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Vistas of Finance

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ABSTRACT

Finance is undergoing a fundamental and technological shift. In the years ahead, there will inevitably be new financial characters and new financial cliffhangers. In this reply to the response of Professor Stephen Bainbridge to my Article, *The New Investor*, I offer commentary on one particular new financial character, then on the general trope of cliffhangers as they relate to financial regulation.

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INTRODUCTION

I am grateful for both the response of one of America's leading corporate law scholars to my Article, *The New Investor*,[1] and the opportunity to reply to his insightful perspective. In his response essay, *The New Investor Cliffhanger*,[2] Professor Stephen Bainbridge noted that rather than highlight "an obscure little problem," my Article identifies big, important problems relating to "how technology is changing the capital markets" but leaves readers with a number of cliffhangers about the road ahead.[3] In this reply Essay, I comment on one particular cliffhanger, then on the general trope of cliffhangers as they relate to financial regulation.

Part I of this reply examines the need for new legal understandings of the "reasonable investor," and suggests a potential pathway forward. Part II then explores certain pathologies behind financial regulation that reveal the appropriateness of the cliffhanger metaphor, and proposes an alternative interpretation of that popular trope.

I. CYBORG INVESTORS

Policymakers should embrace new understandings of an investor population that is more cognitively and technologically diverse than the traditional, monolithic understanding of the "reasonable investor."[4] While the prevailing understanding of the reasonable investor has grounded decades of robust growth in American capital markets,[5] new understandings may be necessary to sustain that success in the years ahead. As computerization and artificial intelligence fundamentally transform modern finance into cyborg finance,[6] policymakers should consider introducing a new investor concept into the legal landscape: the cyborg investor. This new conception will help better match financial regulation with

1. Tom C.W. Lin, *The New Investor*, 60 UCLA L. REV. 678, 699–703 (2013).
2. Stephen M. Bainbridge, *The New Investor Cliffhanger*, 61 UCLA L. REV. DISC. 2 (2013).
3. *Id.* at 4.
4. *See, e.g.*, Joan MacLeod Heminway, *Female Investors and Securities Fraud: Is the Reasonable Investor a Woman?*, 15 WM. & MARY J. WOMEN & L. 291, 297 (2009) ("[M]any may question whether the reasonable investor must be a rational *economic* actor—*homo economicus*—with wealth maximization as the key attribute.").
5. *See* CHARLES ROXBURGH ET AL., MCKINSEY GLOBAL INST., GLOBAL CAPITAL MARKETS: ENTERING A NEW ERA 9 (2009).
6. *See* Lin, *supra* note 1, at 681 (introducing the concept of cyborg finance).

financial reality, as the traditional reasonable investor paradigm has grown quaint in the face of modern financial innovations.

The "reasonable investor" is one the core concepts of financial regulation.[7] It was at the genesis of the modern financial regulation during the drafting of the Securities Act of 1933[8] and Securities Exchange Act of 1934.[9] And since then, financial regulators have largely operated with the understanding of the reasonable investor as the rational actor of neoclassical economics who invests for the long term.[10]

Financial regulation for the rational actor is fairly straightforward: "[S]ubstitute a philosophy of full disclosure for the philosophy of *caveat emptor*,"[11] which will allow the rational actor to perfectly process the disclosed information and make the utility-maximizing decision.[12] Thus, not surprisingly, transparency and disclosure have long been touchstones of the modern financial regulatory framework.[13] Despite the successes of that framework based on traditional understandings of the reasonable investor, there remains much room for reexamination and redress.

Professor Bainbridge is correct to suggest in his response that the traditional legal definition of the reasonable investor requires a rethinking in light of technological advances in finance.[14] The Ninth Circuit Court of Appeals recently held: "The term 'reasonable investor' is a concept within the jury's ordinary experience and understanding."[15] Yet, it is difficult to plausibly believe that most ordinary individuals and jurors could or would conceive of reasonable investors as automated computerized systems that trade billions of dollars of securities at

7. *See* David A. Hoffman, *The "Duty" to Be a Rational Shareholder*, 90 MINN. L. REV. 537, 537–39 (2006).
8. *See* H.R. REP. NO. 73-85, pt. 1, at 2 (1933).
9. *See* H.R. REP. NO. 73-1383, pt. 2, at 5 (1934).
10. *See* Regulation NMS, 70 Fed. Reg. 37,496, 37,500 (June 29, 2005) (discussing financial regulation's "core concern for the welfare of long-term investors"); Heminway, *supra* note 4, at 297 ("Decisional law and the related literature support the view that the reasonable investor is a rational investor . . . .").
11. SEC v. Capital Gains Research Bureau, Inc., 375 U.S. 180, 186 (1963).
12. JOEL SELIGMAN, THE TRANSFORMATION OF WALL STREET: A HISTORY OF THE SECURITIES AND EXCHANGE COMMISSION AND MODERN CORPORATE FINANCE 39–40 (3d ed. 2003).
13. *See, e.g.*, Tom C.W. Lin, *A Behavioral Framework for Securities Risk*, 34 SEATTLE U. L. REV. 325, 336 (2011) ("In practice, this assumption has produced a regulatory framework that emphasizes more information over less information, more disclosure over better disclosure, quantity over quality.").
14. *See* Bainbridge, *supra* note 2, at 8–9.
15. United States v. Sayre, 434 F. App'x 622, 624 (9th Cir. 2011).

speeds measured in milliseconds, as is the case for many investors today.[16] New understandings of the modern investor population are necessary.

One way to modernize current comprehensions of the reasonable investor would be a formal introduction of a cyborg investor concept. The introduction of this concept would expand the current regulatory framework by defining a new typology of investors that fall beyond the ambit of traditional understandings of the reasonable investor. With proper study and industry input, policymakers can craft a functional definition of a cyborg investor that appropriately captures its artificial, automated, and accelerated characteristics, with perhaps defined baselines on computing power, execution speed, and financial sophistication.[17]

The introduction of a new typology of investors is neither unique nor revolutionary in financial regulation. The cyborg investor will exist as a distinct type or subtype of investor with specific characteristics much in the same way as accredited investors do under the existing framework.[18] In fact, the cyborg investor could be a subset of the preexisting accredited investor typology.

This new conception and formal, regulatory recognition will allow financial regulators to better design rules and regulations in ways that are more appropriate to the capabilities and realities of the contemporary investor population.[19] For instance, mindful that cyborg investors frequently utilize artificial intelligence programs to review disclosures, policymakers could consider enhancing the current disclosure framework.[20] Mindful that machines and not ordinary individuals, in many instances, are reviewing the disclosures, policymakers can perhaps permit disclosure of more information in terms of both volume and variety in order to better inform market participants.

It should be noted that in recent years, policymakers have gradually begun moving towards recognizing the functional realities of a diverse investor population and the advanced technological capacity of some investors to process more volumes and varieties of information. The Dodd-Frank Wall Street Reform and Consumer Protection Act requires the disclosure of swap prices and volume data "as soon as technologically practicable."[21] The Securities and Exchange Commission (SEC) has also adopted a "consolidated audit trail" rule

16. *See* Lin, *supra* note 1, at 711–16.
17. In future research, I plan on presenting a more detailed definition of the concept.
18. *See* 17 C.F.R. § 230.501(a) (2013) (defining accredited investors).
19. *See* Lin, *supra* note 1, at 699–703 (discussing the capabilities of new investors in cyborg finance).
20. *See* Henry T.C. Hu, *Too Complex to Depict? Innovation, "Pure Information," and the SEC Disclosure Paradigm*, 90 TEX. L. REV. 1601, 1607 (2012) (suggesting that a new disclosure paradigm can be "facilitated by innovations in computer and Internet technologies").
21. Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act), Pub. L. No. 111-203, 124 Stat. 1376, 1779 (2010) (codified in scattered sections of the U.S.C.).

to make it easier for regulators to monitor and track the complex securities clearinghouse infrastructure.[22] And the SEC has recently permitted companies to use social media to make key disclosures.[23] The introduction of a cyborg investor typology, thus, will be a step consistent with financial regulation's current movement to embrace new technology.

In sum, policymakers should embrace the functional realities of the new financial landscape with more technologically advanced investors than traditional conceptions of reasonable investors. One way to manifest that embrace would be to formally introduce a new typology of investors: the cyborg investor.

II. TWO VIEWS OF CLIFFHANGERS

The cliffhanger has long been a good metaphor of suspense, crisis, and urgency. And good metaphors when properly mastered can offer new insight to otherwise old ideas.[24] Yet, good metaphors can also "constrain our imaginations, remove potential objectives, and obscure the perception of political contingencies."[25] The metaphor of a cliffhanger serves as an instructive trope for thinking about the pathologies of financial regulation. I would suggest that the predominant understanding of the term could explain how modern financial regulation came to be, and an alternative understanding could elucidate how financial regulation could be.

A. The Predominant View

The predominant understanding of a cliffhanger is likely one of a suspenseful scenario that grossly engages the audience about a doubtful outcome. After all, a cliffhanger literally speaks of one who is hanging off the edge of a cliff. This interpretation of cliffhangers has long been part of human narratives from *One Thousand and One Nights* to modern episodic television series.[26] This

22. 17 C.F.R. § 242.613 (2013).
23. *See* U.S. SEC. & EXCH. COMM'N, RELEASE NO. 69279, REPORT OF INVESTIGATION PURSUANT TO SECTION 21(A) OF THE SECURITIES EXCHANGE ACT OF 1934: NETFLIX, INC., AND REED HASTINGS (2013); *SEC Says Social Media OK for Company Announcements if Investors Are Alerted*, SEC. EXCHANGE COMMISSION (Apr. 2, 2013), http://www.sec.gov/news/press/2013/2013-51.htm.
24. *See* STEVEN PINKER, THE STUFF OF THOUGHT: LANGUAGE AS A WINDOW INTO HUMAN NATURE 241 (2007) (explaining that a good metaphor or analogy "would be the mechanism that the mind uses to understand otherwise inaccessible concepts").
25. Eben Moglen, *The Invisible Barbecue*, 97 COLUM. L. REV. 945, 948 (1997).
26. *See* Emily Nussbaum, *Tune in Next Week: The Curious Staying Power of the Cliffhanger*, NEW YORKER, July 30, 2012, http://www.newyorker.com/arts/critics/television/2012/07/30/120730crte_television_nussbaum.

interpretation has also become part of the contemporary, political discourse during the debate about the "fiscal cliff" in 2012.[27] This construction of cliffhangers can also help explain the origins of much of financial regulation.

Broad, transformative financial regulations are not born out of steady times; rather, they are the offspring of busts, scares, and scandals.[28] Crises frequently serve as the creative muses of legislators and regulators, unleashing energies and efforts that remained uninspired in boom times. The Great Depression gave us the Securities Act of 1933 and the Securities Exchange Act of 1934.[29] The scandals of Enron and WorldCom gave birth to the Sarbanes-Oxley Act of 2002.[30] And the recent financial crisis spawned the Dodd-Frank Wall Street Reform and Consumer Protection Act.[31] In sum, much of modern financial regulation came about because of cliffhangers—the fear of falling off a proverbial cliff, the fear of just having fallen off, and the fear of not knowing of what is to come after either scenario.

As a result of this rulemaking pathology, modern financial regulation often manifests the cognitive biases of policymakers reacting to the last crisis rather than proactively thinking about the next one.[32] Policymakers, like most individuals, are flawed judges of risk.[33] They frequently (and understandably) overreact and overestimate risk, especially in the aftermath of a crisis or catastrophe.[34] This pathology can lead to wrong diagnoses of problems, erroneous prescriptions of solutions, and obtuse regulations of businesses that quickly grow ineffective and stale in a dynamic marketplace.[35] Additionally, such well-intentioned, but misguided rulemaking can sow the seeds of new problems and

27. *See* Jackie Calmes, *Demystifying the Fiscal Impasse That Is Vexing Washington*, N.Y. TIMES, Nov. 15, 2012, http://www.nytimes.com/2012/11/16/us/politics/the-fiscal-cliff-explained.html (explaining the "fiscal cliff").
28. *See* Stuart Banner, *What Causes New Securities Regulation? 300 Years of Evidence*, 75 WASH. U. L.Q. 849, 850 (1997) ("[M]ost of the major instances of new securities regulation in the past three hundred years of English and American history have come right after crashes.").
29. *See* JACK E. KIGER ET AL., ACCOUNTING PRINCIPLES 409 (1st ed., rev. prtg. 1984).
30. *See* Larry E. Ribstein, *Bubble Laws*, 40 HOUS. L. REV. 77, 83, 86 (2003).
31. *See* DAVID SKEEL, THE NEW FINANCIAL DEAL: UNDERSTANDING THE DODD-FRANK ACT AND ITS (UNINTENDED) CONSEQUENCES 43–57 (2011).
32. *See, e.g.*, David A. Dana, *A Behavioral Economic Defense of the Precautionary Principle*, 97 NW. U. L. REV. 1315, 1324–25 (2003); Tom C.W. Lin, *Too Big to Fail, Too Blind to See*, 80 MISS. L.J. 355, 369–75 (2010) (book review).
33. *See* Amos Tversky & Daniel Kahneman, *Availability: A Heuristic for Judging Frequency and Probability*, 5 COGNITIVE PSYCHOL. 207, 231 (1973).
34. *See* Roger G. Noll & James E. Krier, *Some Implications of Cognitive Psychology for Risk Regulation*, 19 J. LEGAL STUD. 747, 774–75 (1990).
35. *See, e.g.*, Charles K. Whitehead, *The Goldilocks Approach: Financial Risk and Staged Regulation*, 97 CORNELL L. REV. 1267, 1295 (2012).

future crises.[36] It is little wonder that leading scholars like Professor Bainbridge and others have called such rulemaking "quack corporate governance."[37]

B. An Alternative View

An alternative view of a cliffhanger would be of one who is situated on a cliff, or colloquially, one who is "hanging out" on a cliff. Being situated on a cliff allows one rare vantage points on the journey thus far, the journey to come, and the promises and perils ahead. This alternative interpretation is less prevalent in popular narratives, but it can serve as an instructive construction for explaining what financial regulation could be.

With the predominant perspective of cliffhangers, perhaps out of fear and a desire to respond to public outcries for quick reforms and punishment, policymakers frequently respond to financial scandals and crises with broad, comprehensive regulations that are akin to taking sledgehammers rather than scalpels to the problems of the financial system.[38] Such blunt, reactive regulations often create consequential and costly cycles of overregulation, deregulation, and reregulation.[39]

With the alternative perspective of cliffhangers, financial scandals and crisis can be perceived as offering rare vistas of finance that allow for careful examinations of the road behind and the road ahead. Instead of reacting to a financial scandal or crisis like someone hanging off the edge of a cliff, policymakers should soberly approach the situation as an opportunity to assess how best to proceed in a sensible manner. Financial scares present rare opportunities in which the attention of the public and policymakers are focused on the state of the financial system. Rather than squander such scarce opportunities by acting out of fear, policymakers should not fear to act in a manner that proactively and sensibly strengthens the system for the long term.

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36. *See, e.g.*, Charles W. Calomiris, *Financial Innovation, Regulation, and Reform*, 29 CATO J. 65, 65 (2009) (explaining how financial innovation and problems are frequently created by misguided regulation).
37. *See* Stephen M. Bainbridge, *Dodd-Frank: Quack Federal Corporate Governance Round II*, 95 MINN. L. REV. 1779 (2011); Roberta Romano, *The Sarbanes-Oxley Act and the Making of Quack Corporate Governance*, 114 YALE L.J. 1521 (2005).
38. *See* Edward F. Greene & Elizabeth L. Broomfield, *Promoting Risk Mitigation, Not Migration: A Comparative Analysis of Shadow Banking Reforms by the FSB, USA and EU*, 8 CAPITAL MARKETS L.J. 6, 8 (2013) ("[The current regulatory approach] subjects diverse entities to a 'one-size-fits-all' regulatory approach, ignoring the different causes of risk, and also further complicating legal obligations for entities that are often already subject to other complex regulatory regimes.").
39. *See* Saule T. Omarova, *Wall Street as Community of Fate: Toward Financial Industry Self-Regulation*, 159 U. PA. L. REV. 411, 416 (2011) (discussing the "never-ending spiral of rulemaking and rule evading").

While sweeping reforms and swift penalties may be psychologically and politically more satisfying following a financial crisis or scandal,[40] dispassionate, evidence-based but no less urgent assessments and actions may be more effective in mitigating the damage of such events in the future. With an alternative view of financial cliffhangers, policymakers can perhaps better recognize the inherent limitations relating to jurisdiction, origination, and resource of traditional regulatory frameworks.[41] And from that simple recognition, they can perchance begin to think anew about regulatory designs that break away from old dogmatic, bureaucratic visions, and seriously consider new perspectives to better leverage the expertise, proximity, and resources of industry participants, to better balance the roles of government and industry in effective financial regulation.[42]

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Because of the cyclical nature of business, financial crises will inevitably occur again and again.[43] In the coming years, there will invariably be many peaks and valleys, creating many financial cliffhangers—real and imagined. While no policy or regulation can perfectly prevent all financial flaws and failures, how we choose to view and respond to financial cliffhangers can certainly shape the depths and heights of those peaks and valleys.

CONCLUSION

Finance is undergoing a fundamental shift. In the years ahead, there will be new financial characters and new financial cliffhangers. This brief reply Essay has presented a preview of one such character, the cyborg investor, and offered competing perspectives of such financial cliffhangers. Advances in technology will continue to alter present and prospective views of finance and financial regulation. And in future work and research, I hope to more deeply explore these vistas of finance.

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40. *See, e.g.*, Miriam H. Baer, *Choosing Punishment*, 92 B.U. L. REV. 577, 579 (2012) ("[P]ublic actors have ample reason to 'choose' punishment over other forms of government action as a means of attracting and maintaining public support.").
41. Lin, *supra* note 1, at 717–27.
42. *See* Omarova, *supra* note 39, at 413–16 (exploring the benefits of leveraging industry resources in financial regulation).
43. *See* CARMEN M. REINHART & KENNETH S. ROGOFF, THIS TIME IS DIFFERENT: EIGHT CENTURIES OF FINANCIAL FOLLY xxvi (2009) ("Of course, financial crises are nothing new. They have been around since the development of money and financial markets.").