

**BEYOND COST-BENEFIT ANALYSIS IN FINANCIAL REGULATION:  
PROCESS CONCERNS AND EMOTIONAL IMPACT ANALYSIS\***

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**Abstract:** This Article advocates that regulators should go beyond cost-benefit analysis to analyze process concerns and emotional impacts of alternative policies. This Article analyzes such affective benefits as investor confidence, faith, and trust in securities markets, and such affective costs as depression, financial anxiety, and investment stress, all of which non-affective cost-benefit analysis fails to sufficiently address. This Article also examines a number of general conceptual and measurement issues regarding affective benefits and costs. This Article focuses on how such issues arise with such regulations as mandatory securities disclosures; gun-jumping rules for publicly registered offerings; financial education or literacy campaigns; statutory or judicial default rules and menus; and statutes that provide for continual reassessment and revision of regulation. All these regulations affect investor sentiment and thus reinforce how and why incorporating affect into cost-benefit analysis enhances financial and securities regulation.

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## Introduction

In 1952, Harry M. Markowitz introduced modern portfolio theory (MPT),<sup>1</sup> for which he shared the 1990 Alfred Nobel Prize in Economic Science with Merton H. Miller and William F. Sharpe.<sup>2</sup> MPT mathematically justifies a long-standing intuition that diversification or “not putting all your eggs in one basket” is a reasonable investment strategy to reduce financial risks.<sup>3</sup> Investors today face a plethora of retail mutual funds to help them diversify their financial investments.<sup>4</sup> A mutual fund is a company which pools money from lots of investors, also known as its shareholders, to purchase many diverse assets, such as bonds, money market securities, and stocks.<sup>5</sup> Over half of U.S. households, invest in mutual funds.<sup>6</sup> Americans participate in stock markets primarily via mutual funds and pension plans.<sup>7</sup> The U.S. mutual fund industry grew from just 73 funds in 1945 to 8,000 funds by 2002.<sup>8</sup> Mutual fund shares of 401(k) assets amounted to merely 9% in 1990, but had grown to 44% by 2001.<sup>9</sup> Similarly, 67% of retirement assets were in equity mutual funds by 2004, compared to just 9% in 1990.<sup>10</sup> U.S. mutual funds managed assets of approximately \$50 billion in 1970,<sup>11</sup> but now hold over more than \$7.5 trillion in assets, and are continuing to increase significantly in size and importance.<sup>12</sup>

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<sup>1</sup> Harry M. Markowitz, *Portfolio Selection*, 7 J. FIN. 77 (1952). See generally, HARRY M. MARKOWITZ, PORTFOLIO SELECTION: EFFICIENT DIVERSIFICATION OF INVESTMENTS (2d ed. 1991).

<sup>2</sup> <http://nobelprize.org/economics/laureates/1990/index.html>.

<sup>3</sup> RICHARD A. BREALEY, STEWART C. MYERS, & FRANKLIN ALLEN, PRINCIPLES OF CORPORATE FINANCE 181 (8th ed. 2006) (explaining Harry Markowitz’s pioneering contributions to portfolio diversification); and Burton G. Malkiel, A RANDOM WALK DOWN WALL STREET: THE TIME-TESTED STRATEGY FOR SUCCESSFUL INVESTING 210-14 (8th rev. & updt. ed. 2003) (describing how modern portfolio theory helps investors lower their financial risks).

<sup>4</sup> See e.g., Mutual Fund Investor’s Center, available at <http://www.mfea.com/>.

<sup>5</sup> *Id.*, at <http://www.mfea.com/GettingStarted/LearningTopics/Basics/TheBasics.asp>.

<sup>6</sup> *Id.*

<sup>7</sup> John C. Boogle, *Individual Stockholder, R.I.P.*, WALL ST. J., Oct. 3, 2005, at A10.

<sup>8</sup> Investment Company Institute, MUTUAL FUND FACT BOOK (2003).

<sup>9</sup> *Mutual Funds and the U.S. Retirement Market in 2004*, 11 FUNDAMENTALS: INVESTMENT COMPANY INSTITUTE RESEARCH IN BRIEF (2005).

<sup>10</sup> *Mutual Funds and the U.S. Retirement Market in 2004*, 11 FUNDAMENTALS: INVESTMENT COMPANY INSTITUTE RESEARCH IN BRIEF (2005).

<sup>11</sup> Erik R. Sirri & Peter Tufano, *Competition and Change in the Mutual Fund Industry*, in FINANCIAL SERVICES: PERSPECTIVES AND CHALLENGES FOR THE 1990S 181 (Samuel L. Hayes III ed., 1994).

<sup>12</sup> U.S. Chamber of Commerce v. SEC Mutual Fund “Governance” Litigation (Apr. 8, 2005), available at <http://www.uschamber.com/nclc/news/casealerts/ca050408.htm>. See generally, ROBERT C. POZEN, THE MUTUAL FUND BUSINESS (2d ed. 2002).

On July 27, 2004, the Securities and Exchange Commission (SEC) adopted a new corporate governance rule that requires mutual-fund companies to, among other things, (i) have chairs of their boards who are independent of their fund's management, and (ii) increase the percentage of directors on their boards who are independent of their fund's management from a previously required 50% to 75% (except for boards having only three members, two are required to be independent directors).<sup>13</sup> On June 21, 2005, the most important court in federal regulatory law, the U.S. Court of Appeals for the D.C. Circuit, unanimously remanded to the SEC for consideration the costs of the above two requirements,<sup>14</sup> because “the Commission ... “fail[ed] adequately to consider the costs imposed upon funds by the two challenged conditions.”<sup>15</sup>

Despite this court decision, without providing for any further public notice or comment, and in a controversial 3-2 vote, the SEC affirmed its July 2004 rule just eight days later.<sup>16</sup> The U.S. Chamber of Commerce, which originally challenged the SEC rule, also challenged the SEC's affirming its rule.<sup>17</sup> The SEC estimated the costs of compliance per mutual fund would be “extremely small relative to the fund assets for which fund boards are responsible, and are also small relative to the expected benefits.”<sup>18</sup> Both of the dissenting Commissioners, eight Senators, former SEC Commissioner Joseph A. Grundfest, and former SEC Chair Harvey Pitt all made pleas for a more deliberative approach.<sup>19</sup> One securities law scholar has reasoned that new

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<sup>13</sup> Investment Company Governance, 69 Fed. Reg. 46,378 (Aug. 2, 2004).

<sup>14</sup> U.S. Chamber of Commerce v. SEC, No. 04-1300 (D.C. Cir. June 21, 2005), available at <http://pacer.cadc.uscourts.gov/docs/common/opinions/200506/04-1300a.pdf>.

<sup>15</sup> *Id.*, at 17.

<sup>16</sup> Michael Schroeder, *SEC Adopts Mutual Fund Rule, Risks New Challenge*, WALL ST. J., June 30, 2005, at C1. This was also just one day before former SEC Chair William Donaldson's resignation took effect. Investment Company Governance, 70 Fed. Reg. 39,390, 39,403 (July 7, 2005) (to be codified at 17 C.F.R. pt. 270), available at <http://www.sec.gov/rules/final/ic-26985fr.pdf>.

<sup>17</sup> U.S. Chamber of Commerce Vows to Continue Fight; SEC Mutual Fund Action to be Challenged in Court (June 29, 2005), available at <http://www.uschamber.com/press/releases/2005/june/05-112.htm>; Chamber Files Motion to Stay SEC Mutual Fund Rule (July 26, 2005), available at <http://www.uschamber.com/press/releases/2005/july/05-126.htm>; and U.S. Chamber Files Suit Against New Mutual Fund Rules; Charges SEC Overstepped Authority in Independent Boards (Sept. 2, 2005), available at <http://www.uschamber.com/press/releases/2004/september/04-118.htm>.

<sup>18</sup> Investment Company Governance, *supra* note 16, at 39,395.

<sup>19</sup> *Id.*, at 39,408.

mutual fund regulation is likely to have unknowable costs, but few knowable benefits.<sup>20</sup> A recent empirical study finds that strengthened corporate governance controls have no statistically significant impact on mutual fund outflows.<sup>21</sup>

Although this particular controversy focuses on regulating mutual fund governance, there have also been a number of recent other controversies over the proper boundaries of SEC regulation. One controversy arose in response to the SEC's proposal to impose a mandatory two percent redemption fee on mutual fund shareholders who redeem shares within five days of their purchase.<sup>22</sup> A second controversy was the SEC's proposal to amend Rule 22c-1 that would adopt a hard 4 p.m. close for mutual fund orders.<sup>23</sup> A third controversy was the SEC requiring members of the \$1 trillion hedge fund industry to register as investment advisors.<sup>24</sup>

Finally, there has been a lot of controversy over Congressional passage of the Sarbanes-Oxley Act of 2002 (SOX),<sup>25</sup> in particular, its Section 404 about internal accounting controls. Four legal scholars discuss and summarize recent evidence from a number of empirical Cost-Benefit Analysis (CBA) studies of SOX,<sup>26</sup> estimating that SOX is likely to have benefits which

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<sup>20</sup> Larry E. Ribstein, *Do the Mutuals Need More Law?*, Spring REG. 4, 5 (2004).

<sup>21</sup> Stephen Choi & Marcel Kahan, *The Market Penalty for Mutual Fund Scandals* (unpublished manuscript) (Oct. 23, 2005).

<sup>22</sup> SEC Proposes Mandatory Redemption Fees for Mutual Fund Securities (Feb. 25, 2004), available at <http://www.sec.gov/news/press/2004-23.htm>.

<sup>23</sup> Amendments to Rules Governing Pricing of Mutual Fund Shares, Release No. IC-26288; File No. S7-27-03 (Dec. 11, 2004); Proposed Rule: 68 Fed. Reg. 70,388 (Dec. 17, 2004) (to be codified at 17 C.F.R. pt. 270), available at <http://www.sec.gov/rules/proposed/ic-26288.htm>. See also, Deborah Solomon, *New SEC Chief Plans to Enforce Hedge-Fund Rule*, WALL ST. J., Sept. 19, 2005, at A1.

<sup>24</sup> Registration Under the Advisers Act of Certain Hedge Fund Advisers, 17 C.F.R. pts. 275 and 279, SEC Release No. IA-2333, File No. S7-30-04, available at <http://www.sec.gov/rules/final/ia-2333.htm>. See also, Implications of the Growth of Hedge Funds, Report of the Staff of the U.S. Securities and Exchange Commission (Oct. 2, 2003), available at <http://www.sec.gov/news/studies/hedgelfunds0903.pdf>.

<sup>25</sup> Pub. L. No. 107-204, 116 Stat. 745 (2002).

<sup>26</sup> Robert Charles Clark, *Corporate Governance Changes in the Wake of the Sarbanes-Oxley Act: A Morality Tale for Policymakers Too*, Harvard Law School John M. Olin Center for Law, Economics, and Business & Program on Corporate Governance Discussion Paper No. 525 (Sept. 2005), available at [http://www.law.harvard.edu/programs/olin\\_center/corporate\\_governance/papers/Clark-Corp%20Gov\\_9.20.05.pdf](http://www.law.harvard.edu/programs/olin_center/corporate_governance/papers/Clark-Corp%20Gov_9.20.05.pdf); Donald C. Langevoort, *Internal Controls After Sarbanes-Oxley: Revisiting Corporate Law's "Duty of Care as Responsibility for Systems"*, J. CORP. L. (forthcoming 2006); Larry E. Ribstein, *Market versus Regulatory Responses to Corporate Fraud: A Critique of the Sarbanes-Oxley Act of 2002*, 28 J. CORP. L. 1 (2002) and Roberta Romano, *The Sarbanes-Oxley Act and the Making of Quack Corporate Governance*, 114 YALE L.J. 1521 (2005). See also, Larry E. Ribstein, *Bubble Laws*, 40 HOUS. L. REV. 77, 83-90 (2003); Larry E. Ribstein, *International Implications of Sarbanes-Oxley: Raising the*

are likely to be modest and hard to document, but measurable compliance costs which are already very large. Other corporate law scholars have more balanced attitudes and middle-of-the-road views about SOX.<sup>27</sup>

Each of these above recent controversies about securities regulation implicate far-reaching questions of what is and should be the appropriate roles of CBA in securities regulation particularly and in financial regulation generally. A noted economist, Professor Luigi Zingales, advocates comparing the costs and benefits of alternative financial regulations by quantitatively estimating those costs and benefits.<sup>28</sup> The nontrivial question of whether the SEC should more routinely engage in formal CBA has already been the subject of another paper.<sup>29</sup> Thus, this Article brackets that important question and starts with the working hypothesis that such U.S. financial regulators as the SEC can and should benefit from engaging in some form of CBA.<sup>30</sup> This is a reasonable hypothesis because there are several economic, legal, philosophical, and pragmatic arguments in favor of informing regulatory policy by some type of CBA.<sup>31</sup> But, this is

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*Rent on US Law*, 3 J. CORP. L. STUD. 299 (2003); Larry E. Ribstein, *Sarbox: The Road to Nirvana*, 2004 MICH. ST. L. REV. 279; and Larry E. Ribstein, *Sarbanes-Oxley after Three Years*, NEW ZEALAND L. REV. (2005), Illinois Law and Economics Working Paper No. LE05-016 (June 20, 2005), available at [www.ssrn.com/abstract=746884](http://www.ssrn.com/abstract=746884).

<sup>27</sup> See, e.g., William W. Bratton, *Enron, Sarbanes-Oxley and Accounting: Rules Versus Standards Versus Rents*, 48 VILL. L. REV. 1023 (2003) (finding SOX begins a political process intended over time to produce a new regulatory regime); Lawrence A. Cunningham, *The Sarbanes-Oxley Yawn: Heavy Rhetoric, Light Reform (And it Might Just Work)*, 36 U. CONN. L. REV. 915 (2003) (reading SOX as being a modest Act); Brett McDonnell, *Sarbanes-Oxley, Fiduciary Duties, and the Conduct of Officers and Directors*, EUR. BUS. ORG. L. REV. (forthcoming) (concluding that although SOX imposes significant compliance costs, it also results in beneficial changes in the behaviors of accountants, directors, and officers); and Brett McDonnell, *SOx Appeals*, 2004 MICH. ST. DCL L. REV. 505 (explaining how SOX induced regulators and private actors better informed than Congress to undertake a new reform dynamic spurring desirable changes in the corporate governance of U.S. companies).

<sup>28</sup> Luigi Zingales, *The Costs and Benefits of Financial Market Regulation*, European Corporate Governance Institute Working Paper Series in Law No. 21/2004, (Apr. 2004), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=536682](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=536682).

<sup>29</sup> Edward Sherwin, *Cost-Benefit Analysis of Financial Regulation: Why Dollars Don't Always Make Sense in SEC Rulemaking* 76-83 (Apr. 27, 2005), available at <http://www.law.harvard.edu/faculty/hjackson/projects.php>.

<sup>30</sup> *Id.*, at 14-20. The Securities Regulation Section of the American Association of Law Schools annual meeting chose as its focus: "Cost-Benefit Analysis in Financial Regulation" (January 4, 2006). Background materials available at <http://www.law.harvard.edu/faculty/hjackson/projects.php>.

<sup>31</sup> See, e.g., Kenneth J. Arrow et al., *Is There a Role for Cost-benefit Analysis in Environmental, Health, and Safety Regulation?*, 272 SCI. 221 (1996) (suggesting that CBA can play an important role in helping to inform regulatory decision-making if utilized appropriately); JONATHAN BARON, *JUDGMENT MISGUIDED:*

a hypothesis, which could prove to be false either because CBA is too costly or difficult for policy makers to consistently and successfully implement.

This Article advocates going beyond Long-Standing CBA (LSCBA) to incorporate emotional impacts, including process concerns.<sup>32</sup> In other words, this Article promotes a different and novel CBA, namely Affective CBA (ACBA). LSCBA has been defined as “a set of procedures for defining and comparing benefits and costs. In this sense it is a way of organizing and analyzing data as an aid to thinking.”<sup>33</sup> LSCBA does not count affect in analyzing benefits and costs. Some omissions are implicit and unconscious as it has become a second-hand, automatic reflex for LSCBA to ignore much affect because of the dual conservative forces of precedent and tradition. Other exclusions of affect in LSCBA are conscious, deliberate, explicit and intentional choices due to beliefs and feelings that affective variables are categorically distinct from non-affective variables;<sup>34</sup> and perhaps being insurmountably difficult to measure, too complex to easily analyze, or too nebulous to make operational.

A formal definition of ACBA is analysis which evaluates and measures emotional impacts of alternative policies. This Article utilizes the phrase, “emotional impacts” to mean impacts of affective benefits and affective costs upon traditional economic and financial variables. Affect and emotions are internal experiences intrinsic to people, in contrast with financial income and monetary wealth, which are variables that are or can easily become publicly

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INTUITION AND ERROR IN PUBLIC DECISION MAKING 189-93 (1998) (explaining the advantages of CBA); and CASS R. SUNSTEIN, *THE COST-BENEFIT STATE: THE FUTURE OF REGULATORY PROTECTION* 25-26 (2002) (“[t]he strongest arguments for CBA seem to rest not with neoclassical economics, but with common sense, informed by behavioral economics and cognitive psychology”).

<sup>32</sup> Douglas Kysar, *Preferences for Processes: The Process/Product Distinction and the Regulation of Consumer Choice*, 118 HARV. L. REV. 525 (2004).

<sup>33</sup> RICHARD O. ZERBE, JR. & DWIGHT D. DIVELY, *COST-BENEFIT ANALYSIS IN THEORY AND PRACTICE* 2 (1994).

<sup>34</sup> CASS R. SUNSTEIN, *RISK AND REASON: SAFETY, LAW, AND THE ENVIRONMENT* 292 (2003) (stating that CBA “might seem to disregard people’s sense of risk and danger. The point is correct, but is no objection. Policy should ordinarily be rooted in evidence, not baseless fear or unwarranted optimism”).

or externally observable and extrinsic to people. Examples of positive affect include awe,<sup>35</sup> exuberance,<sup>36</sup> and happiness;<sup>37</sup> while negative affect includes envy,<sup>38</sup> guilt,<sup>39</sup> shame,<sup>40</sup> and stress.<sup>41</sup>

Much of the controversy over the aforementioned mutual fund governance rules involved process concerns over whether the SEC sincerely and truly deliberated before affirming its mutual fund governance rules upon the U.S. Court of Appeals for the D.C. Circuit's decision to remand them to the SEC for consideration of those rules' costs. As the distinguished economist, Albert O. Hirschman eloquently stated, "for a democracy to function well and to endure, it is essential, so it has been argued, that opinions *not* be fully formed *in advance* of the process of deliberation."<sup>42</sup> Thus, ACBA could and should consider not only affective substantive benefits, but also such affective procedural or process benefits as public acknowledgement of a viewpoint or public hearing of a voice because social psychological research finds that people feel good even about judicial outcomes for the other side, if they have a chance to air their side.<sup>43</sup> Similarly, ACBA could and should consider not only affective substantive costs, but also such

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<sup>35</sup> Dacher Keltner & Jonathan Haidt, *Approaching Awe, A Moral, Spiritual, and Aesthetic Emotion*, 17 COGNITION AND EMOTION 297 (2003).

<sup>36</sup> See, e.g., Peter H. Huang, *Regulating Irrational Exuberance and Anxiety in Securities Markets*, in THE LAW AND ECONOMICS OF IRRATIONAL BEHAVIOR 501, 520-23 (Francesco Paresi & Vernon Smith eds., 2005).

<sup>37</sup> See, e.g., JONATHAN HAIDT, THE HAPPINESS HYPOTHESIS (2006).

<sup>38</sup> See, e.g., Vai-Lam Mui, *The Economics of Envy*, 26 J. ECON. BEHAV. & ORG. 311 (1995).

<sup>39</sup> See, e.g., Peter H. Huang, *Trust, Guilt and Securities Regulation*, 151 U. PA. L. REV. 1059 (2001).

<sup>40</sup> See, e.g., and Peter H. Huang & Christopher J. Anderson, *A Psychology of Emotional Legal Decision Making: Revulsion And Saving Face in Legal Theory and Practice*, 90 MINN. L. REV. (forthcoming 2006) (reviewing MARTHA NUSSBAUM, *HIDING FROM HUMANITY: DISGUST, SHAME, AND THE LAW* (2004)).

<sup>41</sup> Carol Nickerson et al., *Zeroing in on the Dark Side of the American Dream: A Closer Look at the Negative Consequences of the Goal for Financial Success*, 14 PSYCHOL. SCI. 531 (2003); Tim Kasser & Richard M. Ryan, *A Dark Side of the American Dream: Correlates of Financial Success as A Central Life Aspiration*, 65 J. PERSONALITY & SOC. PSYCHOL. 410 (1993); and Tim Kasser & Richard M. Ryan, *Further Examining the American Dream: Differential Correlates of Intrinsic and Extrinsic Goals*, 22 J. PERSONALITY & SOC. PSYCHOL. 281 (1996). See generally, ALEX J. ZAUTRA, EMOTIONS, STRESS, AND HEALTH (2003).

<sup>42</sup> Albert O. Hirschman, *Having Opinions – One of the Elements of Well-Being?*, 79 AM. ECON. REV. 75. 77 (1989).

<sup>43</sup> See generally, YUEN J. HUO & TOM R. TYLER, TRUST IN THE LAW: ENCOURAGING PUBLIC COOPERATION WITH THE POLICE AND COURTS (2002); TOM R. TYLER, THE SOCIAL PSYCHOLOGY OF PROCEDURAL JUSTICE (1998); and TOM R. TYLER, WHY PEOPLE OBEY THE LAW: PROCEDURAL JUSTICE, LEGITIMACY, AND COMPLIANCE (1990).

affective procedural or process costs as emotional difficulties that individuals and groups of people have in making certain types of tradeoffs.<sup>44</sup>

LSCBA strives to be and often appears to be and is a cold and unemotional, technocratic method of (assisting) human decision-making. Some people have felt that “[s]ome debates were so emotionally charged, you couldn’t even conduct them – and certainly not in public.”<sup>45</sup> In fact, process concerns including affective costs of deliberating over and making tragic choices,<sup>46</sup> explicitly instead of implicitly, help to explain some people’s resistance to LSCBA. Expressive theories of law view choices among incommensurable options and the processes by which we as individuals and societies make those choices to be signals to others or ourselves about who we are or hope to be.<sup>47</sup>

This Article advocates that financial regulators can and must incorporate consequences that securities and financial regulations have upon the affect, emotions, and moods of investors, other financial markets participants, and even people who are not involved with or in financial markets.<sup>48</sup> ACBA advocates indirect measures of impacts that affective benefits and costs have upon traditional economic and financial variables. In contrast, LSCBA of environmental, health, and safety regulations is based upon measures of non-affective benefits and costs, determined via revealed preference techniques, such as hedonic pricing methodology,<sup>49</sup> or stated preference

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<sup>44</sup> See generally, MARY LUCE FRANCES ET AL., EMOTIONAL DECISIONS: TRADEOFF DIFFICULTY AND COPING IN CONSUMER CHOICE (2001).

<sup>45</sup> RICHARD BRADLEY, HARVARD RULES: THE STRUGGLE FOR THE SOUL OF THE WORLD’S MOST POWERFUL UNIVERSITY 19 (2005).

<sup>46</sup> See generally, GUIDO CALABRESI & PHILIP BOBBITT, TRAGIC CHOICES (1978).

<sup>47</sup> See generally, ELIZABETH S. ANDERSON, VALUE IN ETHICS AND ECONOMICS (1996); Elizabeth S. Anderson & Richard H. Pildes, *Expressive Theories of Law: A General Restatement*, 148 U. PA. L. REV. 1503 (2000); and Richard H. Pildes & Elizabeth S. Anderson, *Slinging Arrows At Democracy: Social Choice Theory, Pluralism, and Democratic Politics*, 90 COLUM. L. REV. 2121 (1990).

<sup>48</sup> See, e.g., Andrew W. Lo et al., *Fear and Greed in Financial Markets: A Clinical Study of Day-Traders*, 95 AM. ECON. REV. ? (forthcoming 2005), (Mar. 22, 2005) revised version available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=690501](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=690501) (finding in a sample of 80 anonymous day-traders that there was a correlation between more intense emotional reactions to monetary gains or losses and significantly worse trading performance).

<sup>49</sup> See, e.g., Daniel McFadden, *The New Science of Pleasure: Consumer Behavior and the Measurement of Well-Being*, Frisch Lecture, Econometric Society World Congress, London (Aug. 20, 2005) (revised Oct. 5, 2005), available at [http://emlab.berkeley.edu/users/webfac/dromer/e237\\_f05/mcfadden.pdf](http://emlab.berkeley.edu/users/webfac/dromer/e237_f05/mcfadden.pdf).

techniques, such as contingent valuation methodology.<sup>50</sup> ACBA shares its emphasis on actual impacts as opposed to inferred tastes or hypothetical preferences with a recent inquiry by 2002 Nobel Laureate in economics Daniel Kahneman,<sup>51</sup> and economist Robert Sugden, analyzing the possibility of appraising economic policy based upon experienced utility measures.<sup>52</sup> Finally, ACBA is an example of and thus related to psychologist Gerald Clore's notion of emotional accounting.<sup>53</sup>

An understandable concern at least among non-economists about ACBA is that it privileges economics in policy evaluation by framing affective reactions to or emotional impacts of policies as benefits or costs which economists can add or subtract in performing CBA. But, economics and economists are privileged already in government and legal and policy decision-making. Indeed, economists have long enjoyed privileged roles in social policy formation and implementation for quite some time, as evidenced for example by the Council of Economic Advisors (CEA).<sup>54</sup> The CEA consists of three independent economists who according to its founding mandate, "provide the President with objective economic analysis and advice on the development and implementation of a wide range of domestic and international economic policy issues."<sup>55</sup> The CEA prepares an overview annually of U.S. economic progress in a document known as the Economic Report of the President.<sup>56</sup> The CEA has a staff, which "includes about 20

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<sup>50</sup> See, e.g., Kenneth J. Arrow et al., *Report of the NOAA Panel on Contingent Valuation*, 58 FED. REG. 4601 (1993); and Dollar-Based Ecosystem Valuation Methods: Contingent Valuation Method, available at [http://www.ecosystemvaluation.org/contingent\\_valuation.htm](http://www.ecosystemvaluation.org/contingent_valuation.htm).

<sup>51</sup> <http://nobelprize.org/economics/laureates/2002/index.html>.

<sup>52</sup> Daniel Kahneman & Robert Sugden, *Experienced Utility as a Standard of Policy Evaluation*, 32 ENVTL. & RESOURCE ECON. 161 (2005).

<sup>53</sup> Gerald L. Clore, *For Love or Money: Some Emotional Foundations of Rationality*, 80 CHI.-KENT L. REV. 1151, 1159 (2005).

<sup>54</sup> <http://www.whitehouse.gov/cea/>.

<sup>55</sup> The Employment Act of 1946. H.R. 2202, S. 380, 15 U.S.C. § 1021 et seq. See generally, G. J. Santoni, *The Employment Act of 1946: Some History Notes*, FED. RES. BANK OF ST. LOUIS REV., Nov. 1986, at 5-16. See also, [http://www.americanpresident.org/action/orgchart/administration\\_units/councilofeconomicadvisers/a\\_index.shtml](http://www.americanpresident.org/action/orgchart/administration_units/councilofeconomicadvisers/a_index.shtml).

<sup>56</sup> <http://www.gpoaccess.gov/eop/>.

academic economists, plus four permanent economic statisticians.”<sup>57</sup> Another example of the privileging of economics in law and public policy is that “[i]n the last few decades, the law and economics movement has had a tremendous impact on legal studies.”<sup>58</sup>

Psychologist Daniel Kahneman, a 2002 Nobel Laureate in economics, made this observation:

“there are really two disciplines that are in charge, and they’re the economists and the lawyers. And the economists, in particular, are the gatekeepers, the academic gatekeepers of the policy world. They do the research, they interpret the research, and so everything goes through them in terms of what actually gets implemented. ... and this situation is one that is not going to change soon.”<sup>59</sup>

Thus, Kahneman believes that psychologically informing economics is likely to be more influential and effective than attempting removal of economics from law and public policy.<sup>60</sup>

ACBA incorporates psychological insights about process concerns and emotional impacts into a controversial, albeit established set of economic policy valuation procedures, namely CBA.

Finally, ACBA is not LSCBA, but instead complements LSCBA. In other words, LSCBA is not complete because it fails to include ACBA. Similarly, ACBA is also incomplete because it does not repeat LSCBA. Thus, to engage in a Total CBA (TCBA) of a regulation entails adding a LSCBA of that regulation to an ACBA of that regulation. In symbols,  $TCBA = LSCBA + ACBA$ . This equation is only intended to be a metaphor for incorporating affective benefits and costs into policy analysis. In other words, a regulator should account simultaneously for affective and non-affective variables as benefits and costs. This Article advocates ACBA to achieve TCBA in general and in securities and final regulation in particular. This Article utilizes

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<sup>57</sup> [http://en.wikipedia.org/wiki/Council\\_of\\_Economic\\_Advisors](http://en.wikipedia.org/wiki/Council_of_Economic_Advisors).

<sup>58</sup> EMMA COLEMAN JORDAN & ANGELA P. HARRIS, *ECONOMIC JUSTICE: RACE, GENDER, IDENTITY, AND ECONOMICS*, at v (2005).

<sup>59</sup> Daniel Kahneman, *Does Psychology Have Anything To Say to Policy Makers?*, 1 (Oct. 3, 2003), available at [http://www.gallup.hu/pps/2003/kahneman\\_transscript.pdf](http://www.gallup.hu/pps/2003/kahneman_transscript.pdf).

<sup>60</sup> See e.g., Russel B. Korobkin & Thomas S. Ulen, *Law and Behavioral Science: Removing the Rationality Assumption from Law and Economics*, 81 CA. L. REV. 1051 (2000).

a specific example, namely U.S. federal securities regulation, to be a template for analyzing how and why regulators can and should perform ACBA more generally.

The rest of this Article is organized as follows. A first section analyzes ACBA in financial regulation, and also advocates that if U.S. financial regulators are going to engage in LSCBA, they should also engage in ACBA in order for their CBA to be complete. Section II analyzes conceptual and measurement issues that arise in ACBA. Section III illustrates how these general issues arise in ACBA of a number of alternative particular categories of regulating financial and securities information transmission. A conclusion summarizes this Article and speculates on applying ACBA to non-financial social policies.

#### **I. Affective Cost-Benefit Analysis in Financial Regulation**

To preview this first section, consider these five alternative positions concerning the propriety of utilizing CBA in financial regulation. First, there is a role for some type of CBA in financial regulation. Second, a financial regulator should engage in LSCBA. Third, if a financial regulator should engage in LSCBA, then it should also, if possible, engage in ACBA in order to accomplish TCBA. Fourth, no regulator should engage in LSCBA because of at least one of its many existing critiques. Fifth, a financial regulator should not engage in CBA because of the fact that ACBA and hence TCBA is difficult, if not impossible, to perform rigorously and scientifically. As the introduction of this Article stated, this Article assumes the validity of the first viewpoint and it does not analyze the second viewpoint, but several other legal scholars argue for and endorse the first and second points of view.<sup>61</sup>

This Article accepts the first viewpoint about CBA to be a working hypothesis. This Article does not explicitly analyze the second judgment over the desirability of CBA in financial regulation. This Article does explicitly advocate that financial regulators take the third position regarding CBA. This Article does not address the fourth attitude towards LSCBA, because this Article does not endorse that financial regulators engage in LSCBA. Moreover, a number of

legal scholars already make persuasive critiques of LSCBA.<sup>62</sup> This Article is agnostic over the fifth position because whether financial regulators can engage in ACBA in a determinate, principled, and unbiased manner is an open question. Naturally, this Article admits the fifth position is a possibility which actual empirical experience with attempted ACBA might prove to be the case. But, until such empirical evidence becomes available, in the meantime, this Article theoretically evaluates potential conceptual problems and measurement difficulties with ACBA in general and in the specific contexts of securities regulation and financial regulation.

Two critics of LSCBA state that “[i]n practice, most cost-benefit analyses could more accurately be described as “complete cost-incomplete benefit” studies. Most or all of the costs are readily determined market prices, but many important benefits cannot be meaningfully quantified or priced, and are therefore implicitly given a value of zero.”<sup>63</sup> A reason LSCBA is incomplete about benefits, while complete about costs is that many costs are non-affective and easy to measure, while those benefits that are left out include process concerns and affective variables, which are perceived to be difficult for us to quantify. ACBA explicitly recognizes process concerns and other affective benefits and places non-zero values upon them.

#### **A. How Affective and Long-Standing Cost-Benefit Analysis Differ**

To illustrate how ACBA differs from LSCBA, reconsider the case which this Article started with, namely the SEC rule that requires mutual funds to have independent board chairs and a higher percentage of independent directors than before. LSCBA of requiring independent board chairs and more independent directors for mutual funds considered, among other financial costs, these:<sup>64</sup> (1) search costs to find qualified board candidates; (2) new board member salaries; (3) higher compensation for independent board chairs; and (4) additional remuneration to retain

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<sup>61</sup> *Langevoort, supra* note 26; *Ribstein, supra* note 26; and *Romano, supra* note 26.

<sup>62</sup> FRANK ACKERMAN & LISA HEINZERLING, PRICELESS: ON KNOWING THE PRICE OF EVERYTHING AND THE VALUE OF NOTHING 35-40 (2004). *See generally*, Henry S. Richardson, *The Stupidity of the Cost-Benefit Standard*, 29 J. LEGAL STUD. 971 (2000).

<sup>63</sup> ACKERMAN & HEINZERLING, *supra* note 62, at 40.

<sup>64</sup> *Investment Company Governance, supra* note 18, at 39,391-39,396.

independent legal counsel and other support staff for new independent directors. LSCBA considered, among other financial benefits, these:<sup>65</sup> (1) enhancing quality fund governance; (2) fostering more capital formation; (3) increasing accountability by fund boards; and (4) increasing market liquidity.

ACBA of requiring independent board chairs and more independent directors for mutual funds evaluates likely magnitudes of such affective costs as these: (1) a false sense of security by fund shareholders resulting in less individual vigilance; (2) additional influence costs;<sup>66</sup> (3) reduced board cohesiveness; and (4) transition costs of changing board cultures. ACBA should also quantify such affective benefits as these: (1) avoiding documented perverse, psychological shortcomings to simply disclosing conflicts of interest;<sup>67</sup> (2) lower decision-making anxiety for potential fund shareholders; (3) lower stress for existing fund shareholders; and (4) placebo effects.<sup>68</sup> The first affective benefit cited above requires explicitly comparing the proposed substantive regulation with the most common policy alternative in the SEC's regulatory toolkit, namely mandatory disclosure. This example thus illustrates how ACBA could lead to a regulatory outcome different from traditional policy instruments under LSCBA.

ACBA should obtain evidence from, among other sources, a request for public comment and empirical affective data as to whether and, if so, how much this proposed rule would actually promote the affective benefit of more investor confidence. The affirming majority of the SEC's Commissioners merely and summarily asserted as buzzwords and as a mantra,<sup>69</sup> without engaging

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<sup>65</sup> *Id.*, at 39,396.

<sup>66</sup> Margaret A. Meyer et al., *Organizational Prospects, Influence Costs and Ownership Changes*, 1 J. ECON. & MGMT. STRATEGY 9 (1992).

<sup>67</sup> Daylian M. Cain et al., *Coming Clean but Playing Dirtier: The Shortcomings of Disclosure as a Solution to Conflicts of Interest*, in CONFLICTS OF INTEREST: CHALLENGES AND SOLUTIONS IN BUSINESS, LAW, MEDICINE, AND PUBLIC POLICY 104 (Don A. Moore et al. eds., 2005) (presenting evidence that disclosure of conflicts of interest can have two perverse effects: (1) disclosers behave in more biased fashion; and (2) audience of disclosure insufficiently discounts for conflict of interest); and Daylian M. Cain et al., *The Dirt on Coming Clean: Perverse Effects of Disclosing Conflicts of Interest*, J. LEGAL STUD. (forthcoming) (same), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=480121](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=480121).

<sup>68</sup> Amitai Aviram, *The Placebo Effect of Corporate Compliance Programs* (unpublished manuscript), available at <http://www.law.ufl.edu/faculty/publications/pdf/avir.pdf>.

<sup>69</sup> Investment Company Governance, *supra* note 18, at 39,396 and 39, 400-39,401.

in ACBA to quantify in dollar terms the value of promoting investor confidence.<sup>70</sup> Both dissenting SEC's Commissioners criticized and questioned the affirming majority for such vague assertions.<sup>71</sup> Thus, a contentious part of the controversy over these mutual fund governance rules is the actual size of a particular and often cited affective benefit, namely more investor confidence over and greater trust in securities markets. In other words, the controversy over these mutual fund governance rules can in large part be understood as differences in beliefs about whether the SEC can and should perform ACBA of investor confidence.

It is quite intuitive to believe that there was a flight from U.S. stock markets because investors lost confidence and trust in our stock markets after our string of infamous corporate scandals. A trust-based explanation of why investors deserted American stock markets would imply that restoring, maintaining, and promoting investor confidence about and trust in our stock markets is crucial to U.S. economic prosperity. But, trust plays no role in the standard finance literature about investors' optimal portfolio choices and rates of stock market participation. Only very recently, a financial model demonstrates formally how people's fears of being cheated reduce their participation in stock markets.<sup>72</sup> Calibrating this model shows that mistrust in stock markets alone can explain why many people with a lot of wealth in the U.S. do not buy stocks, in addition to account for cross-country differences in stock market participation rates.<sup>73</sup> Also very recently, a study conducting five experiments "found that incidental emotions significantly influence trust in unrelated settings. Happiness and gratitude – emotions with positive valence – increase trust, and anger – an emotion with negative valence – decreases trust."<sup>74</sup> Future

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<sup>70</sup> *Id.*, at 39,396.

<sup>71</sup> *Id.*, at 39,405 and 39,408.

<sup>72</sup> Luigi Guiso et al., Trusting the Stock Market, Nat'l Bureau of Econ. Res. Working Paper No. 11648 (unpublished manuscript) (Sept. 19, 2005), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=811545](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=811545).

<sup>73</sup> *Id.*

<sup>74</sup> Jennifer R. Dunn & Maurice E. Schweitzer, *Feeling and Believing: The Influence of Emotion on Trust*, 88 J. PERSONALITY & SOC. PSYCHOL. 736 (2005).

research should analyze how such emotions as anxiety and frustration influence trust.<sup>75</sup> A pair of legal scholars also recently proposed a cognitive theory about optimal trust and explored its policy implications for two settings: corporate governance and doctor-patient relationships.<sup>76</sup>

A recent empirical study by several economists at the Brookings Institution provided ballpark estimates that suggest the crisis in U.S. corporate governance reduced the U.S. Gross Domestic Product (GDP) in the first year after the scandals from a low of 0.20% to a high of 0.48% of GDP, or approximately \$21 to \$49.9 billion.<sup>77</sup> In their base case, GDP drops 0.34%, or approximately \$35.4 billion. To place these base case numbers in comparative perspective and familiar contexts, those numbers are in the range of what the federal government spent annually on homeland security, or the surge in annual total costs of U.S. oil imports due to a \$10 or 38% rise in the per barrel price of crude oil.<sup>78</sup> They base their calculations on conservative estimates of how the corporate governance crisis impacts stock market wealth, which in turn affects consumer expenditures and investment,<sup>79</sup> calibrated according to a model of the U.S. economy due to the Federal Reserve Board.<sup>80</sup> Their estimates are conservative because they do not include longer-term supply side disturbances related to bankruptcies of several major corporations, or inefficiencies due to distorted consumer, corporate, and investor decisions based upon misreported corporate earnings.

A possible concern about ACBA is that while people experience affective benefits and costs, those experiences are quite variable in terms of being temporary psychological effects that

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<sup>75</sup> *Id.*, at 746.

<sup>76</sup> Claire A. Hill & Erin Ann O'Hara, A Cognitive Theory of Trust (unpublished manuscript) (Nov. 2005).

<sup>77</sup> Carol Graham et al., *The Bigger They Are, the Harder They Fall: An Estimate of the Costs of the Crisis in Corporate Governance*, 6 Working Paper The Brookings Institution (Aug. 30, 2002), available at <http://www.brookings.edu/Views/Papers/Graham/20020722Graham.pdf>. See also, Carol Graham et al., *Cooking the Books: The Cost to the Economy*, Policy Brief # 106, The Brookings Institution (Aug. 2002), available at <http://www.brookings.edu/comm/policybriefs/pb106.htm>; and *Cooking the Books: The Economic and Political Implications of the Crisis in Corporate Governance*, 3-6, A Brookings National Issues Forum (Sept. 4, 2002), available at <http://www.brookings.edu/comm/events/20020904.htm>.

<sup>78</sup> Graham et al., *supra* note 77, at 11.

<sup>79</sup> James M. Porterba & Andrew A. Samwick, *Stock Ownership Patterns, Stock Market Fluctuations, and Consumption*, 2 BROOKINGS PAPERS ON ECON. ACTIVITY 295 (1995).

dissipate with experience or practice. To be sure, there is well-known psychological evidence that people adapt over time both faster and more than they and others expected to happiness,<sup>81</sup> and some types of unhappiness.<sup>82</sup> In other words, the affective forecasting literature in social psychology finds that people overestimate both the duration and intensity of their future happiness or unhappiness in response to changes in their external circumstances.<sup>83</sup> Such affective overestimation can be due to a number of sources,<sup>84</sup> including a focusing illusion,<sup>85</sup> a distinction bias,<sup>86</sup> and immune neglect.<sup>87</sup> Regardless of its cause, people inaccurately anticipate their adaptation upon a hedonic treadmill.<sup>88</sup> People also incorrectly predict other people's emotional

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<sup>80</sup> David Reifschneider et al., *Aggregate Disturbances, Monetary Policy, and the Macroeconomy: The FRB/US Perspective*, FED. RES. BULL. (Jan. 1999).

<sup>81</sup> See, e.g., Philip Brickman, Dan Coates & Ronnie J. Janoff-Bulman, *Lottery Winners and Accident Victims: Is Happiness Relative?*, 36 J. PERSONALITY & SOC. PSYCHOL. 917 (1978). But see, Richard A. Easterlin, *Is There an "Iron Law of Happiness"?*, Institute of Economic Policy Research Working Paper 05.8 (Jan. 2005), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=653543](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=653543); and Sonja Lyubomirsky et al., *Pursuing Happiness: The Architecture of Sustainable Change* 9 REV. GEN. PSYCHOL. 111 (2005).

<sup>82</sup> See, e.g., Robert H. Frank, *Does Absolute Income Matter?*, in *ECONOMICS AND HAPPINESS: FRAMING THE ANALYSIS* (Luigino Bruni & Pier Luigi Porta eds., 2006); and Andrew J. Oswald & Nattavudh Powdthavee, *Does Happiness Adapt? A Longitudinal Study of Disability with Implications for Economists and Judges*, (unpublished manuscript) (Sept. 30, 2005), available at [http://www2.warwick.ac.uk/fac/soc/economics/staff/faculty/oswald/hedonic\\_adaptation.pdf](http://www2.warwick.ac.uk/fac/soc/economics/staff/faculty/oswald/hedonic_adaptation.pdf).

<sup>83</sup> See, e.g., Jeremy A. Blumenthal, *Law and the Emotions: The Problem of Affective Forecasting*, 80 IND. L.J. 155 (2005); Daniel T. Gilbert et al., *Looking Forward to Looking Backward*, 15 PSYCHOL. SCI. 346 (2004); Jon Gertner, *The Futile Pursuit of Happiness*, N.Y. TIMES MAG., Sept. 7, 2003, at 44; Jennifer S. Lerner & Roxana M. Gonzalez, *Forecasting One's Future Based on Fleeting Subjective Experiences*, 31 PERSONALITY & SOC. PSYCHOL. BULL. 454 (2005); and Timothy D. Wilson et al., *Making Sense: The Causes of Emotional Evanescence*, in 1 THE PSYCHOLOGY OF ECONOMIC DECISIONS: RATIONALITY AND WELL-BEING 209 (Isabelle Brocas & Juan D. Carrillo eds., 2003).

<sup>84</sup> Daniel Kahneman & Richard H. Thaler, *Utility Maximization & Experienced Utility*, J. ECON. PERSP. (forthcoming) (discussing four areas of mistaken hedonic forecasts and choices).

<sup>85</sup> See, e.g., David A. Schkade & Daniel Kahneman, *Does Living In California Make People Happy? A Focusing Illusion in Judgments of Life Satisfaction*, 9 P PSYCHOL. SCI. 340 (1998); and Timothy Wilson et al., *Focalism: A Source of Durability Bias in Affective Forecasting*, 78 J. PERSONALITY & SOC. PSYCHOL. 821 (2000). But see, Kent C. H. Lam et al., *Cultural Differences in Affective Forecasting: The Role of Focalism*, 31 PERSONALITY & SOC. PSYCHOL. BULL. 1296 (2005) (presenting three studies which support a hypothesis that East Asians, who tend to think more holistically than Westerners, are less susceptible to focalism and, thus, bias in affective forecasting).

<sup>86</sup> Christopher K. Hsee & Jiao Zhang, *Distinction Bias: Misprediction and Mischoice Due to Joint Evaluation*, 86 J. PERSONALITY & SOC. PSYCHOL. 680 (2004).

<sup>87</sup> Daniel Gilbert et al., *Immune Neglect: A Source of Durability Bias in Affective Forecasting*, 75 J. PERSONALITY & SOC. PSYCHOL. 617 (1998).

<sup>88</sup> See, e.g., RICHARD LAYARD, *HAPPINESS: LESSONS FROM A NEW SCIENCE* 48-49 (2005) (describing hedonic adaptation); and Daniel Kahneman, *Objective Happiness*, in *WELL-BEING: THE FOUNDATIONS OF HEDONIC PSYCHOLOGY* 13-14 (Daniel Kahneman, Ed Diener & Norbert Schwarz eds., 1999) (analyzing the hedonic treadmill hypothesis).

reactions,<sup>89</sup> and their hedonic adaptation.<sup>90</sup> But, what is crucial for our purposes is to remember two points. First, based upon their inaccurate affective forecasts, people will make decisions, some of which are irreversible or very costly to reverse. Second, ACBA does not ask people to forecast ex ante their affect in the future, but instead envisions asking people to report ex post experienced and remembered affect.

The above study by economists at the Brookings Institution demonstrates that even if affective benefits and costs are transitory or people can adapt to affective reactions, affect has irreversible and permanent consequences upon such traditional economic variables as levels of aggregate consumption, investment, stock prices, and stock volume. More generally, incorrect affective forecasts will transform any forward-looking behavior, such as commercial real estate purchases, commercial and personal borrowing, consumer durable expenditures, mortgage financing and refinancing, new home construction, and residential real estate purchases. As 1972 Nobel Laureate in economics,<sup>91</sup> Kenneth Arrow noted, expectations concerning the future affect many economic decisions in the present.<sup>92</sup> ACBA should build upon recent economic theoretical research about how such affect as anxiety and fear influence people's consumption, investment, and savings decisions.<sup>93</sup> Economists have only just begun to analyze theoretical models of how

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<sup>89</sup> Leaf Van Boven et al., *The Illusion of Courage in Social Predictions: Underestimating the Impact of Fear of Embarrassment on Other People*, 96 *ORG. BEHAV. & HUMAN DECISION PROCESSES* 130 (2005).

<sup>90</sup> Jason Riis et al., *Ignorance of Hedonic Adaptation to Hemodialysis: A Study Using Ecological Momentary Assessment*, 134 *EXPERIMENTAL PSYCHOL.: GENERAL* 3 (2005).

<sup>91</sup> George Loewenstein & Ted O'Donoghue, *Animal Spirits: Affective and Deliberative Processes in Economic Behavior*, available at <http://nobelprize.org/economics/laureates/1972/index.html>.

<sup>92</sup> See generally, Kenneth Joseph Arrow, *The Future and the Present in Economic Life*, 16 *ECON. INQUIRY* 157 (1978).

<sup>93</sup> See, e.g., Andrew Caplin & Jonathan Leahy, *Psychological Expected Utility Theory and Anticipatory Feelings*, 116 *Q. J. ECON.* 51 (2001) (providing the first theoretical model of how anticipatory emotions can alter economic behavior); and Wojciech Kopczuk & Joel Slemrod, *Denial of Death and Economic Behavior*, Nat'l Bureau of Econ. Res. Working Paper 11485 (June 2005) (providing the first theoretical model of the impact of denial and fear of death upon consumption and saving decisions), available at <http://www.nber.org/papers/w11485>.

regulators can and should take into account and utilize such affect as anxiety and fear to influence people's behavior.<sup>94</sup>

ACBA is able to address whether investors being concerned or scared about mutual fund board independence supports increasing the percentage of independent directors on mutual fund boards from 50% to 75%. ACBA also can address whether and how much of a reduction in levels of mutual fund investors' anxiety justifies requiring mutual funds to retain independent board chairs. In thinking about distinctions among financial regulations for which ACBA could be important, and those for which ACBA might not, behavioral finance research is relevant.<sup>95</sup> For example, ACBA should matter more for rules about closed-end funds, which are simply "firms whose only asset is a portfolio of common stocks,"<sup>96</sup> than open-end funds, which "stand ready to buy or sell additional shares at a price equal to the fund's net asset value per share."<sup>97</sup> A reason for this difference is because individuals are more involved with closed-end funds than with open-end funds. For that same reason, closed-end fund pricing is a behavioral puzzle,<sup>98</sup> while "[t]he share price of an open-end fund always equals net asset value."<sup>99</sup>

It would help courts, the SEC, and securities law scholars to answer these questions to decide in what financial environments ACBA adds value to LSCBA in regulatory and policy

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<sup>94</sup> See Andrew Caplin, *Fear as a Policy Instrument*, in TIME AND DECISION: ECONOMICS AND PSYCHOLOGICAL PERSPECTIVES ON INTERTEMPORAL CHOICE 441-58 (George Loewenstein, Daniel Read, & Roy F. Baumeister eds., 2003) (providing the first theoretical model of how to utilize fear-inducing messages to motivate citizens to undertake preventive care); Andrew Caplin & Kfir Eliaz, *AIDS Policy and Psychology: A Mechanism-Design Approach*, 34 RAND J. ECON. 631 (2003) (providing the first theoretical model of AIDS policy when people are fearful of AIDS testing); Andrew Caplin & Jonathan Leahy, *The Supply of Information by a Concerned Expert*, 114 ECON. J. 487 (2004) (providing the first theoretical model of the optimal disclosure procedure for doctors facing potentially anxious patients); Andrew Caplin & Jonathan Leahy, *Behavioral Policy*, in 1 THE PSYCHOLOGY OF ECONOMIC DECISIONS: RATIONALITY AND WELL-BEING 73, 79-85 (Isabelle Brocas & Juan D. Carillo eds., 2003) (outlining theoretical challenges that anxiety and stress pose for analyzing such educational policies as genetic testing and providing financial retirement savings information); and Botond Koszegi, *Health Anxiety and Patient Behavior*, 22 J. HEALTH ECON. 1073 (2003) (providing the first theoretical model of patients' anxiety over their health and consequences of such fears and stress for patient decision-making about information acquisition and treatment).

<sup>95</sup> See generally, II ADVANCES IN BEHAVIORAL FINANCE (Richard H. Thaler ed., 2005).

<sup>96</sup> BREALEY, MYERS, & ALLEN, *supra* note 3, at 963.

<sup>97</sup> Investment Company Governance, *supra* note 18, at 39,405 and 39,408.

<sup>98</sup> Charles M. C. Lee et al., *Investor Sentiment and the Closed-End Fund Puzzle*, 46 J. FIN. 75 (1991).

evaluation. Which SEC rules are most likely to have affective benefits and costs on individual retail investors? Are at least some decision-makers at large institutional investors likely to also experience affective benefits and costs?<sup>100</sup> ACBA can and should also examine how the nature and size of affective benefits and costs differ between individual retail investors, such as the apocryphal widows and orphans, versus large institutional investors, such as mutual funds and pension plan sponsors. In other words, how does this pair of affective costs differ: “I don't want to lose my nest egg” versus “I don't want to be fired.” And, how does this pair of affective benefits differ: “I want my investments to double in value” versus “I want my annual bonus to be huge.”

#### **B. Cost-Benefit Analysis in SEC Rulemaking**

As a general empirical and factual matter, SEC rulemakings often contain sections with apparently extensive LSCBA. A casual perusal of many SEC proposed and final rules finds a larger percentage of pages in them devoted to discussing LSCBA than one might expect. For example, the final version above-mentioned mutual fund governance rule contained a section III, entitled Discussion, which had a subsection I. Costs Resulting From Exemptive Rule Amendments.<sup>101</sup> Both concurring and dissenting SEC Commissioners also engaged in their own additional CBA discussions.<sup>102</sup> Thus, a total of 78% to 79% of the pages in the final version of this rule are devoted to CBA discussions. This might not be surprising because the U.S. Court of Appeals for the D.C. Circuit remanded this rule to the SEC for consideration of its costs.<sup>103</sup>

Another example of an SEC proposal for a rule defining the term “nationally recognized statistical rating organization” contained a section VI, entitled Consideration of the Costs and Benefits of Proposed Rule, which made up approximately 12% to 13% of the pages in that

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<sup>99</sup> *Id.*, at n.12.

<sup>100</sup> *See, e.g.*, Andrew W. Lo & Dmitry V. Repin, *The Psychophysiology of Real-Time Financial Risk Processing*, 14 J. COGNITIVE NEUROSCI. 323 (2002).

<sup>101</sup> Investment Company Governance, *supra* note 18, at 39,391-97.

<sup>102</sup> *Id.*, at 39,399-401; and 39,403-408.

<sup>103</sup> U.S. Chamber of Commerce v. SEC, *supra* note 14.

proposal.<sup>104</sup> A careful examination of these and other such pages reveals that LSCBA by the SEC is often uninformative, should not be taken seriously, and ultimately is likely counterproductive. Also in those areas where ACBA is crucial, such as the often cited by the SEC, affective benefits of investor confidence and trust in the integrity of securities markets, the amount, level, quality, and sophistication of CBA is disappointing.

As a matter of general impression, the SEC rulemaking process clearly at least appears to attempt some discussion of CBA. Reasonable people can debate whether SEC attempts at CBA are more analogous to disingenuous image or public relations and informational management spin or instead sincere public discourse and information acquisition and examination. Reasonable individuals can also disagree over whether SEC discussions of CBA are understandable reactions to perceived demand by securities investors and securities industry professionals for the SEC to engage in CBA justifications of its rulemaking or alternatively overreactions, analogous to physicians engaging in practicing defensive medicine due to fears of unjustified malpractice lawsuits. It remains an open empirical question whether the SEC already possesses or might develop a requisite institutional competence to successfully engage in ACBA.

Thus, while the SEC engages in CBA in an ad hoc and haphazard fashion, the SEC typically does not perform formal, systematic CBA of its regulations. Neither do any of these other U.S. financial regulators: the Commodity Futures Trading Commission (CFTC); the Federal Deposit Insurance Corporation (FDIC); the Federal Reserve Board of Governors; and the Federal Trade Commission (FTC). But, current SEC Commissioner Annette Nazareth, during a Senate Banking Committee confirmation hearing of her nomination, stated that she was “keenly aware of the cost of regulation and the importance of balancing these costs with the benefits that regulation seeks to achieve.”<sup>105</sup> Each of the aforementioned U.S. financial regulators, the SEC, CFTC,

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<sup>104</sup> Definition of Nationally Recognized Statistical Rating Organization, Release Nos. 33-8570; 34-51572; IC-26834; File No. S7-04-05; Proposed Rule 70 Fed. Reg. 21,306, 21,319-21 (Apr. 25, 2005) (to be codified at 17 C.F.R. pt. 240), available at <http://www.sec.gov/rules/proposed/33-8570fr.pdf>

<sup>105</sup> Deborah Solomon, *Cox Pledges to Leave Stock-Options Rule Alone*, N.Y. TIMES, July 27, 2005, at C3.

FDIC, FTC, and Federal Reserve Board of Governors, is exempt from those major provisions of the executive orders that require CBA by executive agencies.<sup>106</sup> Their exemptions are because of their status as independent regulatory agencies, not executive agencies.<sup>107</sup>

The phrase “independent agency” is of course ironic because “independent” financial regulatory agencies, such as the SEC “are not independent of politics; they are highly dependent upon the industries that they are charged with regulating. That dependency is mediated through Congress, which uses its mediating role to extract financial support from the financial services industry, accounting firms and public companies.”<sup>108</sup> So, the SEC and the other aforementioned U.S. financial regulators differ in this regard at least statutorily from U.S. executive agencies, such as the EPA, which engages in CBA more regularly and routinely than it does not in evaluating alternative regulations about environmental social risks.<sup>109</sup>

### C. Cost-Benefit Analysis in Non-Financial Regulation

Applications of CBA to environmental, health, and safety regulations have understandably generated much contentious debate and heated controversy.<sup>110</sup> Some people believe and feel that, as is also possible with an increasingly influential Precautionary Principle,<sup>111</sup> certain politicians and interest groups utilize CBA merely to be an excuse for delay,

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<sup>106</sup> Exec. Order No. 12,291, 3 C.F.R. 127, 128 (1981) § 1(d); Exec. Order No. 12,866, 3 C.F.R. 638, 639 (1993) § 3(b).

<sup>107</sup> Paper Reduction Act of 1980, codified as amended at 44 U.S.C. § 3502(10) (1994) and re-codified at 44 U.S.C. § 3502(5) (2000) after the Paper Reduction Act of 1995, Pub. L. No. 104-13, 109 Stat. 163 (1995).

<sup>108</sup> Adam C. Pritchard, *The SEC at 70: Time for Retirement?*, 80 NOTRE DAME L. REV. 1073, 1092 (2005).

<sup>109</sup> Cass R. Sunstein, *Cost-Benefit Default Principles*, 99 MICH. L. REV. 1651 (2001).

<sup>110</sup> See generally, ACKERMAN & HEINZERLING, *supra* note 62; Robert H. Frank, *Why Is Cost-Benefit Analysis So Controversial?*, 29 J. LEGAL STUD. 913 (2000); Jeffrey L. Harrison, *Piercing Pareto Superiority: Real People and the Obligations of Legal Theory*, 39 AZ. L. REV. 1 (1997); Jeffrey L. Harrison, *Egoism, Altruism, and Market Illusions: The Limits of Law and Economics*, 33 U.C.L.A. L. REV. 1309 (1986); JORDAN & HARRIS, *supra* note 58, at 382-84 (2005); MARK KELMAN, *Is the Kaldor-Hicks Position Coherent?*, in A GUIDE TO CRITICAL LEGAL STUDIES 141-50 (1987); Duncan Kennedy, *Cost-Benefit Analysis of Entitlement Problems: A Critique*, 33 STAN. L. REV. 387, 422-45 (1981); and Symposium, *Cost-Benefit Analysis: Legal, Economic, and Philosophical Perspectives*, 29 J. LEGAL STUD. 837 (2000).

<sup>111</sup> See, e.g., Mike Feintuck, *Precautionary Maybe, But What's the Principle? The Precautionary Principle, the Regulation of Risk, and the Public Domain*, 32 J.L. & SOC. 371 (2005). See generally, CASS R. SUNSTEIN, *LAWS OF FEAR: BEYOND THE PRECAUTIONARY PRINCIPLE* (2005). But see, Dan M. Kahan et al., *Fear and Democracy or Fear of Democracy? A Cultural Evaluation of Sunstein on Risk*, 119 HARV. L.

further study, inaction, and regulatory paralysis.<sup>112</sup> Other legitimate concerns about CBA include these critiques: anti-regulatory tendency;<sup>113</sup> bias;<sup>114</sup> commodification;<sup>115</sup> incommensurability;<sup>116</sup> indeterminacy;<sup>117</sup> measurement errors;<sup>118</sup> and poor track record.<sup>119</sup> Not all of these numerous concerns about CBA in non-financial regulation apply to CBA in financial regulation. For example, dignity and other concerns about valuation of human life,<sup>120</sup> or loss of limb are unlikely, if ever, to arise in applying CBA to financial regulations. But, some other concerns about CBA of non-financial regulations, such as its potential for anti-regulatory bias, political misuse, organizational delay, or institutional paralysis also may apply to CBA of securities and financial regulations.

#### **D. Is the SEC Required by Statute to Engage in Cost-Benefit Analysis?**

The organic statutes of the SEC require that the SEC rulemaking process consider some type of “efficiency” among other desired economic goals, because the “Definitions” sections of each of these statutes: the Securities Act of 1933;<sup>121</sup> the Securities Exchange Act of 1934;<sup>122</sup> the

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REV. (forthcoming 2006) (reviewing and critiquing CASS R. SUNSTEIN, *LAW OF FEAR: BEYOND THE PRECAUTIONARY PRINCIPLE*).

<sup>112</sup> SUNSTEIN, *supra* note 34, at 293 (stating that “[a]ny effort to ensure cost-benefit balancing should ensure that it does not produce “paralysis by analysis.””). See also, Christopher J. Anderson, *The Psychology of Doing Nothing: Forms of Decision Avoidance Result from Reason and Emotion*, 129 PSYCHOL. BULL. 139 (2003).

<sup>113</sup> ACKERMAN & HEINZERLING, *supra* note 62, at 35. But see, Robert W. Hahn, *The Economic Analysis of Regulation: A Response to the Critics*, 71 U. CHI. L. REV. 1021 (2004).

<sup>114</sup> See generally, C. Edwin Baker, *The Ideology of the Economic Analysis of Law*, 5 PHIL. & PUB. AFF. 3 (1975); and Daniel Kahneman, Jack L. Knetsch, & Richard H. Thaler, *The Endowment Effect, Loss Aversion, and Status Quo Bias*, 5 J. ECON. PERSP. 193 (1991).

<sup>115</sup> See generally, MARGARET JANE RADIN, *CONTESTED COMMODITIES* (2001).

<sup>116</sup> See generally, *INCOMMENSURABILITY, INCOMPARABILITY, AND PRACTICAL REASON* (Ruth Chang ed., 1997); and Cass R. Sunstein, *Incommensurability and Valuation in Law*, 92 MICH. L. REV. 779 (1994).

<sup>117</sup> Amy Sinden, *In Defense of Absolutes: Combating the Politics of Power in Environmental Law*, 90 IOWA L. REV. 1405, 1454 (2005); and DANIEL A. FARBER & PHILIP J. FRICKEY, *LAW AND PUBLIC CHOICE: A CRITICAL INTRODUCTION* 34 (1991).

<sup>118</sup> Richard H. Pildes & Cass R. Sunstein, *Reinventing the Regulatory State*, 62 U. CHI. L. REV. 1, 47 (1995).

<sup>119</sup> See generally, Robert W. Hahn & Robert E. Litan, *Counting Regulatory Benefits and Costs: Lessons for the U.S. and Europe*, 8 J. INT’L ECON. L. 473, 478-86 (2005).

<sup>120</sup> See generally, Eric A. Posner & Cass R. Sunstein, *Dollars and Death*, 72 U. CHI. L. REV. 537 (2005).

<sup>121</sup> 15 U.S.C. § 77b-2(b).

<sup>122</sup> 15 U.S.C. § 78c-2(f).

Investment Company Act of 1940;<sup>123</sup> and the Investment Advisors Act of 1940;<sup>124</sup> mandate that SEC rules “consider, in addition to the protection of investors, whether the action will promote efficiency, competition, and capital formation.” Thus, there appears to be statutory textual bases for SEC rulemaking to include CBA because the language of CBA also involves a particular economic notion of efficiency, namely Kaldor-Hicks efficiency.<sup>125</sup> But, does promoting “efficiency” necessarily mean engaging in CBA? There are at least four competing, different concepts of economic efficiency,<sup>126</sup> two providing differing conceptions of financial or informational efficiency, and two involving alternative notions of allocational efficiency. In light of these multiple interpretation of what efficiency sensibly can mean, how should the SEC interpret “efficiency” in these statutes?

### 1. Informational Efficiencies

First, financial economists in addition to some corporate and securities law scholars utilize the word “efficiency” in the context of the Efficient Capital Markets Hypothesis (ECMH).<sup>127</sup> Second, some corporate and securities legal scholars differentiate informational efficiency in the sense of the ECMH from another concept of informational efficiency known as fundamental (value) efficiency.<sup>128</sup> The difference between these concepts is that a securities

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<sup>123</sup> 15 U.S.C. § 80a-2(c).

<sup>124</sup> 15 U.S.C. § 80b-2(c)

<sup>125</sup> See, e.g., ZERBE, JR. & DIVELY, *supra* note 33, at 12-13.

<sup>126</sup> Two additional forms of efficiency not considered here are Keynesian efficiency (which focuses on lost potential output when an economy experiences recession and thus less than full employment of labor and resources) and Schumpeterian efficiency (which addresses technical innovation, market leadership, and industrial stabilization). See ROBERT KUTTNER, *EVERYTHING FOR SALE: THE VIRTUES AND LIMITS OF MARKETS* 24-28 (1996).

<sup>127</sup> See, e.g., BREALEY, MYERS, & ALLEN, *supra* note 3, at 333-37 (defining the ECMH and three levels of efficiency); STEPHEN J. CHOI & A.C. PRITCHARD, *SECURITIES REGULATION: CASES AND ANALYSIS* 33-35 (2005) (discussing three versions of the ECMH); Eugene F. Fama, *Efficient Capital Markets: A Review of Theory and Empirical Work*, 25 J. FIN. 383 (1970) (defining an efficient capital market); and Ronald J. Gilson & Reinier H. Kraakman, *The Mechanisms of Market Efficiency*, 70 VA. L. REV. 549 (1984) (introducing the notion of informational efficiency to corporate and securities law scholarship).

<sup>128</sup> See, e.g., Ian Ayres, *Back to Basics: Regulating How Corporations Speak to the Market*, 77 VA. L. REV. 945, 946-47 (1991) (distinguishing between informational and fundamental efficiency); CHOI & PRITCHARD, *supra* note 127, at 36 (same); Lynn A. Stout, *Are Stock Markets Costly Casinos? Disagreement, Market Failure, and Securities Regulation*, 81 VA. L. REV. 611, 646-47 (1995) (same); Lynn A. Stout, *The Mechanisms of Market Inefficiency: An Introduction to the New Finance*, 28 J. CORP. L.

“market is “informationally efficient” if certain classes of information are immediately incorporated into a stock's price; a market is “fundamentally efficient” if a stock's price reflects only information relating to the net present value of the corporation's future profits.”<sup>129</sup> Recently, a number of legal scholars have questioned the relevance of informational efficiency for securities regulation.<sup>130</sup>

## 2. Pareto Allocational Efficiency

Third, non-financial economists outside of the contexts of CBA and the University of Chicago style of law and economics utilize the term “efficiency” to mean a concept of allocational efficiency due to the Italian economist, Vilfredo Pareto.<sup>131</sup> An allocation of resources is termed Pareto efficient if there is no reallocation of resources that could make one person better off according to that person's own preferences and make nobody else worse off according to their own preferences. A pair of pioneering economists, the already mentioned American Kenneth Joseph Arrow, a co-recipient of the 1972 Alfred Nobel Prize in Economic Science,<sup>132</sup> and the French-born American Gerard Debreu, the recipient of the 1983 Alfred Nobel Prize in Economic Science,<sup>133</sup> created a mathematical model of and proved that the operation of a perfectly competitive system of markets results in equilibrium allocation of resources that is Pareto

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635, 641 (2003) (distinguishing between informational efficiency and fundamental value efficiency); and William K.S. Wang, *Some Arguments that the Stock Market is Not Efficient*, 19 U.C. DAVIS L. REV. 341, 344-49 (1986) (same).

<sup>129</sup> Ayres, *supra* note 128, at 946-47.

<sup>130</sup> See, e.g., Donald C. Langevoort, *Theories, Assumptions and Securities Regulation: Market Efficiency Revisited*, 140 U. PA. L. REV. 851 (1992) (contrasting the huge difference between the persistent conception of market efficiency in the dominant legal culture versus that among economists); Lynn A. Stout, *The Unimportance of Being Efficient: An Economic Analysis of Stock Market Pricing and Securities Regulation*, 87 MICH. L. REV. 613, 617 (1988) (finding that “that the connection between prices in the public trading markets for stocks and the allocation of real resources is a weak one, and that stock markets may have far less allocative importance than has generally been assumed”); and Lynn A. Stout, *Inefficient Markets and the New Finance*, J. FIN. TRANSFORMATION (forthcoming) (critiquing ideas of security market efficiency).

<sup>131</sup> See, e.g., KENNETH J. ARROW, *THE LIMITS TO ORGANIZATION* 19 (1974) (defining Pareto efficiency); and Guido Calabresi, *The Pointlessness of Pareto*, 100 YALE L.J. 1211, 1215 (1991) (same).

<sup>132</sup> <http://nobelprize.org/economics/laureates/1972/index.html>.

<sup>133</sup> <http://nobelprize.org/economics/laureates/1983/index.html>.

efficient.<sup>134</sup> Thus, Arrow and Debreu clarified and formalized a famous metaphor due to the Scottish political economist, Adam Smith, of an “invisible hand” for a system of perfectly competitive markets that is able to guide the decentralized choices of individuals pursuing their own self-interest into an aggregate outcome that is normatively and socially desirable in a precise and technical, but also limited and restrictive sense.<sup>135</sup>

### 3. Kaldor-Hicks Allocational Efficiency

Fourth and finally, non-financial economists and legal scholars utilize the word “efficiency” in the context of CBA to mean another form of allocational efficiency, termed Kaldor-Hicks (KH) efficiency, and named after a famous British economist, Nicholas Kaldor, and another famous British economist and co-recipient of the 1972 Alfred Nobel Prize in Economic Science,<sup>136</sup> Sir John Richard Hicks. An allocation of resources is termed KH efficient if there is no reallocation of resources that makes those who gain from that reallocation so much better off they remain better off relative to the initial allocation even if they were to hypothetically compensate those who lose from that reallocation. Kaldor’s hypothetical compensation test asks if the maximum amount of money that winners due to a reallocation of resources are willing to pay is more than the minimum amount of money that losers resulting from that reallocation of resources are willing to accept.<sup>137</sup> Kaldor’s hypothetical compensation test is from the viewpoint of winners from a reallocation of resources.

A famous Hungarian-born American economist, Tibor de Scitovsky demonstrated that there can be two allocations of resources, call them A and B, such that a move from A to B passes

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<sup>134</sup> Kenneth Joseph Arrow & Gerard Debreu, *Existence of an Equilibrium for a Competitive Economy*, 22 *ECONOMETRICA* 265 (1954) (providing their pioneering model of a general equilibrium and proving that under certain hypotheses, a competitive general equilibrium allocation exists and is Pareto efficient).

<sup>135</sup> ADAM SMITH, *AN INQUIRY INTO THE NATURE AND CAUSES OF THE WEALTH OF NATIONS* Book Four, Chapter 2 (1776).

<sup>136</sup> <http://nobelprize.org/economics/laureates/1972/index.html>.

<sup>137</sup> Nicholas Kaldor, *Welfare Propositions in Economics and Interpersonal Comparisons*, 49 *ECON. J.* 549 (1939).

Kaldor's hypothetical compensation test, but so does is a move from B to A.<sup>138</sup> Scitovsky developed a different, but related hypothetical compensation test, which asks if the maximum amount of money which losers due to a reallocation of resources are willing to offer to winners from a reallocation of resources in order to prevent such a proposed reallocation of resources is less than the minimum amount of money that winners are willing to accept as a bribe to forgo such a reallocation of resources. This hypothetical compensation test is from the viewpoint of losers to a reallocation of resources.

A proposed reallocation of resources passes Scitovsky's criterion if that reallocation passes both Kaldor's and Scitovsky's hypothetical compensation tests. In other words, the Scitovsky criterion is the above pair of hypothetical compensation tests. Hicks demonstrated the relationships between Kaldor's hypothetical compensation test and Scitovsky's criterion and two concepts in microeconomic applied price theory, known as compensating variations and equivalent variations.<sup>139</sup> Economists and legal scholars asserting efficiency of CBA typically mean efficiency in the sense of Kaldor-Hicks efficiency. Scholars criticizing efficiency of CBA typically find Kaldor-Hicks efficiency to be an unsatisfactory welfare criterion for evaluating social policy because winners do not actually compensate losers, even though winners can hypothetically compensate losers and still come out ahead. More generally, "traditional law and economics scholars, like economists, are interested in questions of ... efficiency ... . On the other hand, legal scholars concerned with questions of identity, including race, gender and sexual orientation have focused their scholarly investigations on issues of subordination, identity, cultural context, and legal indeterminacy."<sup>140</sup>

#### **4. Indeterminacy of Efficiency**

It makes a difference as to whether the SEC interprets efficiency in an informational or allocational sense because there are equilibrium allocations that result from a system of perfectly

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<sup>138</sup> Tibor Scitovsky, *A Note on Welfare Propositions in Economics*, 9 REV. ECON. & STAT. 77 (1941).

<sup>139</sup> John R. Hicks, *The Foundations of Welfare Economics*, 49 ECON. J. 696 (1939).

competitive markets that are informationally efficient, but not allocationally efficient, and vice versa.<sup>141</sup> Corporate finance scholars;<sup>142</sup> judicial opinions;<sup>143</sup> corporate law and securities regulation scholars;<sup>144</sup> and even the SEC itself;<sup>145</sup> usually employ the word “efficiency” to mean informational efficiency in the sense of the ECMH.<sup>146</sup> This textual ambiguity means that any statutory basis for the SEC to perform CBA is attenuated in comparison with a traditional Executive Order standard because the notion of “efficiency” is not self-evidently the concept of Kaldor-Hicks efficiency that is routinely utilized in CBA. Also, there is no statutory textual basis for how the SEC should balance any particular notion of promoting efficiency in performing CBA against each of these other goals: protection of investors, promotion of competition, and encouragement of capital formation.

Finally, legislative history to determine statutory intent will not be helpful because notions of informational efficiency arose only after the years in which the organic statutes of the SEC were passed. Although economists developed notions of allocational efficiency before the years in which the organic statutes of the SEC were passed, regulatory adoption of CBA and

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<sup>140</sup> JORDAN & HARRIS, *supra* note 58, at 1.

<sup>141</sup> James Dow & Gary Gorton, *Stock Market Efficiency and Economic Efficiency: Is There A Connection?*, 52 J. FIN. 1087, 1109, 1113 (1997) (proving that informational efficiency is neither sufficient nor necessary for allocational efficiency). *See also*, RUBEN LEE, *WHAT IS AN EXCHANGE? THE AUTOMATION, MANAGEMENT, AND REGULATION OF FINANCIAL MARKETS* 221-24 (1998) (discussing how allocational efficiency differs from informational efficiency).

<sup>142</sup> *See, e.g.*, BREALEY, MYERS, & ALLEN, *supra* note 3, at 337.

<sup>143</sup> *See, e.g.*, *Basic Inc. v. Levinson*, 485 U.S. 224, 246 (1998) (stating that “[r]ecent empirical studies have tended to confirm Congress' premise that the market price of shares traded on well-developed markets reflects all publicly available information, and, hence, any material misrepresentations.”); *Cammer v. Bloom*, 711 F.Supp. 1264, 1286-87 (D.N.J., 1989) (providing a five-factor test for when a market is efficient for purposes of the fraud-on-the-market principle); and *Wielgos v. Commonwealth Edison Co.*, 892 F.2d 509, 510 (7th Cir. 1989) (stating that “the Securities and Exchange Commission believes that markets correctly value the securities of well-followed firms, so that new sales may rely on information that has been digested and expressed in the security's price.”).

<sup>144</sup> *See, e.g.*, Gilson & Kraakman, *supra* note 127. *See also*, Donald C. Langevoort, *Foreword: Revisiting Gilson and Kraakman's Efficiency Story*, 28 J. CORP. L. 499, 500 (2003) (discussing the seminal contributions of Gilson & Kraakman's article).

<sup>145</sup> *See, e.g.*, Staff of House Comm. on Interstate and Foreign Commerce, 95th Cong., 1st Sess., Report of the Advisory Comm. on Corporate Disclosure to the SEC (Comm. Print 1977).

<sup>146</sup> *But see*, William O. Fisher, *Does the Efficient Market Theory Help Us Do Justice in A Time of Madness?*, 54 EMORY L.J. 843, 847 (2005) (raising technical and theoretical challenges over applying the EMCH underlying the so-called fraud-on-the-market doctrine to securities fraud cases that arose from the Internet, high-tech, and telecommunications bubble during 1998-2001).

Kaldor-Hicks efficiency gained momentum only in the 1980s with the rise of the modern regulatory state,<sup>147</sup> coming several decades after when the organic statutes of the SEC were passed.

### 5. Will the SEC Engage in Cost-Benefit Analysis?

As mentioned already, four noted legal scholars have advocated that the SEC engage in CBA.<sup>148</sup> While the public at present seems unlikely to push for CBA of securities regulation in response to a perception of too much financial and securities regulation; either Congress in response to lobbying pressure from the securities industry could impose CBA upon the SEC and other U.S. financial regulators,<sup>149</sup> or the SEC and other U.S. financial regulators may preemptively impose CBA upon themselves due to “congressional pressure, interest group lobbying, bureaucratic (but nonexpertise-based) policy views, or bureaucratic protection of turf or other self-interest.”<sup>150</sup> Should the SEC and other U.S. financial regulators adopt CBA, they can learn from the significant experience of the SEC’s United Kingdom counterpart, the Financial Services Authority (FSA), which is mandated by statute to engage in CBA of its regulations.<sup>151</sup> American and British scholars and economic consultants have studied formal CBA of FSA financial regulations.<sup>152</sup> An American legal scholar has recently advocated for a number of

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<sup>147</sup> SUNSTEIN, *supra* note 31, at 10.

<sup>148</sup> Ribstein, *supra* note 26; and Romano, *supra* note 26. See also, Stephen J. Choi & Adam C. Pritchard, *Behavioral Economics and the SEC*, 56 STAN. L. REV. 1, 36-37 (2003) (proposing an internal review process where SEC staff members are required to justify their decisions to mitigate cognitive biases that affect the SEC); and Stephanie Stern, *Cognitive Consistency: Theory Maintenance and Administrative Rulemaking*, 63 U. PITT. L. REV. 589, 626-27 (2002) (recommending “[r]eview processes that encourage counterargument” to counteract agency “lock-in” bias from notice-and-comment rulemaking).

<sup>149</sup> Sherwin, *supra* note 29, at 83.

<sup>150</sup> Elena Kagan, *Presidential Administration*, 114 HARV. L. REV. 2245, 2353 (2001).

<sup>151</sup> Financial Services and Markets Act of 2000, c. 8, § 2(3)(c); § 155(1)-(2); and § 155(10) (Eng.).

<sup>152</sup> ISSAC ALFON & PETER ANDREWS, COST-BENEFIT ANALYSIS IN FINANCIAL REGULATION: HOW TO DO IT AND HOW IT ADDS VALUE (Financial Services Authority, Occasional Paper Series No. 3, 1999); FINANCIAL SERVICES AUTHORITY, CENTRAL POLICY, PRACTICAL COST-BENEFIT ANALYSIS FOR FINANCIAL REGULATORS: VERSION 1.1 (June 2000), available at <http://www.fsa.gov.uk/pubs/foi/CBA.pdf>; Julian R. Franks et al., *The Direct and Compliance Costs of Financial Regulation*, 21 J. BANKING & FIN. 1547 (1997); NERA ECONOMIC CONSULTING, THE FSA’S METHODOLOGY FOR COST-BENEFIT ANALYSIS (Nov. 26, 2004), available at [http://www.fsa.gov.uk/pubs/other/nera\\_CBA\\_report.pdf](http://www.fsa.gov.uk/pubs/other/nera_CBA_report.pdf); Press Release, *FSA Begins Costs of Regulations Study* (Mar. 3, 2005), available at <http://www.fsa.gov.uk/Pages/Library/Communication/PR/2005/027.shtml>; Howell E. Jackson, An

compelling reasons that the United States also adopt a single, federal financial services agency that is akin to the United Kingdom's FSA.<sup>153</sup>

A possible source of uneasiness that some might have about ACBA is that incorporating affect into CBA will not impose a meaningful constraint on SEC rule-making. But, such a reservation about whether ACBA will succeed in constraining the SEC presumes that ACBA has the goal of regulatory agency constraint. ACBA will certainly restrain financial regulators from those regulations having costs greater than benefits, but also it will suggest and justify other financial regulations having benefits greater than costs. Financial regulators engaging in ACBA should not let preconceived notions about whether there is too much or too little financial regulation in general dictate ACBA. Instead, a virtue of ACBA is that it has a potential to and should provide a principled and unbiased tool for evaluating alternative regulatory policies.

## II. Conceptual and Measurement Issues with Affective Cost-Benefit Analysis

To preview this section, a precursor to ACBA is research by Professor Richard Zerbe, Jr. and his co-authors about incorporating moral sentiments into LSCBA.<sup>154</sup> Zerbe's approach successfully confronted and tackled conceptual difficulties and issues about including moral sentiments in LSCBA. This Article advocates counting and including moral sentiments in analyzing policy, but also any affective benefits and costs which are measurable. Zerbe's approach, however, bracketed any discussion of measurement issues associated with incorporating moral sentiments into LSCBA. Fortunately, many issues that measuring, quantifying, and monetizing affective benefits and costs raise also occur in empirical,

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American Perspective on the U.K. Financial Services Authority: Politics, Goals, and Regulatory Intensity, Harvard Law School John M. Olin Center for Law, Economics, and Business & Program on Corporate Governance Discussion Paper No. 522 (Aug. 2005), available at [http://www.law.harvard.edu/programs/olin\\_center/corporate\\_governance/papers/Jackson\\_522.pdf](http://www.law.harvard.edu/programs/olin_center/corporate_governance/papers/Jackson_522.pdf)); and DAVID SIMPSON ET AL., SOME COST-BENEFIT ISSUES IN FINANCIAL REGULATION (Financial Services Authority, Occasional Paper Series No. 12, 2000), available at <http://www.law.harvard.edu/faculty/hjackson/projects.php>.

<sup>153</sup> Elizabeth F. Brown, *E Pluribus Unum – Out of Many, One: Why the United States Needs a Single Financial Services Regulator*, 14 U. MIAMI BUS. L. REV. ? (forthcoming 2005), available at <http://law.bepress.com/cgi/viewcontent.cgi?article=1522&context=alea>.

experimental, and theoretical research by economists and psychologists about happiness and SWB. An analysis of those issues is beyond the scope of this Article, but forms the subject of a complementary Article.<sup>155</sup>

#### A. Some Foundations of Long-Standing Cost-Benefit Analysis

In a sense, CBA simply generalizes to social decision-making an individual decision-making procedure. If we denote total benefits to some decision,  $d$ , as  $TB(d)$  and total costs of that decision,  $d$ , as  $TC(d)$ , then CBA is a procedure for solving  $\text{Max } [TB(d)-TC(d)]$ . If both total benefits and total costs are differentiable functions of the decision variable, then the first order necessary condition for an optimal  $d^*$  is that  $d^*$  satisfies  $MB(d^*) - MC(d^*) = 0$ , or  $MB(d^*) = MC(d^*)$ .<sup>156</sup> In other words, the value of the decision variable which maximizes the net difference between total benefits and total costs must satisfy the equation marginal benefits equal marginal costs. If total benefits and total costs are twice differentiable functions of the decision variable and strictly concave and strictly convex functions of the decision variable, respectively, and the decision variable belongs to a compact, convex set, then both the first and second order conditions for a strict maximum will be satisfied.<sup>157</sup> This means that equating marginal benefits and marginal costs is also a sufficient condition to solve for the unique optimal  $d^*$ .

A central question about CBA is at what level of detail and formality should we engage in CBA? An ever-changing apocryphal story,<sup>158</sup> attributed to Howard Raiffa,<sup>159</sup> a co-founder of modern decision theory, is relevant. Professor Raiffa was discussing with his dean and friend at Columbia an employment offer that he had received from Harvard. His colleague sarcastically told Raiffa to just set up a decision tree analysis of his choice problem and act accordingly.

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<sup>154</sup> See, e.g., Richard O. Zerbe, Jr., *Should Moral Sentiments Be Incorporated into Cost-benefit Analysis? An Example of Long-Term Discounting*, POL'Y SCI. (2006).

<sup>155</sup> Peter H. Huang, *Happiness and Cost-Benefit Analysis: Evaluating Policy Affect* (unpublished manuscript) (Dec. 2005).

<sup>156</sup> BRIAN BEAVIS & IAN DOBBS, *OPTIMIZATION AND STABILITY THEORY FOR ECONOMIC ANALYSIS* 34 (1990)

<sup>157</sup> See, e.g., *Id.* at 28, 36 (1990); and KEVIN LANCASTER, *MATHEMATICAL ECONOMICS* 17 (1968).

<sup>158</sup> MAX H. BAZERMAN, *JUDGMENT IN MANAGERIAL DECISION MAKING* 63-64 (5th ed. 2002).

Raiffa responded this was a serious decision and that formal decision analysis is a fine mechanical aid or tool for trivial decisions, but such decisions as where to live and work, whom to date and marry, and whether and how many children to have are too important for using formal decision analysis because it misses too much.

Raiffa's response suggests that utilizing formal CBA has diminishing marginal productivity in such personal domains. While people may informally estimate and approximately weigh pros and cons of various alternatives in making decisions about whether to date, marry, or have children with another particular individual, we may also feel that formally engaging in and utilizing CBA for such important and personal choices is at best, foolhardy and misguided and at worst, inappropriate and self-defeating. In the words of personal advice from a legal scholar, there is and should be neither calculating nor calculations in romantic love.<sup>160</sup>

A pair of economists recently developed a theoretical model in which individuals maximize a weighted sum of scalar outcomes resulting from two systems.<sup>161</sup> A deliberative system corresponds to conventional non-affective rational choice. Another affective system corresponds to emotions and motivational drives. Their model analytically captures a familiar being "of two minds" experience. Their particular linear functional form for combining separate deliberation and affective systems provides a heuristic representation, which is familiar and helpful to conventionally trained economists.<sup>162</sup> A distinction between valuation by calculation and valuation by feeling is also consistent with recent psychological research into different modes of valuation.<sup>163</sup>

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<sup>159</sup> See generally, HOWARD RAIFFA, DECISION ANALYSIS: INTRODUCTORY LECTURES ON CHOICES UNDER UNCERTAINTY THEORY (1970).

<sup>160</sup> Marleen A. O'Connor (personal communication, Sept. 10, 2005)

<sup>161</sup> George Loewenstein & Ted O'Donoghue, Animal Spirits: Affective and Deliberative Processes in Economic Behavior, available at [http://www.hss.cmu.edu/departments/sds/faculty/Loewenstein/will7\\_04.pdf](http://www.hss.cmu.edu/departments/sds/faculty/Loewenstein/will7_04.pdf).

<sup>162</sup> Julie A. Nelson, Rationality and Humanity: A View from Feminist Economics 17 (unpublished manuscript) (May 2005) Global Development and Environment Institute Working Paper No. 05-04 available at <http://ase.tufts.edu/gdae/Pubs/wp/05-04RationalityHumanity.pdf>.

<sup>163</sup> Christopher K. Hsee & Yuval Rottenstreich, *Music, Pandas, and Muggers: On the Affective Psychology of Value*, 133 J. EXPERIMENTAL PSYCHOL. 23 (2004).

Nobel Laureate in economics,<sup>164</sup> Kenneth J. Arrow stated that “some sense of rational balancing of ends and means must be understood to play a major role in our understanding of ourselves and our social role.”<sup>165</sup> Nonetheless, what many people find annoying, disconcerting and frustrating about CBA is that it reduces contextually rich decisions into simply a matter of making arithmetical calculations. As one corporate law scholar states, calculations as to both love and securities are complicated, but even the latter is more complicated than supporters of calculations think.<sup>166</sup> Part of many people’s exasperation with CBA is their belief and feeling that CBA is prone to miss or significantly undervalue non-market based and subjective values. In other words, what is problematic about CBA as an analytic matter is not only that it attempts to measure immeasurable or hard-to-measure benefits and costs, but also what is or should count as benefits and costs is not necessarily clear, but is taken instead as being immutably given by policymakers.<sup>167</sup> In addition, there are well-known conceptual ambiguities, practical difficulties, and theoretical challenges to eliciting truthfully an individual’s preferences or valuations in a number of non-affective contexts: agricultural economics,<sup>168</sup> environmental economics,<sup>169</sup> experimental economics,<sup>170</sup> public economics,<sup>171</sup> and marketing.<sup>172</sup>

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<sup>164</sup> <http://nobelprize.org/economics/laureates/1972/index.html>.

<sup>165</sup> ARROW, *supra* note 131, at 15.

<sup>166</sup> Claire A. Hill, *Law and Economics in the Personal Sphere*, 29 L. & SOC. INQUIRY 219, 253 (2004) (reviewing RICHARD A. POSNER, *SEX AND REASON* (1994), ERIC A. POSNER, *LAW AND SOCIAL NORMS* (2002), ROBERT H. FRANK, *LUXURY FEVER: WHY MONEY FAILS TO SATISFY IN AN ERA OF EXCESS* (2000), and MARGARET BRINIG, *FROM CONTRACT TO COVENANT: BEYOND THE LAW AND ECONOMICS OF THE FAMILY* (2000)).

<sup>167</sup> Claire Hill, *Beyond Mistakes: The Next Wave of Behavioral Law and Economics*, 29 QUEEN’S L.J. 563, 582 (2004) (pointing out how LSCBA presupposes that categories of costs and benefits are known already), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=452100](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=452100).

<sup>168</sup> See, e.g., Jayson L. Lusk et al., *Experimental Auction Procedure: Impact on Valuation of Quality Differentiated Goods*, 86 AM. J. AGRIC. ECON. 389 (2004).

<sup>169</sup> See, e.g., Robert Sugden, *Anomalies and Stated Preference Techniques: A Framework for a Discussion of Coping Strategies*, 32 ENVTL. & RESOURCE ECON. 1 (2005). See generally, Symposium, 32 ENVTL. & RESOURCE ECON. (2005).

<sup>170</sup> See, e.g., Glen W. Harrison et al., *Experimental Methods and Elicitation of Values*, 89 AM. ECON. REV. 649 (1999).

<sup>171</sup> See, e.g., Ronald G. Cummings & Laura O. Taylor, *Unbiased Value Estimates for Public Goods: A Cheap Talk Design for the Contingent Valuation Method*, 7 EXPERIMENTAL ECON. 123 (2004).

<sup>172</sup> Matthew Rousu et al., *Consumer Willingness to Pay for "Second-Generation" Genetically Engineered Products and the Role of Marketing Information*, J. AGRIC. & APPLIED ECON. (forthcoming), available at <http://www.susqu.edu/facstaff/r/rousu/research/LabelingandGMcigs.pdf>.

Neoclassical economics assumed that because people are rational, economists could infer an individual's private, subjective, and unobservable preferences from that individual's public, objective, and observable behavior in terms of market choices. This revealed preference approach requires that preference orderings are well-behaved, not only in the sense of satisfying certain mathematical axioms, such as the weak axiom of revealed preference;<sup>173</sup> but also, more crucially in the sense of being stable across contexts and over time. Much of recent behavioral and experimental economics research empirically demonstrates how much so-called preferences are sensitive to situational contexts.<sup>174</sup>

## **B. Some Foundations of Affective Cost-Benefit Analysis**

There are a variety of affective variables which ACBA might helpfully incorporate, including distributional or equity concerns, ethical values, moral sentiments, immoral sentiments, process concerns.<sup>175</sup> But, if regulators are to incorporate these affective variables into their policy deliberations and evaluations, then regulators must be able to consistently quantify or measure such variables in order to improve upon their decision-making process by adding such affective variables to LSCBA. Fortunately, there are several precursors to ACBA, including arguably Adam Smith's first book, *The Theory of Moral Sentiments* (1759) published seventeen years before his famous book, *The Wealth of Nations* (1776).<sup>176</sup>

### **1. Moral (and Immoral) Sentiments**

ACBA builds upon and is consistent with research analyzing the desirability and feasibility of incorporating moral sentiments into CBA. Zerbe utilizes the phrase "moral sentiments" to mean concern for other people, beings, or entities in the form of paternalistic or non-paternalistic altruistic preferences. People clearly feel moral sentiments as defined here.

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<sup>173</sup> See, e.g., Kenneth Joseph Arrow, *Rational Choice Functions and Orderings*, 26 *ECONOMICA NEW SERIES* 121, 123 (1959).

<sup>174</sup> See, e.g., *CHOICES, VALUES, AND FRAMES* (Daniel Kahneman & Amos Tversky eds., 2000).

<sup>175</sup> F. Thomas Juster et al., *A Conceptual Framework for the Analysis of Time Allocation Data*, in *TIME, GOODS, AND WELL-BEING* 113, ? (F. Thomas Juster & Frank P. Stafford eds., 1985).

<sup>176</sup> See generally, Nava Ashraf et al., *Adam Smith, Behavioral Economist*, 19 *J. ECON. PERSP.* 131 (2005).

Thus, moral sentiments are particular examples or forms of affective benefits. In fact, many individuals are more than willing to make charitable private donations of clothes, food, money, labor services, lodging, supplies, and time in order to express their moral sentiments towards victims of such natural disasters as hurricanes Katrina and Rita. Zerbe and his co-authors propose empirical measurements of moral sentiments by an individual's willingness to pay (WTP) for them.<sup>177</sup>

Moral sentiments are but one instance of ethical and other values that are missing from LSCBA because such values are not considered to be a legitimate part of LSCBA, are seen as being hard to quantify, and are affective in their nature. Zerbe's approach advocates replacing the standard KH criterion (defined in the last section) for LSCBA with their notion of an aggregate KHM (for Kaldor-Hicks-Moral) measure which adds to the standard KH criterion one additional requirement. This is a requirement that if there is a WTP or willingness to accept (WTA) for a particular item, then we should count its WTP or WTA.<sup>178</sup> Potential examples include amounts of money that individuals are willing to pay to express their moral sentiments towards pets;<sup>179</sup> compassion towards animals;<sup>180</sup> or concern for trees.<sup>181</sup>

Zerbe's approach deals effectively and thoroughly with three principal arguments against including moral sentiments in CBA. The first and strongest a critique against including moral

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<sup>177</sup> See generally, Richard O. Zerbe, Jr., *An Integration of Equity and Efficiency*, 73 WASH. L. REV. 349 (1998); Richard O. Zerbe, Jr., *Is Cost-Benefit Analysis Legal? Three Rules*, 17 J. POL'Y ANALYSIS & MGMT. 419 (1998); RICHARD O. ZERBE, JR., *ECONOMIC EFFICIENCY IN LAW AND ECONOMICS* (2001); Richard O. Zerbe, Jr., *Can Law and Economics Stand the Purchase of Moral Satisfaction?*, 20 RESEARCH IN LAW AND ECONOMICS: AN INTRODUCTION TO THE LAW AND ECONOMICS OF ENVIRONMENTAL POLICY: ISSUES IN INSTITUTIONAL DESIGN 135 (Richard O. Zerbe, Jr. & Timothy Swanson, eds., 2002); and Richard O. Zerbe, Jr. & Sunny Knott, *An Economic Justification for a Price Standard in Merger Policy: The Merger of Superior Propane with ICG Propane*, 21 RESEARCH IN LAW AND ECONOMICS: ANTITRUST LAW AND ECONOMICS 409 (John B. Kirkwood ed., 2004).

<sup>178</sup> Richard O. Zerbe, Jr., et al., *An Aggregate Measure for Benefit Cost Analysis*, ECOLOGICAL ECON. (forthcoming).

<sup>179</sup> See, e.g., ANIMAL RIGHTS: CURRENT DEBATES AND NEW DIRECTIONS (Cass Sunstein & Marha C. Nussbaum eds., 2004).

<sup>180</sup> See, e.g., PETER SINGER, ANIMAL LIBERATION (2001); and TOM REGAN, THE CASE FOR ANIMAL RIGHTS (2d ed. 2004).

<sup>181</sup> See, e.g., CHRISTOPHER D. STONE. SHOULD TREES HAVE LEGAL STANDING AND OTHER ESSAYS ON LAW, MORALS AND THE ENVIRONMENT (1996).

sentiments is that doing so generates inconsistencies with the Kaldor hypothetical compensation test underlying the KH type of CBA.<sup>182</sup> Zerbe's approach proves that only in trivial cases will a project including moral sentiments pass a KHM criterion, but fail the Kaldor hypothetical compensation test. Zerbe's approach also provides a numerical example where Kaldor's hypothetical compensation test is not consistent with excluding moral sentiments. In addition, Professor Edwin Baker observed that if legal rights are in dispute, the KH criterion fails because there is no way to pass Kaldor's hypothetical compensation test.<sup>183</sup>

A second concern with including moral sentiments is double counting.<sup>184</sup> Zerbe's approach demonstrates this concern does not extend to realistic situations involving positive transactions costs to making transfer payments. Third is an invariance claim that non-paternalistic altruistic moral sentiments are unimportant because they simply reinforce those decisions that would be made in their absence.<sup>185</sup> Zerbe's approach establishes that while this claim is correct for homogenous groups, it fails to be a guide for including moral sentiments because while moral sentiments do not change the sign of a project's net benefits, moral sentiments do change the magnitude of moral sentiments, which can have policy relevance. Furthermore, Zerbe's approach illustrates that inclusion of moral sentiments can alter even the sign of net benefits when a population is heterogeneous.

Thus, Zerbe's approach makes the case that arguments against including moral sentiments are incorrect or unpersuasive. Zerbe's approach proceeds to suggest that adopting

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<sup>182</sup> See generally, Paul R. Milgrom, *Is Sympathy an Economic Value? Philosophy, Economics and the Contingent Valuation Method*, in CONTINGENT VALUATION: A CRITICAL ASSESSMENT 417 (Jerry Hausman ed., 1993); Paul R. Milgrom, *Cost-benefit Analysis, Bounded Rationality and the Contingent Valuation Method*, Stanford Center for Economic Policy Research Publication No. 316 (1992) (unpublished manuscript); and Sidney G. Winter, *A Simple Remark on the Second Optimality Theorem of Welfare Economics*, 1 J. ECON. THEORY 99 (1969).

<sup>183</sup> Edwin C. Baker, *Starting Points in the Economic Analysis of Law*, 8 HOFSTRA L. REV. 939 (1980) (pointing out inability to determine a KH efficient outcome is an indictment of LSCBA)

<sup>184</sup> Peter A. Diamond & Jerry A. Hausman, *Contingent Valuation: Is Some Number Better Than No Number?*, 8 J. ECON. PERSP. 45, 55 (1994) (voicing this double counting concern); and Kenneth E. McConnell, *Does Altruism Undermine Existence Value?*, 32 J. ENVTL. ECON. & MGMT. 22, 23, 29 (1997) (refining this concern properly to just non-paternalistic altruism).

<sup>185</sup> McConnell, *supra* note 184, at 27 (stating this invariance claim).

their KHM criterion is superior to adopting the conventional KH criterion because the KHM measure provides a more complete accounting of, and better, useful information about people's moral sentiments. In other words, under both the conventional KH criterion and their KHM criterion, a move from the status quo world that uses the KH criterion to a world that utilizes their KHM criterion is justified. Hopefully, the first section of this Article convinced its readers that either LSCBA or ACBA would find that a move from LSCBA to ACBA is likely to be justified. Although Zerbe's approach focuses on moral sentiments, they note that moral sentiments can include so-called immoral sentiments, where people feel anger, envy, hatred, jealousy, or vengeance towards others.

## 2. Amoral Sentiments

Upon a moment's reflection, it becomes clear that what Zerbe's approach means by moral sentiments are paradigmatic examples of what this Article has termed affective benefits. Affective benefits and costs can arise from ethical or income distributional concerns.<sup>186</sup> But, affective benefits and costs do not have to be moral sentiments or immoral sentiments because affect does not have to arise from a moral or immoral source. For example, in a sample of 909 employed women, commuting to and from work produced the lowest levels of retrospective well-being out of a list of 19 activities.<sup>187</sup> In other words, stress from daily commuting is bona fide affective cost which can be quite large,<sup>188</sup> but not a moral sentiment or an immoral sentiment. Commuters may feel anger towards their fellow commuters for clogging up roads, but such anger or road rage is at least conceptually distinct from driving stress, though it might be related to such feelings as anger, boredom, despair, frustration, or loss of control. Moral sentiments are examples of affective benefits and costs. Thus, moral sentiments form a proper subset of the set

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<sup>186</sup> CAROL GRAHAM & STEFANO PETTINATO, HAPPINESS & HARDSHIP: OPPORTUNITY AND INSECURITY IN NEW MARKET ECONOMIES (2002).

<sup>187</sup> Daniel Kahneman et al., *A Survey Method for Characterizing Daily Life Experience: The Day Reconstruction Method*, 306 SCI. 1776, 1777 tbl.1, 1779 fig.3 (2004).

<sup>188</sup> Alois Stutzer & Bruno S. Frey, *Stress That Doesn't Pay: The Commuting Paradox*, Institute for Empirical Research in Economics, University of Zurich Working Paper No. 151 (Aug. 2004).

of affective benefits and costs. In fact, Zerbe's approach justifies including as part of CBA not all, nor just moral sentiments, but any goods that have a WTP or WTA. But because of well-known problems with WTP or WTA,<sup>189</sup> ACBA advocates the counting and including of affective benefits and costs by other procedures, such as in terms of their impacts on standard economic variables, including liquidity, prices, volatility, and volume in securities markets.

Recent empirical research found that consumer personal debt can also be very stressful. One study found that heads of households with greater outstanding non-mortgage credit debt balances are significantly more likely to report higher levels of psychological distress.<sup>190</sup> Another study found that credit card behavior is associated with scores on the Frontal Lobe Personality Scale, which is a measure of personality and behavioral traits associated with frontal cortex dysfunction.<sup>191</sup> Finally, there is experimental evidence that debt consolidation loans can undermine bankruptcy risk perceptions and increase people's intentions to engage in such risky financial behavior as credit card (mis)use.<sup>192</sup>

### 3. Measuring and Quantifying Affective Benefits and Costs

Next, we turn to issues about measurement and quantification of affective benefits and costs. Zerbe's approach put aside such measurement issues. Zerbe's approach of eliciting WTP for moral sentiments suggests a possible approach to a crucial question that ACBA must answer, namely how to, at least, quantify and measure in general affective benefits to and costs of proposed regulations, namely the straightforward method of conducting a Contingent Valuation Survey (CVS) asking people to forecast how much they are likely to pay to enjoy or avoid their likely future affective responses to a proposed regulation. Unlike other social scientists, most

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<sup>189</sup> See e.g., Kathryn Zeiler & Charles R. Plott, *The Willingness to Pay/Willingness to Accept Gap, the Endowment Effect, Subject Misconceptions and Experimental Procedures for Eliciting Valuations*, 95 AM. ECON. REV. 530 (2005).

<sup>190</sup> Sarah Brown et al., *Debt and Distress: Evaluating the Psychological Costs of Credit*, 26 ECON. PSYCHOL. 642 (2005).

<sup>191</sup> Marcello Spinella et al., *Predicting Credit Card Behavior: A Study in Neuroeconomics*, 100 PERPETUAL & MOTOR SKILLS 777 (2005).

economists have traditionally been quite skeptical of the accuracy, informativeness, and reliability of questionnaires and other self-descriptions.<sup>193</sup> But, many economists, legal academics, and policy analysts have long adopted CVS methodology in assessing environmental, health, and safety regulations, despite its many problems, such as its hypothetical nature.<sup>194</sup>

Fortunately and more recently, a number of economists have begun to employ other survey methodologies besides CVS.<sup>195</sup> Applications include researching behavioral macroeconomics;<sup>196</sup> conducting field research in development economics;<sup>197</sup> analyzing the observed relationship between income and subjective well-being;<sup>198</sup> analyzing the switch to business majors and careers during the 1970s and 1980s;<sup>199</sup> explaining adjustments in the use of

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<sup>192</sup> Lisa E. Bolton et al., *Does Marketing Products as Remedies Create “Get Out of Jail Free Cards”?*, ? ? (2005).

<sup>193</sup> TRUMAN BEWLEY, WHY WAGES DON’T FALL DURING A RECESSION 13-16 (discussing oft-cited biases and problems of survey data); Fritz Machlup, *Marginal Analysis and Empirical Research*, 36 AM. ECON. REV. 519 (1946) (pointing out that people might hide or falsify information, fail to understand their own motivations, and lack incentives to be accurate); Donald N. McCloskey, *The Rhetoric of Economics*, 21 J. ECON. LITERATURE 481, 514 (1983) (discussing “the curious status of survey research in modern economics”); and THOMAS C. SCHELLING, *the Life You Save May Be Your Own*, in CHOICE AND CONSEQUENCE: PERSPECTIVES OF AN ERRANT ECONOMIST 113, 127-28 (1984) (explaining ambiguities and advantages of interviews and questionnaires). On the subjects of self-reports and socialization of academic economists’ professional norms, I cannot help but recall being a freshman in Econ. 101 listening to Professor Burton G. Malkiel, *supra* note 3, telling a lecture hall full of 700-800 undergraduates this joke about how a survey can alter the behavior of a respondent: if you ask a centipede how it moves, it will stop a number of its legs to ponder this question and then stop another number of its legs to introspect. Pretty soon, that centipede will become paralyzed. *See also*, Flavio T. P. Oliveira & David Goodman, *Conscious and Effortful or Effortless and Automatic: A Practice/Performance Paradox In Motor Learning*, 99 PERCEPTUAL & MOTOR SKILLS 315 (2004).

<sup>194</sup> *See, e.g.*, James J. Murphy & Thomas H. Stevens, *Contingent Valuation, Hypothetical Bias, and Experimental Economics*, 33 AGRIC. & RESOURCE ECON. REV. 182 (2004).

<sup>195</sup> *See, e.g.*, Truman Bewley, *Interviews as a Valid Empirical Tool in Economics*, 31 J. SOCIO-ECON. 343, 344-52 (2002) (describing data analysis, interviewing, and sampling methods for conducting survey research); and BEWLEY, *supra* note 193, at 20-37 (1983) (detailing interview methodology).

<sup>196</sup> *See generally*, BEWLEY, *supra* note 193.

<sup>197</sup> GRAHAM & PETTINATO, *supra* note 186; Robert Townsend, *Financial Systems in Northern Thai Villages*, 110 Q. J. ECON. 1011 (1995); Christopher Udry, *Risk and Insurance in a Rural Credit Market: An Empirical Investigation in Northern Nigeria*, 61 REV. ECON. STUD. 495 (1994); and Christopher Udry, *Risk and Saving in Northern Nigeria*, 85 AM. ECON. REV. 1287 (1995).

<sup>198</sup> RICHARD A. EASTERLIN, *Economics and the Use of Subjective Testimony*, in THE RELUCTANT ECONOMIST: PERSPECTIVES ON ECONOMICS, ECONOMIC HISTORY, AND DEMOGRAPHY 22-24 (2004).

<sup>199</sup> EASTERLIN, *supra* note 198, at 24-26.

contraceptives to limit family size;<sup>200</sup> and understanding why similar households end up with very different wealth levels.<sup>201</sup>

Self-reported measures have become ubiquitous in research about SWB,<sup>202</sup> although there remain serious concerns about exactly what such reports mean and measure.<sup>203</sup> Psychological evidence in experimental settings and from reported happiness surveys finds that people systematically underestimate how much their own tastes change over time.<sup>204</sup> For example, recently there is research utilizing economic field data from a large outdoor-apparel company finding that people are over-influenced by order-date temperature when placing catalog purchases for winter clothing.<sup>205</sup> Survey data that measure current levels of investor confidence,<sup>206</sup> investor sentiment,<sup>207</sup> or consumer sentiment,<sup>208</sup> avoid such forecasting error problems.

In addition to survey data concerning investor confidence, this Article advocates that financial regulators utilize financial data that securities markets automatically and routinely create

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<sup>200</sup> *Id.*, at 26-28.

<sup>201</sup> John Ameriks, Andrew Caplin, & John Leahy, *Wealth Accumulation and the Propensity to Plan*, 118 Q. J. ECON. 1007 (2003) (providing new and unique survey data of differences in the attitudes and skills that households possess when they approach financial planning).

<sup>202</sup> See generally, Ed Diener, *Subjective Well-Being: The Science of Happiness and a Proposal for a National Index*, 55 AM. PSYCHOL. 34 (2000); Daniel Kahneman et al., *Toward National Well-Being Accounts*, 94 AM. ECON. REV. 429 (2003); and Kahneman et al., *supra* note 187. See generally, Bruno S. Frey & Alois Stutzer, *What Can Economists Learn from Happiness Research?*, 40 J. ECON. LITERATURE 402 (2002).

<sup>203</sup> See, e.g., Thomas D. Griffith, *Progressive Taxation and Happiness*, 45 B.C. L. REV. 1363, 1368-70 (2004) (discussing several possible types of errors in self-reported happiness); Daniel Hamermesh, *Subjective Outcomes in Economics*, 71 SOUTHERN ECON. J. 2, 3-4 (2004) (examining critically work that economists have done about self-reported life satisfaction); and Diane M. Ring, *Why Happiness?: A Commentary on Griffith's Progressive Taxation and Happiness*, 45 B.C. L. REV. 1413, 1415-16 (2004) (presenting three additional caveats about happiness reporting).

<sup>204</sup> George Loewenstein et al., *Projection Bias in Predicting Future Utility*, 118 Q. J. ECON. 1209 (2003) (reviewing psychological evidence and constructing a theoretical model to develop implications of such bias for economic environments); and George Loewenstein & David Schakde, *Wouldn't It Be Nice? Predicting Future Feelings*, in *WELL-BEING: THE FOUNDATIONS OF HEDONIC PSYCHOLOGY* 85 (Daniel Kahneman, Ed Diener & Norbert Schwarz eds., 1999) (providing a detailed examination of the psychological evidence).

<sup>205</sup> Michael Conlin, Ted O'Donoghue, & Timothy J. Vogelsang, *Projection Bias in Catalog Orders*, (unpublished manuscript) (Mar. 17, 2005) (providing field data of such projection bias).

<sup>206</sup> See, e.g., the Certified Financial Planner Board Investor Confidence Survey, available at <http://www.cfp.net/media/survey.asp?id=15>.

<sup>207</sup> See, e.g., David Dreman et al., *A Report on the March 2001 Investor Sentiment Survey*, 2 J. PSYCHOL. & FIN. MARKETS 126 (2001).

as by-products, namely information about liquidity, prices, quantities, volatility, and volume to indirectly measure traditional economic and financial consequences of changes in such affective variables as investor confidence. This roundabout method of measuring affective costs and benefits avoids controversies about how reliable direct measures of affect can be. It also satisfies a preference that many economists and policy makers have for objective measures over subjective measures and measures that are behaviorally generated and thus observable to and verifiable by others instead of measures that are self-reported and therefore unobservable to and unverifiable by others.

Three recent econometric studies illustrate how to measure the financial and economic impacts of sudden changes of investor mood and consumer sentiment. The first study involved a cross-section of 39 countries and found that elimination from a major international soccer tournament is associated with a next-day return on a national stock market index that is 38 basis points lower than average.<sup>209</sup> In place this empirical finding in perspective, 40 basis points of the United Kingdom market capitalization as of November 2005 was \$11.5 billion.<sup>210</sup> This recent study also documents that similar stock market loss effects exist for basketball, cricket, ice hockey, and rugby in countries where those sports are popular.<sup>211</sup> The second study found empirical evidence that wins against foreign rivals in the Winner's Cup by one, but not the other two, of the three teams that dominates the Turkish soccer league increased stock market returns.<sup>212</sup> The third study found that winning the 1998 Soccer World Cup had a positive, durable, and significant impact on the demand for soccer games in France.<sup>213</sup>

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<sup>208</sup> See, e.g., the University of Michigan's monthly Consumer Sentiment Survey, available at [http://www.market-harmonics.com/free-charts/sentiment/consumer\\_sentiment.htm](http://www.market-harmonics.com/free-charts/sentiment/consumer_sentiment.htm).

<sup>209</sup> Alex Edmans et al., Sports Sentiment and Stock Returns, (unpublished manuscript) (Nov. 21, 2005), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=677103](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=677103).

<sup>210</sup> *Id.* at 17.

<sup>211</sup> *Id.* at 27-29.

<sup>212</sup> Hakan Berument et al., *Performance of Soccer on the Stock Market: Evidence from Turkey*, SOC. SCI. J. (forthcoming), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=807444#PaperDownload](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=807444#PaperDownload).

<sup>213</sup> Jean-Marc Falter et al., Impact of Overwhelming Joy on Consumer Demand: The Case of a Soccer World-Cup Victory, (unpublished manuscript) (Jan. 12, 2005), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=650741](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=650741).

One might be concerned that measuring affective benefits and costs by their impacts on non-affective variables is a form of double counting. There are three responses to such concerns. First, because LSCBA places zero value upon affective benefits and costs it does not measure their impacts upon non-affective variables, even though LSCBA is capable of measuring non-affective benefits and costs. Second, because affective benefits and costs result in changes in people's future-oriented behavior, which in turn alters values of non-affective variables, affective benefits and costs are what economists term leading indicators of economic and financial activity. Third, because changes in economic and financial outcomes have feedback effects in terms of having second-order affective benefits and costs, policy makers would benefit from improving their ability to directly measure affective benefits and costs.

#### **4. Concerns about Affective Benefits and Costs**

A reason for LSCBA to restrict itself to non-affective costs and benefits is that such variables are in principle at least measurable. Similarly, economists have a methodological preference for or bias towards building models that have as their data or inputs variables which can be objectively measured and verified, such as initial endowments of physical capital, labor, land, energy, and financial resources. These variables are quantifiable and when markets function smoothly, they can also be priced on markets.

But, there are two categories of variables that economists also treat as exogenous parameters, which are trickier for economists to measure. These are producers' technologies and consumers' tastes. Economic models about how firms and societies engage in and can foster research and development, growth, and innovation obviously do not assume that production possibilities and technological constraints are fixed and immutable. In addition, some economists have come to realize that individual preferences are culturally and socially constructed in addition to being malleable in response to advertising, experience, imitation, and persuasion. Moreover,

consumer researchers, marketing professors, and psychologists address how to construct preferences.<sup>214</sup> ACBA should build upon such research.

Another potential concern about ACBA is whether or not it would be too financially costly or resource prohibitive to perform ACBA studies, at least currently because regulations are likely to have their own fairly unique affective benefits and costs. At least with LSCBA, regulators can draw upon a pre-existing large number of LSCBA studies for analogous benefits and costs to a particular regulation. But ACBA does not already have that large collection of data at hand. So basically every ACBA must start more afresh, which is a big drawback in terms of passing timely regulations. One response to such a concern is all this provides all the more reason to start requiring ACBA.

A direct and more basic response is that, as described above already, a small, but growing number of economists have already developed statistical techniques to examine how external factors affect SWB. For example, economists found that an individual's own reported utility losses from terrorism are likely to far exceed terrorism's purely economic consequences.<sup>215</sup> Another pair of researchers estimated the monetary value of the cost of noise that the Schiphol Airport in Amsterdam created.<sup>216</sup> Another study found that long hours of watching television is linked to higher material aspirations and anxiety and thus lower self-reported SWB.<sup>217</sup> Other economists found that changes in macroeconomic variables, such as a nation's Gross Domestic Product and inflation rate, are correlated with reported SWB.<sup>218</sup> This group of economists also

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<sup>214</sup> THE CONSTRUCTION OF PREFERENCE (Sarah Lichtenstein & Paul Slovic eds., 2006)

<sup>215</sup> Bruno S. Frey, Simon Luenchinger & Alois Stutzer, *Calculating Tragedy: Assessing the Costs of Terrorism*, Institute for Empirical Research in Economics, University of Zurich Working Paper No. 205 (Sept. 2004).

<sup>216</sup> Bernard M. S. van Praag & Barbara E. Baarsma, *Using Happiness Surveys to Value Intangibles: The Case of Airport Noise*, *ECON. J.* 224 (2005).

<sup>217</sup> Bruno S. Frey, Christine Benesch & Alois Stutzer, *Does Watching TV Make Us Happy?*, Institute for Empirical Research in Economics, University of Zurich Working Paper No. 241 (May 2005).

<sup>218</sup> Rafael di Tella et al., *The Macroeconomics of Happiness*, 85 *REV. ECON. & STAT.* 809 (2003); and Justin Wolfers, *Is Business Cycle Volatility Costly? Evidence From Surveys of Subjective Wellbeing*, 6 *INT'L FIN.* (2003).

found that merely the fear of unemployment generates large reductions in SWB.<sup>219</sup> Another pair of researchers found that people in transition economies on average self-reported SWB as compared to people in non-transition countries.<sup>220</sup> Their econometric analysis demonstrated that SWB levels are highest in countries with the most advanced market-oriented reforms and lower inequality. Another study provided empirical evidence of the affective and social costs of competition in experimental games.<sup>221</sup> A final example of empirical SWB research is a study finding that higher levels of government spending reduce life satisfaction.<sup>222</sup>

ACBA's introduction of affective benefits and costs into LSCBA could concern critics of LSCBA who argue that LSCBA is really indeterminate and can be merely used as a smoke screen to justify any decision that a regulatory agency desires. But, instead of exacerbating matters by throwing more imponderables into the mix, ACBA can prevent regulators from leaving out relevant benefits and costs. A legal scholar has pointed out that what counts as benefits and what counts as costs are nowhere canonically specified in LSCBA.<sup>223</sup> By highlighting that affective benefits and costs exist and should be taken into account, ACBA disciplines regulators to specify explicitly and justify publicly what and why in their analysis counts as benefits and what counts as costs.

In general, some regulations might not have affective benefits, and other regulations might not have affective costs. But, because all investors are influenced, at least some of the

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<sup>219</sup> Rafael di Tella et al., *Preferences over Inflation and Unemployment: Evidence from Surveys of Happiness*, 91 AM. ECON. REV. 335 (2001).

<sup>220</sup> Peter Sanfey & Utku Teksöz, *Does Transition Make You Happy?*, European Bank for Reconstruction and Development Working Paper No. 91 (June 2005), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=755446](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=755446).

<sup>221</sup> Jordi Brandts et al., *Competition and Well-Being*, Institute for the Study of Labor Discussion Paper No. 1769 (Sept. 2005), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=548222](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=548222).

<sup>222</sup> Christian Bjørnskov et al., *The Bigger the Better? Evidence of the Effect of Government Size on Life Satisfaction Around the World*, Institute of Economic Research Working Paper 05/44 (Oct. 2005), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=830545](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=830545).

<sup>223</sup> Hill, *supra* note 167, at 582 (pointing out how LSCBA presupposes that categories of costs and benefits are known already). See also, Roland G. Fryer, Jr. & Matthew O. Jackson, *A Categorical Model of Cognition and Biased Decision-Making* (Nov. 12, 2004) (unpublished manuscript), available at [http://post.economics.harvard.edu/faculty/fryer/papers/fryer\\_jackson.pdf](http://post.economics.harvard.edu/faculty/fryer/papers/fryer_jackson.pdf).

time, by their own - or other investors' - affect, emotions, and moods;<sup>224</sup> SEC rules will always have some degree or level of affective benefits, such as reduced anxiety or decision-making stress, and/or affective costs, such as increased fear or exuberance.<sup>225</sup> Also, if, as has often been claimed, a desired goal of securities regulation is to bolster or promote investor confidence in the integrity of U.S. federal securities markets;<sup>226</sup> then, the SEC should not only engage in LSCBA, but also utilize ACBA to quantitatively incorporate impacts of investor attitudes, beliefs, feelings, and sentiment upon traditional economic and financial variables.

## 5. Political Concerns

Clearly, financial regulation in general or securities regulation in particular, like any regulatory process, is a political process. This political reality means that SEC regulators must consider how their actions make their supervising politicians feel and that, in turn, depends on how those politicians' constituencies feel towards SEC behavior. For example, there might be a public outcry against SEC regulations that have a large positive LSCBA value. Similarly, there could be strong public support in favor of SEC regulations that have a large negative LSCBA value. ACBA should identify, describe, and quantify such public political pressures, and whether they reflect a rational affective reaction or instead a mistaken affective response due to strongly held irrational or verifiably incorrect beliefs. Non-financial analogues of public anxiety include concerns over brain cancer and tumors due to cell phone usage;<sup>227</sup> and fear of radioactive fallout from a catastrophic nuclear power plant accident.<sup>228</sup> These examples raise a question of whether

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<sup>224</sup> Peter H. Huang, *Moody Investing and the Supreme Court: Rethinking Materiality of Information and Reasonableness of Investors*, 13 SUP. CT. ECON. REV. 99, 102-05 (2005) (presenting empirical and experimental evidence of moody investing). See generally, David A. Hoffman, *The 'Duty' To Be a Rational Shareholder*, 90 MINN. L. REV. (forthcoming 2005).

<sup>225</sup> Henry C. Hu, *Faith and Magic: Investor Beliefs and Government Neutrality*, 78 TEX. L. REV. 777, 840-50 (2000) (arguing that SEC disclosure and regulations contribute to investor optimism about stocks).

<sup>226</sup> Investment Company Governance, *supra* note 18, at 39,396, 39, 400-39,401.

<sup>227</sup> Lennart Hardell et al., *Further Aspects on Cellular and Cordless Phones and Brain Tumours*, 22 INT'L. J. ONCOLOGY 399 (2003) (considering evidence linking cancer to using cell phones).

<sup>228</sup> THE CHINA SYNDROME (Columbia Pictures 1979); Maurice Tubiana, *Radiation Risks in Perspective: Radiation-Induced Cancer among Cancer Risks*, 39 RADIATION & ENV'T. BIOPHYSICS 3, 11, 13 (2000) (discussing the importance of emotions in public's attitudes towards nuclear energy in general and nuclear power plants in particular).

a regulator should count as benefits and costs affective reactions that some people genuinely have, but some technical experts deem to be irrational and unfounded.<sup>229</sup> If people genuinely feel such allegedly phantom benefits and costs, then such fears deserve to be counted and recognized.

ACBA is thus related to research in political science,<sup>230</sup> and political psychology,<sup>231</sup> that analyzes the role of affect in political attributions,<sup>232</sup> deliberations,<sup>233</sup> international relations,<sup>234</sup> judgments,<sup>235</sup> preferences,<sup>236</sup> and protest.<sup>237</sup> Affective reactions also explain and interact with cognitive biases and heuristics in forming public perceptions of and (mis)understandings about public finance systems, including taxation.<sup>238</sup> ACBA's method of measuring emotional impacts

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<sup>229</sup> SUNSTEIN, *supra* note 34, at xii (discussing excessive fear and stating that “[p]ublic fear is a real problem, even if it is unjustified, and a government does its citizens a grave disservice if it ignores their concerns.”). *But see*, Rachel F. Moran, *Fear Unbound: A Reply to Professor Sunstein*, 42 WASHBURN L.J. 1 (2002) (criticizing Sunstein's reduction of fear to a cognitive heuristic. *See also*, Rachel F. Moran, *Fear: A Story in Three Parts*, 69 MO. L. REV. 1013 (2004);

<sup>230</sup> *See e.g.*, George E. Marcus, *The Structure of Emotional Response*, 82 AM. POL. SCI. REV. 735 (1988); George E. Marcus, *Emotions and Politics: Hot Cognitions and the Rediscovery of Passion*, 30 SOC. SCI. INFO. 195 (1991); and George E. Marcus & Michael B. MacKuen, *Anxiety, Enthusiasm and the Vote: The Emotional Underpinnings of Learning and Involvement During Presidential Campaigns*, 87 AM. POL. SCI. REV. 688 (1993).

<sup>231</sup> *See e.g.*, INTRODUCTION TO POLITICAL PSYCHOLOGY 48-56 (Martha Cottam et al. eds., 2004); and George E. Marcus, *The Psychology of Emotion and Politics*, in POLITICAL PSYCHOLOGY 182-221 (David O. Sears et al. eds., 2003).

<sup>232</sup> *See generally*, Deborah A. Small et al., *Emotion Priming and Attribution for Terrorism: Americans' Reactions in a National Field Experiment*, POL. PSYCHOL. (forthcoming).

<sup>233</sup> *See generally*, GEORGE E. MARCUS, *THE SENTIMENTAL CITIZEN: EMOTION IN DEMOCRATIC POLITICS* (2002).

<sup>234</sup> *See generally*, ROSE MCDERMOTT, *POLITICAL PSYCHOLOGY IN INTERNATIONAL RELATIONS* 153-87 (2004).

<sup>235</sup> *See, e.g.*, Victor C. Ottari & Robert S. Wyer, Jr., *Affect and Political Judgment*, in EXPLORATIONS IN POLITICAL PSYCHOLOGY 296-315 (Shanto Iyengar & William J. McGuire eds., 1993). *See generally*, AFFECTIVE INTELLIGENCE AND POLITICAL JUDGMENT (George E. Marcus et al., 2000).

<sup>236</sup> *See generally*, Deborah A. Small & Jennifer S. Lerner, *Emotional Politics: Personal Sadness and Anger Shape Public Welfare Preferences* (2004) (unpublished manuscript).

<sup>237</sup> *See generally*, PASSIONATE POLITICS: EMOTIONS AND SOCIAL MOVEMENT (Jeff Goodwin et al., eds. 2001).

<sup>238</sup> *See generally*, Edward J. McCaffery & Jonathan Baron, *The Political Psychology of Redistribution*, UCLA L. REV. (forthcoming), University of Southern California Center for Law, Economics and Organization Research Paper No. C05-4 (Mar. 15, 2005), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=695305](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=695305).

is also related to recent research about the importance of emotions in bargaining and negotiations.<sup>239</sup>

## 6. Cultural, Diversity, and Heterogeneity Concerns

Although LSCBA can in principle deal with the reality that most regulations impose uneven benefits and impose unequal costs on different subpopulations, indexed by their age, ethnicity, income, race, sex, and wealth by differential weighting of costs and benefits across these subgroups of people; LSCBA privileges non-affective costs and non-affective benefits. A desirable and important feature of ACBA is being able to explicitly acknowledge and evaluate those regulations that are likely to provide different affective benefits for and impose different affective costs upon individuals of different ages, ethnicities, genders, and races. There is recent evidence finding differences in information processing in response to emotional advertisements due to motivational and cognitive changes associated with age.<sup>240</sup> There is a large amount of evidence that non-financial risk perceptions generally vary across gender and race.<sup>241</sup>

Similarly, there are numerous empirical findings providing evidence that: retirement investment behavior differs by gender and marital status;<sup>242</sup> individual stock trading involves

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<sup>239</sup> See generally, ROGER FISHER & DANIEL SHAPIRO, *BEYOND REASON: USING EMOTIONS AS YOU NEGOTIATE* (2005).

<sup>240</sup> Patti Williams & Aimee Drolet, *Age-Related Differences in Responses to Emotional Advertisements*, 32 J. CONSUMER RES. 343 (2005).

<sup>241</sup> See, e.g., Richard J. Bord & Robert E. O'Connor, 78 SOC. SCI. Q. 830 (1997) (presenting survey data evidence that women are more concerned than men about environmental risks for global warming and hazardous chemical waste sites); Debra J. Davidson & William R. Freundenberg, *Gender and Environmental Risk Concerns: A Review and Analysis of Available Research*, 28 ENV'T & BEHAV. 302, 309-16 (1996) (analyzing the results of seventy-five published reports and studies about gender and environmental risk attitudes); James Flynn, Paul Slovic, & C.K. Mertz, *Gender, Race, and Perception of Environmental-Health Risks*, 14 RISK ANALYSIS 1101 (1994) (finding race and gender differences in risk perception in the U.S.); Melissa L. Finucane et al., *Gender, Race, and Perceived Risk: The 'White Male' Effect*, 2 HEALTH, RISK & SOC. 159, 163-69 (2000) (presenting survey data about how people of different races and genders perceive risks); Dan M. Kahan et al., *Gender, Race, and Risk Perception: The Influence of Cultural Status Anxiety*, J. PERSONALITY & SOC. PSYCHOL. (forthcoming) (proposing cultural status anxiety to explain the "white male effect"); and Theresa A. Satterfield et al., *Discrimination, Vulnerability, and Justice in the Face of Risk*, 24 RISK ANALYSIS 115, 124-27 (2004) (reexamining "the white male effect").

<sup>242</sup> Annika E. Sunden & Brian J. Surette, *Gender Differences in the Allocation of Assets in Retirement Savings Plans*, 88 AM ECON. REV. 207, 209-10 (1998) (finding that gender and marital status affect investment behavior significantly).

higher turnover for and lower performance by men than women;<sup>243</sup> women invest less than men in every study of simple investment choices, and thus appear to be financially more risk averse than men;<sup>244</sup> and the Survey of Consumer Finances<sup>245</sup> financial risk tolerance measure differs significantly over ethnicities and racial categories.<sup>245</sup> Such variation in risk attitudes, behavior, beliefs, perceptions, and tolerances across various discrete classifications, which the U.S. Constitution commits to equal protection of,<sup>246</sup> raises very serious issues of equality, equity, and justice for CBA of regulations. Some researchers have proposed that regulatory “agencies and financial educators should target investor education on investments and financial risk to racial and ethnic groups in order to promote better choices for investing for financial goals.”<sup>247</sup>

In addition to explicit measures of affective variables, there is also research about people’s implicit associations, attitudes, and cognitions.<sup>248</sup> Recent implicit measures of life satisfaction (ILS) permit analysis of cultural and ethnic differences in subjective well-being.<sup>249</sup> Similarly, implicit measures of risk attitude facilitate analysis of whether there are gender

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<sup>243</sup> Brad M. Barber & Terrance Odean, *Boys will be Boys: Gender, Overconfidence, and Common Stock Investment*, 88 Q.J. ECON. 261, 275-86 (2001) (presenting such evidence and hypothesizing that evidence is due to greater feelings of male overconfidence than female overconfidence).

<sup>244</sup> Gary Charness & Uri Gneezy, *Gender Differences in Financial Risk-Taking*, (Dec. 5, 2004) (presenting such experimental evidence), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=648735](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=648735). But see, Renate Schubert et al., *Financial Decision Making: Are Women Really More Risk-Averse?*, 89 AM. ECON. REV. 381 (1999) (finding that the comparative risk propensity of male and female subjects depends strongly on financial decision settings; and no gender differences in risk propensity when subjects face contextual financial decision settings)

<sup>245</sup> Rui Yao et al., *The Financial Risk Tolerance of Blacks, Hispanic and Whites*, 129 FIN. COUNSELING & PLANNING 51, 56-59 (2005) (presenting and discussing statistical analyses of empirical survey evidence of differences by race and ethnicity in an individual’s willingness to take financial risks).

<sup>246</sup> U.S. CONST. amend. XIV, § 1.

<sup>247</sup> Yao et al., *supra* note 245, at 51.

<sup>248</sup> See, e.g., <https://implicit.harvard.edu/implicit/>. See also, Marianne Bertrand et al., *Implicit Discrimination*, 95 AM. ECON. REV. ? (forthcoming 2005), available at [http://www.aeaweb.org/annual\\_mtg\\_papers/2005/0107\\_1015\\_1101.pdf](http://www.aeaweb.org/annual_mtg_papers/2005/0107_1015_1101.pdf).

<sup>249</sup> Do-Yeong Kim, *The Implicit Life Satisfaction Measure*, 7 ASIAN J. SOC. PSYCHOL. 236 (2004).

differences in risk behavior.<sup>250</sup> Finally, implicit measures of law-abidingness facilitate research about gender differences in an individual's propensity to abide by laws.<sup>251</sup>

## 7. Affective Neuroscientific Research

A final potential research development related to ACBA comes from recent affective neuroscientific data suggesting that there is a disjunction between two brain systems: wanting and liking.<sup>252</sup> Building on this contemporary neuroscientific evidence of distinct "wanting" and "liking" systems in human (and mice) brains,<sup>253</sup> Professor Colin Camerer introduced a conceptual framework which distinguishes between human wanting, liking, and learning.<sup>254</sup> Camerer utilizes his generalization of neoclassical economics' revealed preference theory, which is a special case of an individual's learning system having already successfully instructed that individual's wanting system about what its liking system, to provide a scientific language for normative and positive analyses of paternalism,<sup>255</sup> or parentalism.<sup>256</sup> Future advances in scanning human

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<sup>250</sup> Richard Ronay & Do-Yeong Kim, *Gender Differences in Explicit and Implicit Attitudes Towards Risk: A Socially Facilitated Phenomenon*, 7 BRIT. J. SOC. PSYCHOL. (forthcoming 2005) available at <http://bizpsych.ajou.ac.kr/kimd/irt.pdf>.

<sup>251</sup> B. Atwood & Do-Yeong Kim, *Gender Differences in Explicit and Implicit Law-Abidingness* (2005) (unpublished manuscript).

<sup>252</sup> Kent C. Berridge, *Pleasure, Unfelt Affect, and Irrational Desire*, in FEELINGS AND EMOTIONS 243 (Antony S.R. Manstead, Nico Frijda & Agneta Fischer eds., 2004); Kent C. Berridge, *Irrational Wanting and Subrational Liking: How Rudimentary Motivational and Affective Processes Shape Preferences and Choices*, 24 POL. PSYCHOL. 657 (2003); Kent C. Berridge, *Pleasure, Pain, Desire, and Dread: Hidden Core Processes of Emotion*, in Kahneman, Diener & Schwarz, *supra* note 204, at 525; Kent C. Berridge, *What is the Role of Dopamine in Reward: Hedonic Impact, Reward Learning, or Incentive Salience?*, 28 BRAIN RES. REV. 309 (1998); Kent C. Berridge, *Food Reward: Brain Substrates of Wanting and Liking*, 20 NEUROSCI. & BIOBEHAV. REVIEWS 1 (1996); Kent C. Berridge & Elliot S. Valenstein, *What Psychological Process Mediates Feeding Evoked By Electrical Stimulation of the Lateral Hypothalamus?*, 105 BEHAV. NEUROSCI. 3 (1991).

<sup>253</sup> Kent C. Berridge & Terry Robinson, *Parsing Reward*, 26 TRENDS IN NEUROSCIENCES 507 (Sept. 2003); Kent C. Berridge et al., *Sequential Super-Stereotypy of an Instinctive Fixed Action Pattern in Hyper-Dopaminergic Mutant Mice: A Model of Obsessive Compulsive Disorder and Tourette's*, 3 BMC BIOLOGY 4 (2005); Susana Pecina et al., *Hyperdopaminergic Mutant Mice have Higher "Wanting" But Not "Liking" for Sweet Rewards*, 23 J. NEUROSCI. 9395 (2003).

<sup>254</sup> Colin Camerer, *Wanting, Liking, and Learning: Speculations on Neuroscience and Paternalism*, 72 U. CHI. L. REV. ? (forthcoming) (reviewing this literature and developing its legal implications for paternalism).

<sup>255</sup> I remember once being asked in the midst of a seminar presentation in the John M. Olin Law and Economics workshop at Georgetown University Law Center about some ideas related to paternalism in family law this question (Feb. 12, 2001): why does the word maternal typically evoke positive connotations and emotions, but the word paternal usually evoke negative connotations and emotions? An audience member suggested that one reason is that mothers frame their interventions (e.g., "let me help you do that")

brains,<sup>257</sup> in conjunction with existing medical technologies might satisfy a preference shared by many economists and policy makers for objective neurological and physiological measures over subjective self-reports about affect and SWB. Such neuroeconomic research offers at least possible beginnings of empirical and theoretical foundations for applied policy analysis and regulatory evaluation involving future neuroscientific measurement of affective benefits and costs, that is, ACBA.<sup>258</sup> Of course, such neuroscientific ACBA raises a number of ethical, legal, and social issues (ELSI),<sup>259</sup> perhaps akin to ELSI about how to regulate genetic privacy and testing.

### III. Conceptual and Measurement Issues with ACBA in Financial Regulation

To preview this section, imagine how the conceptual and measurement issues that are associated with affective benefits and costs arise in a number of discrete categories of securities

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differently than fathers do (e.g., “do this and don’t do that”). This difference in framing could reflect parenting attitudes that differ by gender. Women could be more collaborative and egalitarian, in their modes of childcare and management styles, while men could be more authoritarian or hierarchical. Another audience member volunteered that dads and moms generally engage in different substantive types of parental interventions, perhaps due to a sexual division of labor or traditional gender stereotypes. Certainly, differing perceptions about being maternalistic versus being paternalistic reflect cultural and social conventions about gender roles. *See generally*, RHONA MAHONY, KIDDING OURSELVES: BREADWINNING, BABIES, AND BARGAINING POWER (1996). Interestingly, maternalism is defined as “1. the quality of having or showing the tenderness and warmth and affection of or befitting a mother” and “2. motherly care; behaviour characteristic of a mother; the practice of acting as a mother does toward her children”. WORLDWEB ONLINE, <http://wordwebonline.com/en/MATERNALISM>. *See also*, Peter Suber, *Paternalism*, in PHILOSOPHY OF LAW: AN ENCYCLOPEDIA 635 (Christopher B. Gray ed., 1999) stating that paternalism “comes from the Latin *pater*, meaning to act like a father, or to treat another person like a child.”

<sup>256</sup> Professor Ayres also used the word parentalism during a talk about regulating menus (June 18, 2005). Ian Ayres, *Regulating Menus*, 72 U. CHI. L. REV. ? (forthcoming). The observations discussed in the above footnote suggest that parentalism should evoke more neutral connotations and emotions than maternalism or paternalism. *See also*, Suber, *supra* note 255, at 632 observing that parentalism “is a gender-neutral anagram of “paternalism.””

<sup>257</sup> Richard J. Davidson, *Well-Being & Affective Style: Neural Substrates and Biobehavioral Correlates*, 359 PHIL. TRANSACTIONS ROYAL SOC., LONDON IN B 1395 (2004); and Heather L. Urry et al., *Making A Life worth Living: Neural Correlates of Well-Being*, 15 PSYCHOL. SCI. 367 (2004).

<sup>258</sup> *See, e.g.*, B. Douglas Berheim & Antonio Rangel, Behavioral Public Economics: Welfare and Policy Analysis with Non-Standard Decision-Makers, in ECONOMIC INSTITUTIONS AND BEHAVIORAL ECONOMICS (Peter Diamond & Hannu Vartiainen eds., forthcoming); Nat’l Bureau of Econ. Res. Working Paper 11518 (July 2005) (discussing and illustrating behavioral approaches to applied welfare analysis), available at <http://www.nber.org/papers/w11518>.

<sup>259</sup> *See, e.g.*, MICHAEL S. GAZZANIGA, THE ETHICAL BRAIN 103-19 (2005). *See generally*, NEUROETHICS: MAPPING THE FIELD (Steven Marcus ed., 2004) available at <http://www.dana.org>; NEUROSCIENCE AND THE LAW (Brent Garland ed., 2004).

and financial regulations. Arguably the favorite member of the SEC's regulatory toolbox is mandatory securities disclosure.<sup>260</sup> Both the overarching philosophy and underlying principle of U.S. federal securities regulation can be summed up by the phrase: disclosure, more disclosure, and even further disclosure. Related are SEC rules that regulate the timing of certain voluntary information provision, such as the gun-jumping rules in registered public offerings.<sup>261</sup> An often recurring regulatory option is offering and targeting financial education designed to improve financial literacy, investment behavior, and retirement planning.<sup>262</sup>

Another perennial regulatory favorite is the use of default rules. An example is provided by default allocations in retirement plans.<sup>263</sup> Another example is that of default provisions or contractual terms in personal credit card borrowing.<sup>264</sup> A recent example is Professor Larry Ribstein's "humble" approach to securities regulation that permits "actors to self-define their certification level,"<sup>265</sup> or that would "impose a minimum standard but permit firms to "comply or explain" - that is, opt of compliance as long as they explain that they are doing so."<sup>266</sup> Another recent example is Professor Roberta Romano's proposal that firms be able "to opt-into regulation."<sup>267</sup> A final regulatory proposal is Professor Robert Clark's novel idea for building

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<sup>260</sup> See, e.g., Stephen Bainbridge, *Mandatory Disclosure: A Behavioral Analysis*, 68 U. CIN. L. REV. 1023 (2000) (stating that "[m]andatory disclosure is a – if not the – defining characteristic of U.S. securities regulation").

<sup>261</sup> See, e.g., 15 U.S.C. § 77e (stating the so-called gun-jumping rules). See also, CHOI & PRITCHARD, *supra* note 127, at 423-63 (discussing the so-called gun-jumping rules).

<sup>262</sup> See, e.g., the website of the Financial Literacy and Education Commission, available at <http://www.mymoney.gov/>.

<sup>263</sup> See generally, Richard H. Thaler & Shlomo Benartzi, *Save More Tomorrow: Using Behavioral Economics to Increase Employee Saving*, 112 J. POL. ECON. S164 (2004). See also, Henrik Cronqvist & Richard H. Thaler, *Design Choices in Privatized Social-Security Systems: Learning from the Swedish Experience*, 94 AM. ECON. REV. 424, 425, 428 (2003) (discussing designing default funds).

<sup>264</sup> Cass R. Sunstein, *Boundedly Rational Borrowing*, 72 U. CHI. L. REV. ? (forthcoming) (discussing a Borrow Less Today plan).

<sup>265</sup> Larry E. Ribstein, *Sarbox: The Road to Nirvana*, 2004 MICH. ST. L. REV. 279; 296.

<sup>266</sup> Larry E. Ribstein, *Sarbanes-Oxley after Three Years*, NEW ZEALAND L. REV. (forthcoming), Illinois Law and Economics Working Paper No. LE05-016 22 (June 20, 2005), available at [www.ssrn.com/abstract=746884](http://www.ssrn.com/abstract=746884).

<sup>267</sup> Romano, *supra* note 26, at 1595-97 (proposing changing SOX's corporate governance mandates into statutory defaults).

into regulation a continual research and ongoing reassessment adjustment procedure.<sup>268</sup> ACBA is consistent with Clark's vision because ACBA involves measuring affective benefits and costs ex post of, not ex ante of regulatory policy changes. Indeed, regulators can fine-tune policies in response to feedback that ACBA provides over time. In this manner, ACBA will help to provide an empirical basis for and principled approach to evolving regulation.

### 1. Mandatory Securities Disclosures

My previously published examination of affective benefits from and emotional costs to mandatory securities disclosures is an example of ACBA.<sup>269</sup> That analysis defined irrational exuberance and anxiety and explained how both types of affect have policy and regulatory implications for a long-standing debate over the rationales and effectiveness of mandatory securities disclosures. In particular, that analysis observed that even if some affect dissipates, investor euphoria or anxiety may already respectively “affect issuers of securities in terms of a lower or higher cost of capital due to such emotional reactions.”<sup>270</sup> Affective benefits and costs may be temporary or able to be learned-away; but even if they are so, that does not mean they should not be counted because they will often have irreversible and permanent consequences upon such traditional economic variables as levels of aggregate consumption, credit card debt, investment, stock prices, and stock volume. Rather than reproduce more details from that earlier analysis, the rest of this section offers a “top ten” list of related, but new thoughts.

First, standard analyses of mandatory securities disclosures, like most forms of mandated information provision, do not adequately consider affective reactions to information. It is well-recognized that investors can suffer cognitively from information overload in terms of being

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<sup>268</sup> Clark, *supra* note 26, at 42-44 (proposing that future regulations emulate Title VII of SOX in requiring empirical research and corresponding responsive adjustments or improvements).

<sup>269</sup> Huang, *supra* note 36, at 501, 520-23 (analyzing emotional benefits and costs to mandatory securities disclosures).

<sup>270</sup> Huang, *supra* note 36, at 520.

unable to cognitively process and understand too much information.<sup>271</sup> But, people can also suffer affectively from information overload in terms of feeling anger, annoyance, apathy, boredom, frustration, helpless, listlessness, and stress upon receipt of too much (or too little) information or information too quickly (or too slowly). Thus, mandating additional securities disclosures might produce little or no cognitive benefits in the form of better investor decision making, but potentially large affective costs in the form of affective overload. Analysis of affective costs and benefits of information regulation should not be limited to securities law. We advocate ACBA of regulating information provision in these contexts: federal consumer protection statutes prohibiting deceptive advertising or misleading statements,<sup>272</sup> products liability or tort law's imposition on manufacturers of a duty to warn,<sup>273</sup> and more generally our common law of contracts.<sup>274</sup>

## 2. Should the SEC Worry About Scaring Investors?

Second, another possible affective cost from additional mandatory securities disclosures is what Professor George Loewenstein called the “work of worry,” a delightful phrase that captures the idea that if people engage in certain risky activities despite their experiencing fear about some possible bad consequences of such activities, their fear is a deadweight loss of suffering. Professors Loewenstein and Ted O’Donoghue provide two important and timely examples of the work of worry.<sup>275</sup> Their first example is a terrorist alert warning system which offers no guidance as to how individuals can alter their behavior to improve their safety, imposes

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<sup>271</sup> See, e.g., Troy A. Paredes, *Blinded By the Light: Information Overload and Its Consequences for Securities Regulation*, 81 WASH. U. L.Q. 417, 420 (2003) (highlighting concerns about investors, securities analysts, brokers, and money managers all experiencing information overload from disclosures mandated by federal securities laws).

<sup>272</sup> See, e.g., §5 of the Federal Trade Commission Act, 15 U.S.C. §45(a)(I) and Lanham Act, 15 U.S.C. §1125(a).

<sup>273</sup> Jon D. Hanson & Douglas D. Kysar, *Taking Behavioralism Seriously: The Problem of Market Manipulation*, 74 NYU L. REV. 630 (1999); and Howard Latin, ‘Good’ Warnings, Bad Products, and Cognitive Limitations, 41 UCLA L. REV. 1193 (1994).

<sup>274</sup> Richard Craswell, *Taking Information Seriously: Misrepresentation and Nondisclosure in Contract Law and Elsewhere*, John M. Olin Program in Law and Economics Working Paper Bo. 314 (Oct. 2005), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=827685](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=827685).

privacy costs on many individuals, inconveniences most airline passengers, and terrifies a great number of ordinary individuals. Their second and more controversial set of examples are health and safety warnings that have little or no effect, except for scaring their intended target audience in addition to perhaps others. More generally, as Professors Loewenstein and O'Donoghue note, mandating information provision might not be an example of asymmetric paternalism or conservative regulation,<sup>276</sup> or libertarian paternalism.<sup>277</sup> Requiring provision of information can impose large affective psychic costs, such as fear, guilt, or shame, without producing much countervailing benefits.

Loewenstein and O'Donoghue suggest that in the context of such medical testing as mammograms for women and PSA (Prostate-Specific Antigen) tests for men, scary messages are not only ineffective at convincing patients to seek testing, but also trigger worst-case scenarios or fears and personal anxieties of many patients. They also suggest that although food labeling has clear nutritional informational benefits, it also can foster a neurotic and unhealthy atmosphere towards eating. They instead support restricting the supply of temptations, such as regulating the content and portion size of food, or banning subliminal advertising. Such supply-side restrictions could be more effective, with fewer affective costs in terms of negative feelings, to combat a nationwide U.S. obesity epidemic,<sup>278</sup> if there genuinely is one,<sup>279</sup> and it can be fought. A pair of economists found empirically that variation in health behaviors is due to genetic factors and

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<sup>275</sup> George Loewenstein & Ted O'Donoghue, *"We Can Do This the Easy Way or the Hard Way": Negative Emotions, Self-Regulation and the Law*, 72 U. CHI. L. REV. ? (forthcoming).

<sup>276</sup> Colin Camerer et al., *Regulation for Conservatives: Behavioral Economics and the Case for "Asymmetric Paternalism"*, 151 U. PA. L. REV. 1211 (2003).

<sup>277</sup> Cass R. Sunstein & Richard H. Thaler, *Libertarian Paternalism Is Not An Oxymoron*, 70 U. CHI. L. REV. 1159 (2004); Richard H. Thaler & Cass R. Sunstein, *Libertarian Paternalism*, 93 AM. ECON. REV. 175 (2003).

<sup>278</sup> See, e.g., Jeff Strnad, *Conceptualizing the 'Fat Tax': The Role of Food Taxes in Developed Economies*, Stanford Law and Economics Olin Working Paper No. 286 (July 2004), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=561321](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=561321); and SUPER SIZE ME (Samuel Goldwyn Films 2004).

<sup>279</sup> See, e.g., MICHAEL GARD & JAN WRIGHT, *THE OBESITY EPIDEMIC: SCIENCE, MORALITY AND IDEOLOGY* (2005); and ERIC OLIVER, *FAT POLITICS: THE REAL STORY BEHIND AMERICA'S OBESITY EPIDEMIC* (2000).

behavior-specific situational influences.<sup>280</sup> Whether dieting or even obesity is associated with depression, stress, and unhappiness not only varies across individuals, but also cultures. Two economists recently statistically estimated a negative relationship between obesity and self-reported happiness in the U.S., but a positive correlation between obesity and self-reported happiness in Russia.<sup>281</sup>

### 3. Heterogeneity in Affective Reactions to Securities Disclosures

Third, an individual's affective reactions to any particular stimulus and regulatory policy are likely to be distributed non-uniformly over a population. Such individual variation presents theoretical and empirical challenges for aggregation of affective benefits and costs as well as regulatory policy based upon ACBA.<sup>282</sup> In the context of securities regulation, there are multiple actual, intended, and potential audiences to information transmissions that securities issuers make voluntarily or because they are required to by law. Possible recipients of such messages include these groups: small individual retail investors, large sophisticated institutional investors, securities brokers, professional securities analysts, and securities fraud plaintiff's attorneys. To be sure, even within each of these above groups, there is likely to be much individual variation in affective responses to securities information. But, there are likely to be predictable differences across these groups in terms of their average or mean affective response to securities information. At least, some of these differences will be due to education, experience, and temperament. There might also be individual variation in cognitive responses to securities information, but probably less than for affective responses because people are both aware of and similarly trained in their cognitive reactions to information. Finally, recent research finds that differences in people's

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<sup>280</sup> David M. Cutler & Edward Glaeser, *What Explains Differences in Smoking, Drinking and Other Health-Related Behaviors?*, 95 AM. ECON. REV. ? (forthcoming 2005), (Feb. 2005) revised version available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=658302](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=658302).

<sup>281</sup> Carol Graham & Andrew Felton, *Variance in Obesity Across Cohorts and Countries: A Norms Based Explanation Using Happiness Surveys*, The Brookings Institution, The Center on Social and Economic Dynamics Working Paper No. 42 (Sept. 2005) (unpublished manuscript) available at [http://www.brookings.edu/es/dynamics/papers/CSED\\_wp42.pdf](http://www.brookings.edu/es/dynamics/papers/CSED_wp42.pdf).

economic attitudes can be due to differences in their educational backgrounds,<sup>283</sup> and intensity of religious upbringing.<sup>284</sup>

#### **4. Regulating the Timing of Voluntary Securities Disclosures**

Fourth, all of the above considerations about ACBA of mandated securities disclosures also will apply to SEC rules that regulate the timing of certain voluntary securities information disclosures. A motivation for such rules as the prohibitions against so-called gun-jumping in registered public offerings is the propensity for people who receive more favorable information first and then less favorable information second to behave differently than if they receive both more and less favorable information simultaneously. While this is a legitimate concern, its focus is on the cognitive impacts of selective versus non-selective disclosures. ACBA of such rules should and would also incorporate such affective impacts of selective versus non-selective disclosures as fear about possibly not yet disclosed bad news and relief over learning at once about both good prospects and bad “risk factors” of a particular security. There is experimental evidence that people accelerate negative experiences to avoid dreading them and delay positive experiences to enjoy savoring them.<sup>285</sup>

#### **5. Regulating Audiences of Voluntary Securities Disclosures**

Fifth, related to restrictions on when securities issuers may engage in voluntary securities disclosures are regulations mandating to whom securities issuer may engage in voluntary securities information transmission. An example is Regulation FD (Fair Disclosure),<sup>286</sup> which the SEC promulgated in 2000 and which prohibits securities issuers from only making certain

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<sup>282</sup> Jeffrey Rachlinski, *Cognitive Errors, Individual Differences, and Paternalism*, 72 U. CHI. L. REV. ? (forthcoming).

<sup>283</sup> Luigi Guiso et al., *The Role of Social Capital in Financial Development*, 94 AM. ECON. REV. 526 (2004).

<sup>284</sup> Luigi Guiso et al., *People’s Opium: The Economic Effects of Religion*, 50 J. MONETARY ECON. 225 (2003).

<sup>285</sup> See, e.g., George Loewenstein, *Anticipation and the Value of Delayed Consumption*, 97 ECON. J. 666 (1987); and Yuval Rottenstreich & Christopher K. Hsee, *Money, Kisses, and Electric Shocks: On the Affective Psychology of Risk*, 12 PSYCHOL. SCI. 185 (2001).

<sup>286</sup> 17 C.F.R. parts 240, 243, and 24 (2000); Release Nos. 33-7881, 34-43154, IC-24599, File No. S7-31-99; available at <http://www.sec.gov/rules/final/33-7881.htm>.

securities disclosures to selected analysts before they are made publicly. A pair of mantras often made by Congress, judges, and SEC regulators is that of keeping or making securities markets a “level playing field,”<sup>287</sup> and protecting or promoting the integrity of securities markets. Both of these mantras have strong emotional appeal because they suggest a goal of securities regulation is to make securities markets a safe place for investing by apocryphal widows and orphans. These mantras also show up in the federal common law of insider trading and jurisprudence of Rule 10b-5,<sup>288</sup> because outsiders fear that insiders will take informational advantage of informationally challenged outsiders. But are recitations of these mantras just mere rhetoric with emotional appeal? ACBA can measure and quantify the affective impact of alternative securities regulations on the faith and trust of investors by examining how various policies directly affect investor anxiety or stress, and in so doing indirectly affect such traditional economic and financial variables as prices, volatility, and volume of securities.

## 6. Overall Affect from a System of Securities Regulations

Sixth, the above discussion about fears over bad consequences resulting from inequities in information highlights an important feature of a system of securities regulation as opposed to a system’s constituent individual regulations. There is an emotional sense of well-being or peace of mind from knowing that an overarching regulatory system exists which is distinct from any specific affective benefits and costs that specific regulations produce. Such senses of ease or uneasiness exist not only about financial risks, but also non-financial risks, such as that from the mad cow disease, Bovine Spongiform Encephalopathy.<sup>289</sup> Of course, such an affective sense of security might be false and lead investors to invest only in (U.S.) securities, and insufficiently diversify their portfolios across other non-(U.S. security) financial assets.<sup>290</sup> What both media

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<sup>287</sup> Naturally, this raises a drainage problem because a level playing field will not drain at least naturally.

<sup>288</sup> 17 C.F.R. pt. 240.

<sup>289</sup> See e.g., John Eldridge & Jacquie Reilly, *Risk and Relativity: BSE and the British Media*, in THE SOCIAL AMPLIFICATION OF RISK 138 (Nick Pidgeon et al. eds., 2003); and Douglas Powell, *Mad Cow Disease and the Stigmatization of British Beef*, in RISK, MEDIA AND STIGMA 219 (James Flynn et al. eds., 2001).

<sup>290</sup> Hu, *supra* note 225.

coverage and individual investors focus most of their attention upon is a big picture of securities regulation or its lack thereof because they lack the required interest, patience, skills, and time for closer examination and more detailed study. Securities analysts, issuers, lawyers, and professional investors have the abilities, incentives, resources, and training required to analyze specific regulations and changes in them. But, a big picture gestalt view of a system of securities regulation means that public appearances might be as or even more important than private realities in terms of affective benefits and costs. The triumph of appearance over substance occurs not only in securities regulation, but also in matters involving foreign policy, international relations, and terrorism.<sup>291</sup> A concern for keeping up appearances of doing something can explain prosecutorial decisions to investigate such high-profile celebrities as Martha Stewart for alleged insider trading and securities fraud,<sup>292</sup> or Leona Helmsley for mail fraud and tax evasion.<sup>293</sup>

## 7. Unconscious Affect and Securities Investing

Seventh, the above paragraph is reminiscent of a trichotomy of decision areas or categories due to economics 1972 Nobel Laureate Kenneth Arrow,<sup>294</sup> namely active, monitored, and passive.<sup>295</sup> Because conscious attention is a scarce resource for all humans, most individual investors are consciously processing information about very few securities, while monitoring “out of the corner of their eyes” a few more securities that are related in some way, and passively ignoring the vast majority of securities. In a world of limited attention, media coverage should affect securities prices and trading. Recent research finds empirical evidence that media coverage is correlated with stock price responses to earnings announcements.<sup>296</sup> There is also empirical

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<sup>291</sup> See generally, Jules Lobel & George Loewenstein, *Emote Control: The Substitution of Symbol for Substance in Foreign Policy and International Law*, 80 CHI.-KENT L. REV. 1045 (2005).

<sup>292</sup> See, e.g., Donald C. Langevoort, *Reflections on Scierter (and the Securities Fraud Case Against Martha Stewart that Never Happened)*, Georgetown Law and Economics Research Paper No. 808104 (Sept. 2005) available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=808104](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=808104).

<sup>293</sup> <http://www.who2.com/leonahelmsley.html>.

<sup>294</sup> <http://nobelprize.org/economics/laureates/1972/index.html>.

<sup>295</sup> ARROW, *supra* note 131, at 50-51 (introducing this classification and providing an illustrative individual investor example).

<sup>296</sup> Alexander Dyck & Luigi Zingales, *The Media and Asset Prices* (unpublished manuscript) (Aug. 1, 2003), available at <http://gsbwww.uchicago.edu/fac/luigi.zingales/research/PSpapers/media.pdf>.

data indicating a relationship between media coverage and mutual fund flows.<sup>297</sup> Media coverage may play an important role in corporate governance reforms,<sup>298</sup> because as Justice Louis Brandeis famously said: “[p]ublicity is justly commended as a remedy for social and industrial diseases. Sunlight is said to be the best of disinfectants; electric light the most efficient policemen.”<sup>299</sup> There is evidence of greater pro-company bias in media coverage during stock market booms than busts.<sup>300</sup>

Recent empirical research has also investigated roles that attention plays in financial investment.<sup>301</sup> If people do not focus their conscious attention, they often utilize their unconscious attention. Affective responses are often automatic, reflexive, and unconscious, as opposed to deliberative responses which are controlled, reflective, and conscious.<sup>302</sup> In fact, “feelings of emotion provide conscious information about the results of such unconscious appraisals.”<sup>303</sup> If information processing resources are limited, spontaneously evoked affective reactions, instead of consciously deliberated cognitions tend to have a larger impact on choice. Individuals may then invest in a security, which is superior upon some more affective dimensions, but inferior along other more cognitive dimensions. Finally, a recent model of investors paying selective attention to information predicts and finds support in three Scandinavian data sets that investors will check on the value of their portfolios more frequently in rising markets, but will behave like ostriches

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<sup>297</sup> Erik R. Sirri & Peter Tufano, *Costly Search and Mutual Fund Flows*, 53 J. FIN. 1589, 1614-16 (1998).

<sup>298</sup> Alexander Dyck & Luigi Zingales, *The Corporate Governance Role of the Media*, in RIGHT TO TELL: THE ROLE OF THE MEDIA IN DEVELOPMENT 107 (The World Bank ed., 2002).

<sup>299</sup> Louis D. Brandeis, ch. V OTHER PEOPLE’S MONEY AND HOW THE BANKERS USE IT (1993), available at <http://library.louisville.edu/law/brandeis/opm-ch5.html>.

<sup>300</sup> Alexander Dyck & Luigi Zingales, *The Bubble and the Media*, in CORPORATE GOVERNANCE AND CAPITAL FLOWS IN A GLOBAL ECONOMY 83 (Peter Cornelius & Bruce Kogut eds., 2003).

<sup>301</sup> See, e.g., Brad M. Barber & Terrance Odean. All that Glitters: The Effect of Attention and News on the Buying Behavior of Individual and Institutional Investors, (Jan. 2005) (unpublished manuscript) available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=460660](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=460660); David Hirshleifer & Siew Hong Teoh, *Limited Attention, Information Disclosure, and Financial Reporting*, 36 J. ACCT & ECON. 337 (2003); Len Ping & Wei Xiong, *Investor Attention, Overconfidence and Category Learning*, J. FIN. ECON. (forthcoming).

<sup>302</sup> See, e.g., Matthew D. Lieberman, *Reflective and Reflexive Judgment Processes: A Social Cognitive Neuroscience Approach*, in SOCIAL JUDGMENTS: IMPLICIT AND EXPLICIT PROCESSES 44-67 (J.P. Forgas et al. eds., 2003), available at <http://www.scn.ucla.edu/pdf/SydneyDM.pdf>.

<sup>303</sup> Clore, *supra* note 53, at 1159.

hiding their heads in sand when markets are falling or flat.<sup>304</sup> In this model, learning the value of an investor's portfolio not only provides more information, but it also increases the psychological impact of information on utility.

## 8. Financial Literacy and Securities Educational Campaigns

Eighth, as educators, parents, siblings, aunts, uncles, and former students, we certainly should know that not everyone processes information uniformly in terms of comprehension and pace. Individuals possess different affective styles and personalities which influence the speeds at and manners in which they learn. Just as individual patients have different health and medical information learning styles, individual investors have different financial decision-making styles. Individuals range in their financial comfort level from apathy and avoidance to compulsion and obsession. This means that financial literacy has to be not only taught, but also learned. Because financial knowledge has public good aspects and financial misinformation has public bad characteristics, in terms of spillover economic and financial effects on society, there are likely to be well-known market failures to its provision by private market actors. There is also evidence that financial education for adults in their workplaces has desirable impacts in terms of higher participation in employee-directed pension plans and greater savings.<sup>305</sup>

Because there is widespread innumeracy,<sup>306</sup> many individuals experience anxiety towards mathematics and learning mathematical subjects, such as economics and finance. Additionally, financial and non-financial media coverage of economic and finance matters has a tendency of being alarmist. For example, some investors, politicians, and regulators have a fear of

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<sup>304</sup> Niklas Karlsson et al., The "Ostrich Effect": Selective Attention to Information about Investments, (unpublished manuscript) May 5, 2005) available at, [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=772125](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=772125).

<sup>305</sup> See generally, B. Douglas & Daniel M. Garrett, *The Effects of Financial Education in the Workplace: Evidence from a Survey of Households*, 87 J. PUB. ECON. 1487 (2003); Esther Duflo & Emmanuel Saez, *Participation and Investment Decisions in a Retirement Plan: The Influence of Colleagues' Choices*, 85 J. PUB. ECON. 121 (2002); and Esther Duflo & Emmanuel Saez, *The Role of Information and Social Interactions in Retirement Plan Decisions: Evidence from A Randomized Experiment*, 118 QUART. J. ECON. 1007 (2003).

<sup>306</sup> See generally, JOHN ALLEN PAULOS, *INNUMERACY: MATHEMATICAL ILLITERACY AND ITS CONSEQUENCES* (2001).

derivatives,<sup>307</sup> without understanding them because they remember hearing about derivatives being involved in several high-profile corporate and municipal bankruptcies.<sup>308</sup>

There are reasons to focus educational initiatives and informational campaigns especially on two particularly vulnerable populations, namely individuals who are “at-risk” of having financial problems and novel financial decision-makers, such as young people. Since 2001, the Credit Card Project of the Saint Paul Foundation has been engaging in,<sup>309</sup> and researching such targeted financial education initiatives.<sup>310</sup> As part of this project, University of Minnesota Department of Family Social Science Professor Virginia Zuiker developed an online one-credit course about credit card management.<sup>311</sup> Another part of this project is entitled What’s My Score, a public awareness and educational campaign, that is designed to help college students realize that credit scores are so crucial for their careers and lives that they should manage them like they manage their grade point averages.<sup>312</sup>

In addition to providing optional financial education to college students, it might be sensible to provide optional or even mandatory financial education to high school students. There are not only cognitive benefits to requiring that high school students must enroll in a course in (financial) decision-making,<sup>313</sup> but also there are likely to be affective benefits in terms of less worry about financial matters from better understanding of and a sense of control over them. It might also be helpful for most high school students to learn financial judgment and skills if they practice financial decision-making in environments that simulate real-life investing. Similar

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<sup>307</sup> Rene M. Stulz, *Should We Fear Derivatives?*, 18 J. ECON. PERSP. 173 (2004) (answering the question in its title in the negative).

<sup>308</sup> See generally, Peter H. Huang et al., *Derivatives on TV: A Tale of Two Derivatives Debacles in Prime-Time*, 4 GREEN BAG 2d. 257 (2001).

<sup>309</sup> See THE SAINT PAUL FOUNDATION, THE CREDIT CARD PROJECT, at <http://www.saintpaulfoundation.org/impact/credit/>.

<sup>310</sup> Kimberly M. Gartner & Elizabeth R. Schiltz, *What’s Your Score? Educating College Students About Credit Card Debt*, 24 ST. LOUIS U. PUB. L. REV. 401, 419-31 (2005).

<sup>311</sup> See University of Minnesota, Freshman Survival Skills, at <http://www.collegelife.umn.edu/fsoccourse.shtm>.

<sup>312</sup> See THE SAINT PAUL FOUNDATION, WHAT’S MY SCORE, available at <http://www.whatsmyscore.org/>.

concerns apply to making high school driver education occur in more realistic scenarios, for example with the latest popular music playing, perhaps too loudly and passengers in the front and back seats talking, possibly also too loudly. Poor financial decision making and judgment could involve habits which are very easy to pick up, but quite hard to undo.

To be effective, teachers of basic financial ideas can and should make learning engaging, fun, and relevant. As with other types of problem solving, financial problem solving is best mastered by repeated learning involving doing, reflecting, discussing, teaching others, and repeating. Individuals can accomplish much of their investing and retirement planning by utilizing pre-packaged and user-friendly computer software. A possible concern is whether teachers making financial education fun would mislead students into failing to appreciate the seriousness of investing and irreversibility of financial ruin that can result from a series of ill-conceived choices and mistaken assumptions. Such a danger exists if students come to view investing as being similar to playing a video game, whose initial values they can reset upon becoming bankrupt or insolvent. As is true with education in other contexts and life in general, being mindful rather than mindless prevents accidents.<sup>314</sup>

A final, related possible concern is that some youths could become addicted with taking excessive financial risks because of the adrenalin rush, visceral thrills, and similarity to gambling. There is empirical evidence finding that many young people begin smoking without fully understanding the consequences of doing so and become addicted to cigarettes because of affective and visceral influences.<sup>315</sup> Such research suggests developing financial educational campaigns that go beyond just providing information for people's cognitive, deliberative systems

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<sup>313</sup> See generally, JONATHAN BARON, *TEACHING DECISION MAKING TO ADOLESCENTS* (1991); and B. Douglas Berheim et al., *Education and Saving: The Long-Term Effects of High School Financial Curriculum Mandates*, 80 J. PUB. ECON. 435 (2001).

<sup>314</sup> See generally, ELLEN J. LANGER, *MINDFULNESS* (1990); and ELLEN J. LANGER, *THE POWER OF MINDFUL LEARNING* (1998).

<sup>315</sup> See, e.g., George Loewenstein, *A Visceral Account of Addiction*, in *SMOKING: RISK, PERCEPTION, & POLICY* 188 (Paul Slovic ed., 2001); Paul Slovic, *Cigarette Smokers: Rational Actors or Rational Fools?*, in *SMOKING: RISK, PERCEPTION, & POLICY* 97 (Paul Slovic ed., 2001); and Paul Slovic, *Rational Actors or*

to making visceral appeals to people's affective, emotional systems.<sup>316</sup> Depicting graphically adverse consequences of bad credit, bankruptcy costs, financial ignorance, and monetary ruin might scare people into developing financial acumen, curiosity, experience, and knowledge.<sup>317</sup> In addition to direct information provision, government agencies can also encourage or help disseminate such independent media coverage as a public broadcasting documentary on the credit card industry, which won the 2004-05 Emmy Award for Outstanding Investigative Journalism.<sup>318</sup>

## 9. Financial and Securities Default Rules

Ninth, there is a vast legal literature about default rules.<sup>319</sup> Because of inertia, default rules are often very powerfully sticky. A natural human tendency is to not rock the boat. Part of our status quo bias can be due to human satisficing and conserving on their cognitive resources. But, another reason that most people will feel complacency towards defaults or feel that there must be a reason for defaults to be set as they are is affective.<sup>320</sup> Empirical and experimental research about various default rules across countries and on-line has considered emotional costs upon those opting away from defaults in alternative organ donation programs.<sup>321</sup>

A natural field experiment which occurred in the two neighboring states of New Jersey and Pennsylvania demonstrates very starkly how powerfully sticky defaults can be. Both state legislatures enacted tort reform laws requiring automobile insurance companies to provide

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*Rational Fools: The Influence of Affect on Judgment and Decision Making*, 6 ROGER WILLIAMS U.L. REV. 167 (2000).

<sup>316</sup> Jon D. Hanson & Douglas A. Kysar, *The Joint Failure of Economic Theory and Legal Regulation*, in SMOKING: RISK, PERCEPTION, & POLICY 229, 271-73 (Paul Slovic ed., 2001).

<sup>317</sup> See generally, <http://www.getoutraged.com/>.

<sup>318</sup> FRONTLINE: SECRET HISTORY OF THE CREDIT CARD, (PBS Nov. 23, 2004), available at <http://www.pbs.org/wgbh/pages/frontline/shows/credit/view/>.

<sup>319</sup> See, e.g., Ian Ayres & Robert Gertner, *Filling Gaps in Incomplete Contracts: An Economic Theory of Default Rules*, 99 YALE L.J. 87 (1989); and Lucian Ayre Bebchuk & Assaf Hamdani, *Optimal Defaults for Corporate Law Evolution*, 96 NW. U. L. REV. 489 (2002). But see, Eric Maskin, *On the Rationale for Penalty Default Rules*, Institute for Advanced Study, School of Social Science, Economics Working Paper No. 58 (Oct. 2005) (unpublished manuscript), available at <http://www.sss.ias.edu/publications/papers/econpaper58.pdf>.

<sup>320</sup> Ward Fransworth, *Do Parties to Nuisance Cases Bargain After Judgment? A Glimpse Inside the Cathedral*, 66 U. CHI. L. REV. 373, 384 (1999) (finding that bargaining did not occur after judgment in a sample of twenty nuisance lawsuits).

<sup>321</sup> Eric J. Johnson & Daniel Goldstein, *Do Defaults Save Lives?*, 302 SCI. 1338-39 (2003).

coverage with limited rights to sue after car accidents. In New Jersey, the default rule was that insured motorists had a limited right to sue, but could pay higher premiums to receive a full right to sue. In Pennsylvania, the default rule was that insured motorists had a full right to sue, but could pay discounted premiums if they switched to a limited right to sue. Faced with these options, approximately 20% of New Jersey drivers opted to switch and pay for a full right to sue. In other words, an overwhelming 80% of New Jersey drivers opted to stay with their defaults. Approximately 75% of Pennsylvania drivers opted to keep a full right to sue. In other words, only 25% of Pennsylvania drivers opted to switch from their defaults.<sup>322</sup> There is approximately a four hundred fifty million difference in how much drivers pay for car insurance coverage in these neighboring states.<sup>323</sup>

Professors Brigitte Madrian and Dennis F. Shea demonstrated the power of automatic enrollment in a company's 401(k) plan when employee's 401(k) plan enrollment rates jumped from 49% to 86% upon introducing automatic enrollment as their default.<sup>324</sup> Behavioral economists Richard H. Thaler and Shlomo Benartzi ingeniously utilize inertia from defaults in a financial setting to develop another plan that encourages retirement saving by employees.<sup>325</sup> Under their prescriptive savings plan, Save More Tomorrow, also known as the SMarT plan, employees pre-commit to dedicating 3% of all future pay raises to retirement savings. Professor Thaler testified before a Senate Committee panel on how to help American workers save more about lessons from behavioral economics generally and empirical data and experience with implementing SMarT particularly.<sup>326</sup>

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<sup>322</sup> Eric J. Johnson et al., *Framing, Probability Distortions, and Insurance Decisions*, 7 J. RISK & UNCERTAINTY 35, 48 (1993) (documenting this phenomenon). *See also*, Camerer et al., *supra* note 276, at 1227 n45 (offering possible alternative signaling or costly information explanations for this phenomenon).

<sup>323</sup> Kahneman, *supra* note 59, at 6.

<sup>324</sup> Brigitte Madrian and Dennis F. Shea, *The Power of Suggestion: Inertia in 401(k) Participation and Savings Behavior* 116 QUART. J. ECON. 1149 (2001).

<sup>325</sup> Richard H. Thaler Shlomo Benartzi, *Save More Tomorrow™: Using Behavioral Economics to Increase Employee Saving*, 112 J. POL. ECON. S164 (2004).

<sup>326</sup> Richard H. Thaler, <http://jec.senate.gov/files/ThalerTestimony03102004.pdf>.

Affective reactions to particular default items may not only exacerbate, but also counteract such asymmetries if they are sufficiently strong emotional responses. Potential securities issuers can avoid those default rules in U.S. federal securities regulation that are costly in terms of compliance by financial engineering or engaging in regulatory arbitrage by taking advantage of the globalization and internationalization of securities markets. But, such avoidance may have affective costs in terms of undesirable public relations. Professor Ribstein's call for humble securities regulation avoids these affective costs of avoidance by offering companies an option to explain why they are opting out of defaults,<sup>327</sup> or allowing self-certification.<sup>328</sup> A similar point is true of Professor Romano's proposal that permits firms to follow prescribed procedures to opt out of statutory default rules.<sup>329</sup> Just as regulatory defaults may create salience, so can regulatory menus.<sup>330</sup> But, salience can evoke affective reactions, some of which may contribute to, while others could also counteract a default rule's or menu's effectiveness. Differing affective styles across people suggests that a financial regulator should if possible customize or tailor default rules or menus to fit various types of investors and other actors in financial markets.

## 10. Continual Corporate Governance Reforms

Tenth, consider these reflections about Professor Clark's meditation about what are some lessons that we can and should learn from the recent experience of making changes in U.S. corporate governance.<sup>331</sup> Clark believes that a more deliberative, rational, and knowledge-based regulatory process is unlikely to be realistic in part due to widespread outrage in response to regulatory failures and loud clamoring for major changes. Clark observes that reformist impulses

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<sup>327</sup> Ribstein, *supra* note 266.

<sup>328</sup> Ribstein, *supra* note 265.

<sup>329</sup> Romano, *supra* note 26.

<sup>330</sup> Ayres, *supra* note 256; and Yair Listokin, What Do Corporate Default Rules and Menus Do? An Empirical Examination (unpublished manuscript) (2005).

<sup>331</sup> Clark, *supra* note 26.

are based primarily upon emotions that motivate actions.<sup>332</sup> Clark proposes that regulations (1) enable and require that regulators like the SEC authorize, fund, perform, and perhaps even mandate data collection and empirical analysis studying those regulations over time; (2) empower, encourage, and perhaps even require that regulators to reassess some regulations periodically in light of experience and evidence and respond accordingly; and (3) spell out clear timetables for both (1) and (2).

A Chinese proverb which advocates reverence for an individual's elders states that: "youth is a gift of nature, while age is a work of art." A corollary of this proposition is that we are all works in progress. Along similar lines, Clark's analysis views regulations as being all works in progress, which can benefit from periodic opportunities to learn and in light of such learning, revise their current particular content within longer-term general principles. As Clark notes, a serious potential practical problem with such an enlightened regulatory perspective is the strength of a deep-seated human desire for closure, which is particularly strong in the face of moral outrage and reform frenzy. Another affective difficulty that Clark discusses is that emotionally aroused individuals tend to prefer bright-line rules as opposed to vague standards. On the other hand, Clark offers some reasons to hope that his proposal can be implemented by appealing to regulators' natural and understandable desires to look rational and reasonable.

Clark's novel regulatory proposal may reallocate affective benefits and costs over time by possibly delaying certain ones and moving forward others. As is true in general for ACBA, it matters relative to what benchmarks affective benefits and costs are measured. An analogue to Clark's "revise and reconsider" procedure is the "revise and resubmit" option that reviewers at many peer-refereed journals can select instead of simply rejecting or accepting some article submission. In this way, Clark offers a compromise between those who passionately and strongly desire reform and those who passionately and strongly resist change. Clark's proposal envisions

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<sup>332</sup> See also, Lobel & Loewenstein, *supra* note 291, at 1090 (2005) (warning about dangers of emotional appeals to policy).

an ongoing process of reassessing and revising regulations that is akin to how most people feel and think science usually does and should proceed. But, just as there are scientific revolutions,<sup>333</sup> there could be and perhaps there should be occasionally revolutions in regulatory policy and principles.

Clark's proposal for incremental regulation echoes Nobel Laureate,<sup>334</sup> Kenneth J. Arrow's observation that "recondite calculation of gains and losses does not lead to great enthusiasm. It does not offer magic solutions to problems. A truly rational discussion of collective action in general or in specific contexts is necessarily complex, and what is even worse, necessarily incomplete and unresolved."<sup>335</sup> Clark's "live and learn" type of regulatory policy and reform is consistent with management applications of real options theory, which formally models how decision-makers can profit from opportunities to adapt behavior in light of learning new information,<sup>336</sup> and viewing lawsuits as real options.<sup>337</sup>

Clark's proposed cautious regulatory gradualism is also consistent with a conceptual framework, experimental research, and empirical results by several behavioral decision theorists.<sup>338</sup> Finally, Clark's view that learning about and improving regulation should be ongoing resonates with recent neuroeconomic research finding that even one-shot individual human choice is a dynamic process.<sup>339</sup> In other words, people continue to engage in evaluations and

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<sup>333</sup> See generally, THOMAS S. KUHN, *THE STRUCTURE OF SCIENTIFIC REVOLUTIONS* (3d ed. 1996).

<sup>334</sup> <http://nobelprize.org/economics/laureates/1972/index.html>.

<sup>335</sup> ARROW, *supra* note 165, at 17.

<sup>336</sup> See generally, AVINASH K. DIXIT & ROBERT S. PINDYCK, *INVESTMENT UNDER UNCERTAINTY* (1994); EDUARDO S. SCHWARTZ & LENOS TRIGEORGIS, *REAL OPTIONS AND INVESTMENT UNDER UNCERTAINTY: CLASSICAL READINGS AND RECENT CONTRIBUTIONS* (2004); and LENOS TRIGEORGIS, *REAL OPTIONS* (1996).

<sup>337</sup> Peter H. Huang & Joseph A. Grundfest, *The Unexpected Value of Litigation: A Real Options Model of Litigation and Settlement*, 58 *Stan. L. Rev.* (forthcoming May 2006); Peter H. Huang, *Lawsuit Abandonment Options in Possibly Frivolous Litigation Games*, 23 *REV. LITIG.* 47 (2004) (offering a real options analysis of litigation abandonment options that is partially related to our analysis); and Peter H. Huang, *A New Options Theory for Risk Multipliers of Attorney's Fees in Federal Civil Rights Litigation*, 73 *N.Y.U. L. REV.* 1943 (1998) (deriving an option-based theory for calculating risk multipliers of attorney's fees in federal civil rights litigation).

<sup>338</sup> See generally, JOHN W. PAYNE, ET AL., *ADAPTIVE DECISION MAKER* (1993).

<sup>339</sup> John Dickhut et al., *Choosing, Learning, and Evaluation*, presented at the third annual meeting of the Society for Neuroeconomics (Sept. 15, 2005).

affective reactions after they have already made their choices. Such post-decision evaluations and feelings in turn influence how they make future choices. These post-decision-making evaluations and feelings may also provide neuroscientific explanations for and foundations of such observed behavioral phenomena as endowment effects and sunk cost reasoning. There is a danger that continual reassessment and reevaluation of regulatory policy might induce a ruminating and stressful organizational and political culture of seeking unattainable perfection as opposed to being satisfied if things are “good enough.”<sup>340</sup>

### **Conclusions**

This Article advocates an accounting, inclusion, quantification, and measurement of affective benefits from and costs to financial policies and securities regulations. This Article offers a theoretical examination of an empirical set of procedures and processes. This Article argues that if U.S. financial regulators engage in conventional cost-benefit analysis in their process of evaluating policy, they should also measure impacts that affective benefits and costs have upon traditional economic and financial variables. This Article analyzes conceptual and measurement issues with affective benefits and costs in general. This Article considers how such issues arise in evaluating these alternative categories of securities and financial regulations: mandatory disclosures; so-called gun-jumping rules in public registered offerings; financial education campaigns; default rules and menus; and statutory provisions that provide for continual reassessment and revision of regulations.

Although this Article has focused on incorporating affective benefits and costs in analyzing financial regulations generally and securities regulations particularly; much of its analysis also applies to non-financial individual and social risks. In fact, much contentiousness in assessing costs and benefits in environmental, health, and safety regulations comes from traditional cost-benefit analysis devaluing, ignoring, or simply missing a number of affective

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<sup>340</sup> See generally, Barry Schwartz et al., *Maximizing Versus Satisficing: Happiness Is A Matter of Choice*, 83 J. PERSONALITY & SOC. PSYCHOL. 1178 (2002).

values, including morally based affect in particular. Affective reactions are likely to be just as important, if not more important for non-financial risks than financial risks. But, while money provides a common metric for quantifying and measuring financial risks, quantifying and measuring non-financial risks often lacks a standardized and unifying metric. Money arises naturally in discussions evaluating regulating financial and securities markets, but not necessarily naturally in discourse analyzing regulating non-financial risks, such as environmental risks,<sup>341</sup> health risks,<sup>342</sup> and safety risks.<sup>343</sup> Although there are cross-cultural differences in the psychology of money, there are also similarities in how individuals think about money across nations.<sup>344</sup>

LSCBA provides less and less accurate information than TCBA because LSCBA ignores affective variables. “Without accurate information on overall economic conditions, workers, firms, voters, and policymakers are flying blind – or at least peering through a thick fog.”<sup>345</sup> A personal analogy may prove to be helpful. During my last annual physical examination, my physician prescribed walking more to reduce my slightly elevated blood pressure. She suggested buying a pedometer to keep track of how many steps I take daily and to set a long-range target of 10,000 steps daily. I purchased a pedometer and walked more, lost that pedometer, bought a replacement, and lost it. Both lost pedometers also tracked miles walked and calories burned in addition to steps taken. There are fancier pedometers that also measure blood pressure. One can think of such more sophisticated pedometers as being analogous to ACBA, while both of the lost pedometers are analogous to LSCBA. It is ultimately an empirical question and matter of individual choice whether such more informative pedometers are worth their additional affective and monetary costs.

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<sup>341</sup> See generally, MARK SAGOFF, PRICE, PRINCIPLE, AND THE ENVIRONMENT (2004).

<sup>342</sup> See generally, PETER UBEL, PRICING LIFE: WHY IT'S TIME FOR HEALTH CARE RATIONING (1999).

<sup>343</sup> See generally, PAUL SLOVIC, THE PERCEPTION OF RISK (2000).

<sup>344</sup> See generally, ADRIAN FURNHAM & MICHAEL ARGYLE, THE PSYCHOLOGY OF MONEY (1998).

<sup>345</sup> Katharine G. Abraham, *What We Don't Know Could Hurt Us: Some Reflections on the Measurement of Economic Activity*, 19 J. ECON. PERSP. 3 (2005).

Similarly, ACBA and so TCBA provides more and more accurate information than LSCBA does in terms of values of affective variables. But, it is ultimately an empirical question and matter of regulatory and social choice whether such more affectively informative ACBA and TCBA is worth its additional affective and monetary costs when compared to LSCBA. Despite losing both pedometers and finding one of them after buying two replacements, but not always remembering to wear any of them, walking more and as often as possible are now internalized, even without a pedometer. Similarly, even though a specific regulator or society may decide to not adopt or to abandon, after experimentation with, actually engaging in ACBA and TCBA; thinking informally about qualitative affective benefits and costs can become internalized to cultures, governments, organizations and regulators. But, despite my walking more than before my last physical, unless I actually utilize a pedometer, I will be unable to measure and quantify my progress towards the instrumental goal of 10,000 steps daily. Unless I purchase another pedometer which measures blood pressure, I will not be able to measure and instantaneously keep track of my progress towards the ultimate goal of reducing my blood pressure.

A final analogy is that with experience of usage over time, CBA, ACBA, and TCBA may come to be analogous to global positioning satellite (GPS) navigation systems, built into certain automobiles. Drivers who utilize their built-in GPS systems might become so dependent on them that they find themselves lost upon driving another car without a built-in GPS. Of course, there are several hand-held, portable GPS units. In terms of analogies to ACBA, this Article has attempted to present both general principles and thoughts about ACBA that should be portable across different environmental, health, social, and financial regulations in addition to specific analysis of conceptual and measurement issues associated with ACBA that arise in financial and securities regulation.