) a sense that securities enforcement is unfair, selective, or illegitimate (e.g., because it is politically motivated, or seemingly random, as to which players get penalized).[53]

The second article, by Houston et al., which focuses on the international banking industry, provides some additional, and broader, empirical support for the conclusion above that stricter securities enforcement motivates capital flight. The authors find that, in developing countries with poorly enforced property and creditor rights, more aggressive regulation of the banking industry encourages *inbound* capital flight.[54] However, the effects in developed countries (like the U.S.) of more stringent regulations, and more active enforcement of those regulations, are the exact opposite—increased regulation substantially encourages *outbound* capital flight.[55] The paper's methods are focused and rather elegant; the authors regress international banking statistics on capital flows against time-series-adjusted measurements of banking regulation and securities enforcement activity, as well as Polity ratings of every countries' record of property and creditor rights. The only limitation is the exclusive focus on the banking industry. Since the banking industry's capital is especially mobile, capital flight due to regulatory changes might be especially pronounced in the banking industry.

Another paper that looked at a broader range of industries over a longer period confirms the result that Houston et al. found for the banking industry, albeit without a time-series analysis that is as sensitive to country-by-country changes in regulatory intensity.[56] In the paper, Hail and Leuz conducted a basic sensitivity analysis on capital costs in various countries, as set against changes in the strength of countries' securities laws and the rate of public securities enforcement. The authors find that, before the early 2000s, stricter rules and enforcement did not motivate particularly

---

Finance, and Growth, 67 J. FIN. 313, 344 (2012) (concluding that more protective investment laws result in healthier markets).

52. Rafael La Porta et al., *What Works in Securities Laws?*, 61 J. FIN. 1, 27–28 (2006).

53. *Id.* at 27.

54. Joel F. Houston et al., *Regulatory Arbitrage and International Bank Flows*, 67 J. FIN. 1845, 1877 (2012).

55. *Id.* at 1892.

56. Luzi Hail & Christian Leuz, *International Differences in the Cost of Equity Capital: Do Legal Institutions and Securities Regulation Matter?*, 44 J. ACCT. RES. 485, 500 (2006).

substantial capital flight.[57] However, since that time, as global capital markets have grown more integrated, developed countries experience fairly substantial capital flight in response to either stricter securities laws or more aggressive public securities enforcement.[58]

While the vast majority of the higher-quality contributions to this question focus on the effects of securities laws and increased public enforcement of those laws, a complete answer to the question of whether greater investments in public securities enforcement facilitate market development effectively must also deal with the question of opportunity cost. In a very creative contribution to the field, Cihak and Podpeira look at whether simply pouring more money into a public securities enforcement agency, like the SEC, would do more to incent market development (and reduce illegality, though that question is reserved for the next Part) than alternative investments in securities reform, most notably spending political and actual capital to reorganize securities regulation and enforcement under one, fully integrated organization.[59] The authors create a theoretical model informed by data on regulatory regime intensity and company compliance/estimated rates of illegality. From it, the authors conclude that expenditures—of both financial and political capital—on creating a fully integrated supervisory regime have greater returns on investment in terms of market development than investments in bigger budgets for enforcement organizations that are but a small part of a balkanized regulatory regime.[60]

As applied to the U.S., this conclusion would recommend that legislators spend their time, and taxpayers' money, reorganizing and rationalizing securities enforcement and regulation, instead of pouring more money into SEC coffers. In particular, it may be the case that the best way to improve market development is to find some way of bringing under a single umbrella the currently dispersed powers of the SEC, the Federal Reserve, the Federal Deposit Insurance Corporation (FDIC), and other regulatory organizations. It is worth noting this proposal dovetails with similar suggestions made by experienced insiders like former Treasury Secretary, Tim Geithner.[61]

57. *Id.* at 524.

58. *Id.*

59. Martin Cihak & Richard Podpiera, *Is One Watchdog Better than Three? International Experience with Integrated Financial Sector Supervision* 1 (IMF Working Paper, 2006).

60. *Id.* at 24.

61. *See* GEITHNER, *supra* note 15 (discussing his experiences with Wall Street and working in the Treasury department); *see also* WOLF, *supra* note 2 (discussing details of how regulatory authorities impacted financial crisis).

D. Outcome and Further Considerations

Overall, the literature suggests that, at the margin in the U.S., greater investments in SEC budgets probably do not promote market development. Some high-quality research finds that, within the EU and across U.S. states, more aggressive public securities enforcement promotes market development. Research more directly applicable to the U.S. suggests that more SEC enforcement likely does not promote market development for three reasons. First, more enforcement raises the incentive for firms to move capital and industry out of the U.S. Second, enforcement raises illegitimacy concerns about SEC enforcement due to limited information and thus perceived politicization or incompetence of selective enforcement. Third, enforcement diverts funding and political capital from the more beneficial task of bringing a currently balkanized enforcement and regulatory system under a single, more effective, and efficient, umbrella.

Although a direction can be discerned, the literature is nonetheless far from conclusive. The most fruitful area for further research would be to apply the same analysis in Christensen et al., as far as possible, to the U.S. and other countries. The impending introduction of the new Dodd-Frank laws, some of which mimic EU laws, might allow for the kind of time-series control necessary to produce high-quality insights.

III. DO INCREASED SEC BUDGETS REDUCE ILLEGALITY IN THE MARKETS?

It seems unlikely that more money for the SEC improves market development. But does it accomplish its proximate goal of reducing illegality in securities markets?

A. Summary

Overall, there is simply not enough quality evidence to conclude that, at the margin, larger SEC budgets meaningfully reduce securities illegality. Yet, the evidence that larger SEC budgets have no, or a positive, effect on securities illegality is equally unclear. Mostly, the key takeaway from a close review of the methods used is that, although the balance tilts slightly towards the conclusion that marginal increases in the SEC's budget will not reduce securities illegality, the literature is much more unclear than scholars currently acknowledge. With the empirical literature so poor, we are left with contradictory theories that contain too little hard data to be truly reliable. More research—discussed in the conclusion—is urgently required.

B. Theoretical Evidence

Criminal deterrence theory, now supported by some scattered empirical evidence, supports the idea that a bigger SEC budget should reduce securities illegality. This effect could be achieved in one of two ways. First, increased SEC budgets may raise the likelihood of catching securities fraud because, the higher the budget, the more investigative resources the SEC has to pursue claims. Recent, high-quality literature shows that criminals are more effectively deterred by raising the probability of being caught, rather than increasing the severity of punishment.[62] Second, increased SEC budgets may increase the anticipated severity of punishment because, with greater resources, the SEC can more exhaustively investigate each lead and thus be more likely to find damning details that justify higher fines or longer prison terms. Although the latest research shows that raising the probability of being caught is the best way to reduce illegality, increasing the severity of punishment also has a negative effect on criminality.[63]

Both theories, each now supported by some good empirical research, attest that, while criminals are not hyper-rational agents, they do respond to incentives.[64] But it is important not to exaggerate this insight. In an oft-cited paper, Ausubel argues that firms have good reason to not commit securities fraud because it diminishes market trust, which in turn diminishes market growth, which in turn limits the average firm's growth prospects.[65] However, if there is no realistic chance of being punished for illegality, even rational firms will follow the path of selective injustice that Plato considered in *The Republic*.[66] The advantages to insider trading, for example, are quite clear for individuals and businesses when two conditions

62. *E.g.*, Peter W. Greenwood, *Controlling the Crime Rate through Imprisonment*, *in* JAMES Q. WILSON, CRIME AND PUBLIC POLICY 253, 255 (1983) (stating that increasing the certainty of punishment also increases the deterrent effect of punishment); MARK A. R. KLEIMAN, WHEN BRUTE FORCE FAILS: HOW TO HAVE LESS CRIME AND LESS PUNISHMENT 3 (2009) (asserting that certainty of punishment deters offensive behavior).

63. For the best discussion of the theories relating to punishment and criminality, see Gary S. Becker, *Crime and Punishment: An Economic Approach*, 76 J. POL. ECON. 169, 170 (1968). For an empirical discussion of how increasing the severity of punishment has a small but definite effect on illegality, see KLEIMAN, *supra* note 62, at 93 (noting that some people would be deterred by harsh sentences).

64. Francesco Drago et al., *The Deterrent Effects of Prison: Evidence from a Natural Experiment*, 117 J. POL. ECON. 257, 259 (2009) (showing that adding one month of an incarcerated inmate's prison sentence to the length of whatever sentence he receives in the event of a second conviction reduces recidivism); Mark Kleiman & Beau Kilmer, *The Dynamics of Deterrence*, 106 PNAS 14230, 14234 (2009).

65. Lawrence M. Ausubel, *Insider Trading in A Rational Expectations Economy*, 80 AMER. ECON. REV. 1022, 1038 (1990).

66. PLATO, THE REPUBLIC 153 (Desmond Lee, trans., Penguin 2d ed. 2007).

hold: (1) few other market participants will be aware of the insider trading; and thus (2) no regulatory or policing body will be able to punish them.[67]

Thus, while practitioners of securities illegality are far from hyper-rational actors, they are still sensitive to changing incentives. Additionally, smart violators of securities laws will do so only occasionally, so as to preserve general market trust. But that still leaves room for the selectively unjust who can reap big, immoral returns on big, occasional illegality.

Although there is reason to believe that larger SEC budgets might decrease securities illegality, chiefly by raising the odds of getting caught, other theories of criminal behavior argue *against* that conclusion. One of the fastest growing and well-supported areas of criminal deterrence research focuses on the importance of a criminal or civil justice system's perceived legitimacy. Led by Tom Tyler, this school of thought has shown that the more legitimate the justice system is perceived to be, the more often social or market participants will follow its rules.[68] This effect is independent of the likelihood of being caught, or the severity of punishment.[69] The underlying insight is that, as people trust the fairness and importance of the justice system, the more likely they will be to conform their behavior to the system's requirements.[70] However, as people's estimation of the fairness and importance of the justice system declines, the less often they will conform their behavior to the system's requirements.[71]

This twist on legitimacy research bodes poorly, at least in theory, for the claim that increased SEC budgets will meaningfully reduce securities illegality. The banking and securities industry does not hold the SEC in high esteem.[72] Although firms and employees in the securities industries are understandably reluctant to publicly poll their feelings about their regulator, much anecdotal evidence supports the notion that banks and other securities firms do not perceive the SEC to be fair or impartial.[73] Specific complaints

---

67. Ausubel, *supra* note 65, at 1022–25.

68. *See, e.g.*, TOM TYLER, WHY PEOPLE OBEY THE LAW 82 (2006) (noting that compliance tends to increase when procedures are viewed as fair and just); *but see* AUSTIN SARAT, LAW, VIOLENCE, AND THE POSSIBILITY OF JUSTICE 6 (2001) (suggesting that violence is the force of law); A. JOHN SIMMONS, MORAL PRINCIPLES AND POLITICAL OBLIGATIONS 196 (1979) (analyzing political obligation theories).

69. TYLER, *supra* note 68, at 83; SIMMONS, *supra* note 68, 192–93; *but see* SARAT, *supra* note 68, at 5, 12 (asserting that all law depends on violence).

70. TYLER, *supra* note 68, at 168; *see also* SIMMONS, *supra* note 68, at 198 (analogizing this philosophy, that trust in the system encourages conformity, to evaluating governments).

71. TYLER, *supra* note 68, at 83; *see also* SIMMONS, *supra* note 68, at 198 (commenting on citizens' support of governments based on the governments' perceived legitimacy).

72. *Criminalization of American Business*, *supra* note 18; MACEY, *supra* note 23, at 241.

73. *E.g.*, MACEY, *supra* note 23, at 240 (providing examples of scandals that have damaged the SEC's credibility); *Criminalization of American Business*, *supra* note 18 (discussing the potential of corruption within enforcing agencies).

include that the SEC is seemingly arbitrary in whom it chooses to investigate,[74] too willing to use secret, opaque "non-prosecution" agreements that come with a fine and no admission of guilt and no public trial,[75] and to abuse the threat of a formal investigation to cow CEOs and managers into accepting unjustified civil settlements.[76] The SEC's legitimacy is not helped by a complementary perception that securities laws themselves are too numerous, complex, and burdensome,[77] or that SEC fines are paid by shareholders, many of whom only hold companies' stock unwittingly through institutional investment companies.[78] All of these concerns muddy the perception that the SEC dispenses proportional, consistent, and legitimate justice—all necessary ingredients for motivating the regulated community to follow the rules.[79]

Some recent, very creative, research by Maria Correia suggests that, instead of responding to increased SEC enforcement by reducing illegality or even ramping up compliance with SEC regulations, firms instead invest tactically in political pressure to reduce SEC pressure.[80] More specifically, Correia finds that firms with low accounting quality have greater political lobbying expenses on average.[81] The firms increase these expenditures during the period when they commit alleged securities illegality. As a

---

74. MACEY, *supra* note 23, at 231; *Criminalization of American Business*, *supra* note 18.

75. *Criminalising the American Company: A Mammoth Guilt Trip*, THE ECONOMIST (Aug. 27, 2014), http://www.economist.com/node/21614101; Peter J. Henning, *Behind Rakoff's Rejection of Citigroup Settlement*, N.Y. TIMES (Nov. 28, 2011, 5:14 PM), http://dealbook.nytimes.com/2011/11/28/behind-judge-rakoffs-rejection-of-s-e-c-citigroup-settlement/ ("The S.E.C. settles most cases, and the resolution usually involves neither an admission nor denial of liability by the defendant, even if a civil penalty is assessed and an injunction issued that prohibits future violations of federal securities laws. It is this failure to have any acknowledgment of wrongdoing that has gotten under Judge Rakoff's skin, leading him to reject the settlement because it 'is neither fair, nor reasonable, nor adequate, nor in the public interest.'").

76. Margaret H. Lemos & Max Minzner, *For-Profit Public Enforcement*, 127 HARV. L. REV. 853, 895 (2014).

77. *See, e.g.*, STEVEN M. SEARS, THE INDOMITABLE INVESTOR: WHY A FEW SUCCEED IN THE STOCK MARKET WHEN EVERYONE ELSE FAILS 184–85 (2012) (describing securities laws in the U.S. as "too complex to follow for anyone without specialized knowledge, or access to a securities lawyer"); Roberta Romano, *The Sarbanes-Oxley Act and the Making of Quack Corporate Governance*, 114 YALE L.J. 1521, 1602–03 (2005).

78. Lucian A. Bebchuk & Zvika Neeman, *Investor Protection and Interest Group Politics*, 23 REV. FIN. STUD. 1089, 1090 (2010). There is also an infrequently asked question of whether big-ticket, headline-grabbing fines are more appropriate than fines that instead cover the variable costs of securities enforcement and nothing more. A. Mitchell Polinsky & Steven Shavell, *Enforcement Costs and the Optimal Magnitude and Probability of Fines*, *in* 35 J.L. & ECON. 133, 133 (1992).

79. George Stigler, *The Optimum Enforcement of Laws*, *in* ESSAYS IN THE ECONOMICS OF CRIME AND PUNISHMENT 55, 66 (Gary S. Becker & William M. Landes eds., 1974).

80. Maria M. Correia, *Political Connections and SEC Enforcement*, *in* 57 J. ACCOUNT. & ECON. 241 (2014).

81. *Id.* at 3.

result, the firms are more likely to target their expenditures to the congressional committees with strong ties to the SEC.[82] Firms that spend more this way on lobbying receive equal numbers of inquiries from the SEC, but far fewer fines or full investigations.[83] This evidence strongly suggests that firms may be using political contributions to lower enforcement costs—and that this strategy often works. It also disrupts the general deterrence theory expectation in two ways—first, bigger SEC budgets do not sufficiently deter firms because they can use lobbying to dilute the effectiveness of the SEC; and second, firms are not compelled to follow the rules due to a perception of the SEC's legitimacy. Instead, they play a cynical game of politics against the SEC.

The thrust of Correia's research finds support in a recent article by Jonas Heese.[84] Using labor intensity as a measure for a firm's contribution to employment, Heese discovered that labor-intensive firms are less likely to be subject to an SEC enforcement action, especially during presidential election years, if they are located in politically important states.[85] Heese also found that firms in districts represented by congressmen who sit on SEC oversight committees are also less likely to be investigated, all else being equal.[86] All of these results hold true after controlling for firms' accounting quality and two alternative explanations for firms' favorable treatment by the SEC: firms' location and political contributions. These findings suggest that voters' interests drive political pressure on SEC enforcement, independent of firms' lobbying for their special interests. Rates of SEC enforcement activity are likely not strongly correlated with rates of underlying securities illegality.

Ultimately, results like Correia's and Heese's show the necessity of more directly grappling with empirics to settle the question of whether increased SEC budgets reduce securities illegality. For a topic as complex as the specific deterrence power of specific sets of crimes, primarily theoretical models are too generalized to be of substantial usefulness. In fact, the leading literature review on what effectively deters crime concluded that theoretical contributions provide little grounds for firm conclusions.[87]

---

82. *Id.* at 4.

83. *Id.* at 3.

84. Jonas Heese, *Government Preferences and SEC Enforcement* 2 (Harvard Bus. Sch., Working Paper No. 15-054, 2015).

85. *Id.* at 38.

86. *Id.* at 6.

87. Samuel Cameron, *The Economics of Crime Deterrence: A Survey of Theory and Evidence*, 41 KYKLOS 301, 323 (1988).

C. Limits of the Empirical Evidence

One of the most cited contributions to this field is Jackson's 2007 article in the Yale Journal on Regulation.[88] Jackson first reports his impressive collection of longitudinal statistics on SEC enforcement activity over time, vis-à-vis public securities enforcement in other countries.[89] Jackson finds that the SEC is much more active than public securities enforcers in other countries.[90] He also reports that over the last few decades, SEC budget increases are well correlated with increases in SEC enforcement activity.[91] From this, Jackson (and many authors who cite him) infers that greater SEC budgeting probably improves market behavior by catching more offenders.

However, for any number of reasons, it is far from clear whether Jackson's statistics support the weight of the policy inference he draws from them. For example, increased SEC budgeting and enforcement may simply reflect that securities illegality is rampant and increased SEC budgets only allow the agency to marginally increase the small percentage of cases it successfully notices and prosecutes. But that fact need not bare much at all on what happens to rates of illegality in the future—if increased SEC budgets merely inch up the likelihood of getting caught from, say, 3% to 6%, it is not clear that a semi-rational criminal would reduce his or her rate of illegality much, if at all. This is only one problem with drawing strong inferences from Jackson's data.

One useful point that Jackson's data does strongly support is that marginal increases in SEC budgets lead to marginal increases in enforcement activity. This counters claims that increased SEC budgets are more likely to lead to bigger salaries, more staff, and better office technology instead of more enforcement. The SEC is resource-constrained, and it ramps up or diminishes enforcement activity in response to changes in its resources.[92] A clever study by Kedia and Rajgopal looked at the geography of SEC enforcement and found that firms closer to the SEC and in areas with greater past SEC enforcement activity were less likely to restate financial statements.[93] Therefore, consistent with the resource-

---

88. Howell E. Jackson, *Variation in the Intensity of Financial Regulation: Preliminary Evidence and Potential Implications*, 24 YALE J. REG. 253, 253 (2007).

89. *Id.* at 283.

90. *Id.*

91. *Id.* at 279.

92. Simi Kedia & Shiva Rajgopal, *Do the SEC's Enforcement Preferences Affect Corporate Misconduct?*, 51 J. ACCT. & ECON. 259, 259 (2011).

93. *Id.* at 260.

constrained view, the SEC is more likely to investigate firms closer to its offices.

Thus, it seems that the SEC is resource-constrained, and the SEC invests additional, marginal resources in more frequent enforcement activity. But that only reorients us around our question—do increased SEC budgets reduce securities illegality?

The most recent and powerful answer to this question comes from Lohse et al. In their piece, the authors draw on a dataset of the SEC's resources and its enforcement actions over a period beginning shortly after the Second World War and ending in 2010.[94] They refine Jackson's conclusion that increased SEC budgets lead to more enforcement activity—specifically, Lohse et al. find that increased SEC budgets lead to more investigations of firms, but not as many fines or prosecutions.[95] From this, the authors infer that increases in the SEC's resources improve compliance.[96] Their key, unstated assumption is that higher levels of compliance reflect an increase in investigations, but a decrease in the numbers of enforcement cases.

Although the Lohse et al. article adds a lot to the debate—especially by disaggregating SEC enforcement activity into investigations, on the one hand, and actual punishments or prosecutions on the other—the article nonetheless stumbles over the dog-in-the-night problem.[97] The differential between the number of SEC investigations and the number of SEC enforcement actions is only telling to the extent that the SEC's investigation rate meaningfully tracks actual rates of illegality. There is no reason to assume this is true, however, as shown by the above discussion about the weak correlation between enforcement activity and criminal conduct.

There is also securities-specific research to support the conclusion that the overall correlation between securities fraud and securities law

---

94. Tim Lohse et al., *Public Enforcement of Securities Market Rules: Resource-based Evidence from the Securities and Exchange Commission*, 106 J. ECON. BEHAV. & ORG. 197, 198 (2014).

95. *Id.*

96. *Id.*

97. In his famous short story "Silver Blaze," Sherlock Holmes helps solve a murder mystery by noting "the curious incident of the dog in the night-time." Arthur Conan Doyle, *The Adventure of Silver Blaze*, *in* STRAND MAG. (Herbert Greenhough Smith ed., 1894). When his detective companion responds that Holmes cannot be onto anything because "the dog did nothing in the night time" (i.e., didn't bark or make any other noises), Holmes replies: "[t]hat was the curious incident." *Id.* The dog-in-the-night problem captures that, sometimes, what is of interest is what *does not* happen. When Congress increases SEC budgets, it aims to reduce rates of securities fraud. However, SEC enforcement rates are a bad indicator of success. High enforcement rates could simply reflect a rise in underlying securities fraud. Meanwhile, low enforcement rates could reflect poor performance in identifying increasing rates of securities fraud. Measuring the effectiveness of the SEC at marginally higher or lower budgets is thus bedeviled by the same dog-in-the-night problem.

enforcement activity is weak. Ackerman et al. examined the effects of public enforcement of insider trading laws in terms of how prior year enforcement activity deterred rates of insider trading the following year.[98] The authors found no effect of enforcement on future rates of insider trading.[99] From this, they concluded that market participants recognize that the probability of SEC enforcement activity is sufficiently low that it need not substantially affect their rates of insider trading.[100] While the authors' method does not completely side-step the dog-in-the-night problem, it usefully contains this problem by holding the dependent variable of *reported* rates of securities fraud constant from year-to-year. Given this result, one has good reason to wonder whether Lohse et al.'s assumption is true: rates of SEC investigations are closely correlated with rates of underlying securities illegality.

Are there perhaps ways of accurately gauging rates of insider trading without relying on rates of investigations or prosecutions? In a widely cited paper, Djankov et al. polled corporate bigwigs across the world and regressed the reported frequency of security illegality against a composite measurement of each country's public enforcement regime.[101] They found a negative, yet very moderate, correlation between the aggressiveness and resources of public enforcement agencies and reported rates of securities illegality.[102] The problem with this approach, however, is that it is hard to know whether corporate bigwigs both know enough about malfeasance across an entire industry and speak the truth. After all, bigwigs must know that alerting their national governments, even off-the-record, to large amounts of securities illegality would only increase the chances of more robust enforcement.

In an interesting and less methodologically problematic angle, del Guercio et al. gauged insider trading rates by measuring the pre-announcement run-up of stock prices before the announcement of takeover bids or quarterly earnings data.[103] The authors find that insider trading volume, measured in terms of the volume and frequency of such run-ups, is

---

98. *See* Abraham Ackerman et al., *Insider Trading Legislation and Acquisition Announcements: Do Laws Matter?* (EFA 2006 Zurich Meetings, 2008), http://ssrn.com/abstract=868708 (explaining the purpose of the study to examine insider trading and the timing of acquisition releases).

99. *Id.* at 14.

100. *Id.* at 19.

101. Simeon Djankov et al., *The Law and Economics of Self-Dealing*, 88 J. FIN. ECON. 430, 431 (2008).

102. *Id.* at 463.

103. *See* Diane del Guercio et al., *The Deterrence Effect of SEC Enforcement Intensity on Illegal Insider Trading: Evidence from Run-up Before News Events* (Oct. 5, 2015) http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1784528 (indicating from the study that enforcement deters crime).

negatively related to both increases in SEC budgets and prior year rates of SEC enforcement activity.[104] This finding provides direct evidence that aggressive enforcement deters illegal activity.[105] Although insider trading is only one type of securities crime, and not all run-ups before earnings announcements or take-over bid announcements are the product of insider trading, the piece nonetheless provides some solid support for the conclusion that SEC budgets influence securities illegality rates. Still, the authors provide an interesting contribution.

D. Indirect Empirical Evidence

The best way to flesh out the effects of SEC budgets on securities illegality, in the face of the dog-in-the-night problem, is to look at the question from a variety of indirect angles. Another indirect angle is whether SEC investigations or enforcement actions negatively impact the careers of company managers or board members. If so, and assuming managers and board members are rational, one would expect marginal increases in SEC budgets—which lead to more SEC enforcement activity—to reduce securities illegality at the margin.

The research in this area has been in great flux over the last 25 years. Whereas in the 1990s many scholars found little harm to managers' and board members' careers due to SEC investigations or enforcement actions, the last ten years have seen the state of knowledge swing in the opposite direction. This turnaround includes many papers by scholars disavowing earlier held positions. For example, managers at firms that are required to restate falsely reported earnings are 60% more likely to lose their jobs within the following year than those at similar firms that did not suffer such a reputational blow by the SEC.[106] Moreover, the authors find that 85% of the displaced managers are unable to secure comparable employment afterwards.[107] The longest run of data (1978-2006) found that 93% of managers lose their jobs by the end of SEC regulatory enforcement of financial misrepresentation rules.[108] They also find that most managers lose substantial money through restrictions on their future employment, shareholdings in the firm, and SEC fines.[109] For board members, most types

104. *Id.* at 25.

105. *Id.* at 5.

106. Hemang Desai et al., *The Reputational Penalty for Aggressive Accounting: Earnings Restatements and Management Turnover*, 81 ACCOUNT. REV. 83, 83 (2006).

107. *Id.* at 105.

108. Jonathan M. Karpoff et al., *The Consequences to Managers for Financial Misrepresentation*, 88 J. FIN. ECON. 193, 193 (2008).

109. *Id.*

of fraud allegations and lawsuits (such as private class actions) have little to no effect on their ability to serve on other boards in the future—except for SEC allegations, which do make it harder for board members to find new board jobs in the future.[110]

The 2008 financial crisis muddles the drift of this research, however. While many managers and CEOs lost their jobs as firms went bankrupt, many other bigwigs emerged unscathed. How can this square with the results above? There are a few possible answers. First, availability bias likely overstates how many people got off "scot-free." Second, when such a large percentage of the securities industry was to various degrees complicit with some of the sins of the era, the reputational effects from SEC investigation will seem lower per person. Third, since the SEC dramatically ramped up its use of opaque "non-consent agreements" after the crisis, the SEC's legitimacy has suffered, and thus the reputational consequences of SEC enforcement actions have probably declined.

What this does call for, however, is an updated empirical research project that looks at the effects on managers and board members of SEC investigations and enforcement actions post-2008. Much has changed since the crisis, so it would be useful to see if the late 1990s and early 2000s truths still hold. A study of the reputational effects for board members of public securities enforcement action in Italy from 2007-2011 found little negative impact, largely due to survey responses indicating that managers and board members of other firms held the public enforcement agency in low esteem.[111] It is unclear, though, to what extent the Italian and American experience may differ. Until someone conducts a similar study in the U.S., uncertainty remains as to whether today's managers and board members would meaningfully constrain their behavior in response to fears of career and reputational damages from SEC enforcement activity. The overall direction nonetheless tilts in favor of a hesitant "yes."

Yet, for public securities enforcement action to penalize managers and board members, the SEC must first be able to identify securities violations. This is not always the case, especially when securities illegality takes the form of complex, technologically innovative malfeasance. Another facet of the dog-in-the-night problem is how difficult it is for the SEC to keep up

---

110. Eric Helland, *Reputational Penalties and the Merits of Class Action Securities Litigation*, 49 J.L. & ECON. 365, 365 (2006).

111. Marina Brogi, Once Bitten, Twice Shy? A Study on the Effectiveness of Administrative Sanctions to Discipline Bank Board Members 22 (2011) (Ctr. for Applied Research in Fin. Working Paper).

with technological innovation in its regulated industries.[112] Because of this problem, criminal deterrence theory may substantially underestimate the true rate of annual securities illegality.

For example, Cajrawal and Elliott argue that increased public investment in public securities enforcement agencies, like the SEC, is most effective when it is spent helping the agencies get up to speed in areas of great technical complexity. These areas include high-frequency trading, standards for and supervision of the valuation of assets, and so forth.[113] Based on their composite measurements of estimated securities illegality, public enforcement agency activity, and annual budgets for public enforcement agencies, the authors conclude that most public enforcement agencies, even in the developed world, are ineffective chiefly because they struggle to identify and prosecute highly advanced malfeasance.[114]

Although the SEC is one of the most technically advanced securities regulators in the world, it usually lags the pace of innovation in its regulated industries.[115] Furthermore, while marginal investments in developing countries' public enforcement regimes likely provide high returns, it is not clear that increasing SEC funding produces similarly sizable marginal benefit. Just as with national growth rates, it is easier to catch up to the technological frontier of securities regulation than it is to push it forward. Especially today, when Congress is loath to increase the federal budget deficit, it is unlikely that the SEC will ever soon receive the kind of massive funding increase that would be necessary for it to operate as sophisticatedly as the big, rich companies it regulates.

E. Outcome and Further Considerations

Overall, there is simply not enough quality evidence to conclude that, at the margin, larger SEC budgets meaningfully reduce securities violations. The evidence that larger SEC budgets have an effect on securities illegality is equally unclear. The key takeaway from the methods used is that, although the balance tilts slightly towards the conclusion that marginal increases in the SEC's budget will not reduce securities illegality, the literature is far more unclear than scholars currently acknowledge. With the empirical literature so poor, we are left with contradictory theories that

112. Joel Seligman, *Rethinking Securities Markets: The SEC Advisory Committee on Market Information and the Future of the National Market System*, 57 BUS. L. 637, 640 (2002).

113. Ana Cajraval & Jennifer Elliott, *Strengths and Weaknesses in Securities Market Regulation: A Global Analysis* 1 (IMF Working Paper No. 259, 2007).

114. *Id.* at 19.

115. *Id.* at 11.

contain too little hard data to be truly reliable. Thus, more research—proposed above and re-summarized below—is urgently required.

CONCLUSION

A comprehensive review of the strongest contributions to debates about the effects of increased SEC budgets reveals that the justifications for giving the SEC more money are weaker than many observers understand. The literature suggests that greater investments in SEC budgets probably do not promote market development. Although some research finds that, within the EU and across the U.S., more aggressive public securities enforcement promotes market development, research more directly applicable to the U.S. suggests that more SEC enforcement likely does not promote market development because more enforcement (a) raises the incentive for firms to simply move capital and industry out of the U.S.; (b) raises illegitimacy concerns about SEC enforcement (due to limited information and thus perceived politicization or incompetence of selective enforcement); and (c) diverts funding and political capital from the more beneficial task of bringing a currently balkanized enforcement and regulatory system under a single, efficient umbrella. The most promising area of further research is applying the sophisticated time-series analyses used by Christensen et al. and Agrawal to data more directly relevant to the SEC.

There is simply not enough quality evidence to conclude that, at the margin, larger SEC budgets meaningfully reduce securities crime. Although the case against this view is also very unclear, the weight of the evidence tilts slightly in its favor. The clearest lesson, however, is that the literature on public securities enforcement and rates of securities illegality urgently needs more robust and nuanced empirical examination. The most promising area of further research is less clear for this topic because the dog-in-the-night problem is probably, to an important extent, insurmountable.

That said, a great contribution could take the del Guercio et al. study of run-up rates before the announcement of takeover bids and earnings reports and regress that data against the more complete measurements of SEC enforcement activity in Lohse et al. This approach would be more useful than the approximate measure of SEC enforcement activity in terms of the SEC budget that del Guercio et al. borrowed from earlier articles. This analysis is especially important in light of how the SEC's reputation has begun to change after the financial crisis and the ensuing binge of lawsuits and civil settlements. The relationship between SEC budgets and securities illegality is hard to discern, but the answer could become clearer through creative, empirical work.

The policy implications of these conclusions are muddled by the fact that the literature is so uncertain. At the very least, increased SEC budgets meaningfully promote market development; thus, Congress should refuse to enhance the SEC's inflation-adjusted budget further. As for the connection between SEC budgets and securities illegality, the evidence is not strong enough to justify the large budget increases of the last few years—nor is it strong enough to justify dramatic slashing of the SEC's budget. More evaluation needs to be done, especially in light of the financial crisis. Until then, increases in the SEC budget will likely offer a poor return on investment.