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The Empty Call for Benefit-Cost Analysis in Financial Regulation

Jeffrey N. Gordon

ABSTRACT

The call for benefit-cost analysis (BCA) in financial regulation misunderstands the origins and utility of BCA as a guide to administrative rule making. Benefit-cost analysis imagines an omniscient social planner who can calculate costs and benefits from a natural system that generates prices (costs and benefits) that do not change (or change much) no matter what the central planner does. For example, the toxicity of chemicals, the health hazards of emissions, the statistical value of life—these do not change in response to health-and-safety regulation. For the financial sector, however, the system that generates costs and benefits is constructed by financial regulation itself and the subsequent processes of adaptation and regulatory arbitrage. An important new rule will change the system beyond our calculative powers. Instead of weighing costs and benefits, financial regulation necessarily is based on a series of trade-offs of normatively derived values, which may entail principles of pragmatic design.

1. INTRODUCTION

The congressional prescription for the financial crisis of 2007–9 was to call for a far-reaching regulatory overhaul of the financial sector, reflected in the Dodd-Frank Wall Street Reform and Consumer Protection Act (Pub. L. No. 111-203, 124 Stat. 1326) mandate for 398 separate rule makings (Davis Polk 2014). Reflecting the fragmentation of financial regulatory authority in the United States, multiple regulatory agencies

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have been at work, sometimes acting alone, but often in coordination with one another. Sometimes, as with the so-called Volcker rule that purports to oust banks from proprietary trading and proprietary investment activity, multiple regulators must agree for rule promulgation. What is the standard by which this regulatory output is to be internally produced, justified to the informed public, and evaluated by the courts? A common move, because seemingly commonsensical, is to call for benefit-cost analysis (BCA) in the evaluation of rule making in the financial regulatory area. The best defended version of this is found in Posner and Weyl (2013, forthcoming). Coates (forthcoming) offers a critique based on the virtual impossibility of conducting a true assessment of costs and benefits, meaning that BCA of financial regulatory rules will produce guesstimates that provide cover for decisions reached on other grounds. A quick way to get the point is, first, to observe the vast divergence of credible estimates of the cost of the financial crisis, ranging from \$1–\$2 trillion to \$50 trillion, and then to reflect on the task of estimating the effect of any particular rule in reducing the risk of recurrence. Coates then proposes to distinguish between conceptual BCA, as a framework for the exercise of expert judgment, and quantified BCA. Posner and Weyl (forthcoming) regard this distinction as either circular or insubstantial and assert that the remedy for empirical inadequacies is more research.

The critique offered here is different: the idea of BCA as applied to financial regulation is a serious category mistake. For any nontrivial problem it is conceptually wrongheaded, empty. It misunderstands the origins and utility of BCA and, in particular, the difference between natural and constructed systems. As its core metaphor BCA has an omniscient social planner who can calculate costs and benefits from a system that is essentially stable, because the natural constraints are themselves stable. A natural system generates prices (costs and benefits) that do not change (or change much) no matter what the central planner does. The toxicity of a particular chemical, the health effects of a particular atmospheric emission, the susceptibility of the human body to damage in a moving vehicle—these do not change if the planner reduces the risk-exposure levels, nor does the statistical value of life or some other benefit measure like quality-adjusted life-years.

For the financial sector, the system that generates costs and benefits is not a natural system but rather a system constructed by the pattern of financial regulation itself and by the subsequent processes of adaptation and regulatory arbitrage. We simply do not have the foresight to

forecast how that system will evolve. Thus the omniscient social planner metaphor has no useful place in financial regulation. To be sure, the regulators, the affected industry, and other interested parties will attempt to imagine the system that will result from a given set of rules (and rule changes), but for any nontrivial rule, to call for a BCA that is in any way like the mechanism commonly applied in the health-and-safety area is a counterproductive exercise.

Instead of a weighing of costs and benefits, financial regulation necessarily is based on a series of trade-offs of values that are normatively derived, for example, the desire to achieve the economic benefits from the free flow of capital and the ready availability of credit but balanced against the risks of systemic distress and the associated economic disruption. These value trade-offs may in turn produce subsidiary principles of pragmatic design, for example, minimize the extent to which financial institutions can free ride on systemic stability costs paid by others, create institutions that are resilient across a broad range of financial exigency, and provide regulators with sufficient information to observe the buildup of imbalance in the financial system and the power to make regulatory modifications accordingly. The values that may go into the trade-offs, the principles of pragmatic design, and regulatory implementation all will be controversial, but BCA does not offer an alternative way through this thicket. Thus the basic claim of this paper is straightforward: that BCA as it has come to be used in the modern administrative state is virtually useless in the setting of optimal financial regulation and simply gets in the way of the genuinely hard work to be done. If applied through the machinery of the legal system—especially hard-look judicial review that invites *de novo* relitigation of empirically contestable conjectures—BCA is likely to stymie regulation aimed at the reduction of systemic risk in favor of privileging a status quo that we know is unstable.

Fortunately, BCA is not required by the applicable statutes that govern rule making by the principal financial regulatory agencies, the Federal Reserve Board, the Office of the Controller of the Currency (OCC), the Securities and Exchange Commission (SEC), and the Federal Deposit Insurance Corporation (FDIC). It was not bolted on by the Dodd-Frank Act, which requires dozens of rule makings within a compressed time frame. Indeed, in requiring a collaborative rule-making process in the Dodd-Frank Act, in which as many as five independent agencies are often required to jointly promulgate a common rule, Congress has obviously privileged values other than instrumental rationality and coherence. On occasion the courts, particularly the D.C. Circuit Court of

Appeals, has latched onto BCA as the pretext to strike down an SEC rule that it disfavored as unwarranted SEC turf expansion, but a recent D.C. Circuit decision, *Investment Company Institute and Chamber of Commerce v. Commodity Futures Trading Commission* (720 F.3d 370 [D.C. Cir. 2013]) appears to signal that the court would take a more deferential approach in reviewing the implementation of the Dodd-Frank Act by the financial regulatory agencies. The court endorsed the pragmatics of the Commodity Futures Trading Commission's (CFTC's) approach to assessing the consequences of its proposed rule and specifically refused to require speculative quantification.

This paper is organized as follows. Section 2 briefly describes the origins and canonical use of BCA in the health-and-safety area, with a reference to some of the controversies. The application of BCA in this domain depends on costs and benefits provided by nature, which are largely impervious to the regulatory regime itself. Section 2 outlines the basic claim: that financial markets are jointly produced by rules and the response to rules, and thus for nontrivial rules, BCA does not provide a useful guide to administrative action. Section 2 also provides an extended example based on the regulatory creation of money market mutual funds (MMFs), including the SEC's recently concluded MMF rule making. Section 3 discusses the legal framework that governs financial regulatory agency deliberation and shows that this framework does not require BCA. To be sure, recent cases reviewing SEC rule making in the corporate-governance area have seemed to import a BCA requirement, but this is probably because of the court's particular aversion to the SEC's encroachment in an area of traditional state authority in the absence of a new grant of legislative authority. A recent case suggests that the courts will be more deferential to the regulatory agencies' tasks under the Dodd-Frank Act in light of the undeniable failures of the prior financial regulatory regime and the follow-on grant of broad regulatory authority. Section 4 defends the regulatory principle of pragmatic judgment that protects the regulatory decisions of well-informed regulators operating in good faith to advance a reasonable set of regulatory objectives in the financial regulatory area. To be clear, pragmatic judgment in the financial regulatory area ought to include efforts to understand the consequences of particular proposals, including through use of social science methods that may forecast economic consequences. But the desire to ground decisions on that which can be quantified is a self-deceptive conceit in the financial regulatory area that obscures more than it illuminates. The relevant questions are not what are the benefits, what are

the costs, but how will the financial system change? What are the new opportunities, functions, and pathologies? Regulators should be encouraged to focus efforts on observing and understanding the financial system as it evolves rather than spend extra resources on a fruitless task of quantification that is the heart of BCA.

2. THE ORIGINS OF BENEFIT-COST ANALYSIS

The canonical story is that BCA was imported to the regulatory domain through its initial use by the Army Corps of Engineers as a method for optimal resource allocation in the choice among possible infrastructure construction projects. Coates (forthcoming), however, argues that the history demonstrates, to the contrary, that BCA was used by the corps largely to justify choices favored by political actors and powerful interest groups. The BCA apparatus, on this account, was camouflage.

The conceptual justification for BCA in the modern regulatory state begins at a different place: as a solution to the problems that arise when health-and-safety regulation moves from the decentralized tort system to the centralized administrative system of the modern regulatory state (compare Calabresi and Bobbitt 1978). The tort system relies, in significant measure, on its own benefit-cost machinery. For example, a manufacturer designs and produces a product that while in normal use is associated with a serious, even fatal accident. Think of a riding lawn mower that tips over while traversing a rocky incline, which results in injuries that lead to the driver's death. Suit is brought against the manufacturer. Whether under a negligence standard or strict liability, the manufacturer is called to take cost-justified precaution in the design and outfitting of the lawn mower in light of the potential for such accidents. But what are the benefits? Presumably they are the avoided medical expenses and avoided loss of life, but how much? These benefits are quantified by the black box of the jury, weighing pecuniary losses (lost wages) and nonpecuniary losses (pain and suffering, lost consortium). By aggregating independent jury determinations, experienced attorneys come to know what a case is worth, and so cases commonly settle without a trial. The manufacturer now has important data for its cost-justified design-and-production process, an internal BCA designed to mitigate the cost of accidents.

The tort system is highly imperfect. Many think that it underdeters in the safety realm, because high litigation costs and the power imbalances between the commercial injurer and the individual injured party

mean that many injuries are unredressed, which allows manufacturers to externalize costs. Certain problems are simply beyond the capacity of the tort system even if attorneys were free. Classic examples are workplace health problems and general environmental externalities. A population of employees is exposed to chemicals in the production process. Assume that the incidence of a particular cancer is higher among the employees than occurs in the general population. The general causation issues are quite difficult, scientifically and epidemiologically. The separate legal requirement of proximate causation for a particular employee seeking damages from a particular defendant may create an insurmountable barrier. Successful litigation becomes even harder with each additional factual complication, for example, an employee's work history at different employers in the same or a related industry, using somewhat different chemicals. Thus the injury costs of toxic chemicals will be insufficiently internalized by manufacturers or employers.

Consider also the case of a community that is downwind of a cement plant and is on occasion inundated with fumes and particulates. Litigation to redress these problems may be difficult not only because of free-rider problems in funding the litigation but because different citizens are differently affected by the emissions. In part this is because of the vagaries of wind patterns, in part because of the different susceptibilities. Or perhaps the emissions from the cement plant cause damage because of other ambient emissions, a threshold effect or an interaction effect. Suppose that insistence on a zero-emission standard would mean closing the plant, which employs many citizens in the local community. How can a court grapple with the benefit-cost questions involved in deciding, in effect, how much abatement the plant should achieve?

The inadequacy of the tort system in producing the optimal level of consumer product safety or workplace health and safety or environmental amenities has led to the adoption of statutes and the creation of regulatory bodies tasked with developing and enforcing standards of care and protection. One immediate consequence is to centralize in the government difficult questions of benefits and costs that were previously resolved in a disaggregated way through the judicial system, especially the jury, or perhaps the market, through compensating wage differentials, or, commonly, not resolved at all. Because these decisions are now to be made by the state, they must adhere to practices of bureaucratic regularity and accountability. Because these determinations are centralized, they will have high saliency, and the regulator needs a way to defend their legitimacy. Because these determinations have distributional im-

plications as well as efficiency, the regulator needs a mechanism that finds a neutral way to resolve those questions.

Moreover, often the popular momentum that leads to regulation of health, safety, and environmental problems will produce statutes that overshoot the mark. For example, a workplace health-and-safety statute may prescribe that no employee shall suffer any health hazard because of a job.¹ Such a standard is plainly infeasible in a modern industrial economy.

Benefit-cost analysis has been seen as the answer to the various problems of centralized health, safety, and environmental regulation. It has appeal from several normative perspectives (Ahdieh 2013). From an efficiency perspective, BCA can appropriately conserve on the use of scarce resources by subjecting regulation to a proportionality test; it can serve as a heuristic constraint on behavioral biases in decision making; and it can help policy makers create priority rankings for problems that might be addressed. From a good-government perspective, BCA may bring more transparency to the administrative process and thus perhaps greater legitimacy; it can mitigate Congress-regulator agency problems both *ex ante* and *ex post*: *ex ante*, since Congress can specify the framework within which benefits and costs ought to be assessed, and *ex post*, since Congress can evaluate the regulator's performance against the framework criteria or against other criteria of social (or political) value. From a nonefficiency perspective, BCA can limit the pace of government regulation because of the required fact finding and analysis; indeed, a more thorough regulatory analysis may well open up more grounds for contestation before a reviewing court. From a somewhat different nonefficiency perspective, BCA can open an avenue for the use of objective rather than subjective measures of value to promote a general welfarist agenda.

In light of this versatility, BCA has been embedded in the regulatory system through a series of executive orders that have survived largely intact through the recent presidencies of both political parties (Exec.

1. See the discussion of benzene in *Industrial Union v. American Petroleum Institute* (448 U.S. 607 [1980]) and the interpretation of section 6(b)(5) of the Occupational Safety and Health Act of 1970, which requires regulation "which most adequately assures, to the extent feasible, on the basis of the best available evidence, that no employee will suffer material impairment of health or functional capacity even if such employee has regular exposure to the health hazard by such standard for the period of his working life"; see also the discussion of cotton dust in *Industrial Union Department, AFL-CIO v. American Petroleum Institute* (448 U.S. 607 [1980]), which defers to the agency's feasibility analysis.

Order No. 12,291, 46 Fed. Reg. 13,193 [February 19, 1981] [Reagan]; Exec. Order No. 12,866, 58 Fed. Reg. 51,735 [September 30, 1993] [Clinton]; Exec. Order No. 13,563, 76 Fed. Reg. 3821 [January 21, 2011] [Obama]) and through the creation of a centralized BCA monitor, the Office of Information and Regulatory Affairs in the Office of Management and Budget.² The pervasiveness of BCA doesn't mean that it is without controversy, particularly on the benefit side. Almost by convention, the health, safety, and environmental agencies have measured benefits in terms of the value of statistical life as reflected by utility trade-offs in compensating wage differential studies rather than human capital approaches based on lost wages or in terms of life-years, which might seem to track the long latency of many health problems. Benefits that occur in the future are to be discounted to present value to compare with costs that may be incurred up front, although the level of—indeed, use of—a discount rate is normatively contestable (*University of Chicago Law Review* 2007). Among other deep problems, how are we to account for the lives of the unborn, generations in the future, in the assessment of environmental benefits? What about benefits that resist quantification (Revesz, forthcoming)?

Because quantification is controversial, benefit-cost adherents may want to frame issues of benefits and costs as risk-risk, most graphically, life-life, comparisons (Graham and Wiener 1995). Take the case of babies in airplanes, held in parents' arms. On rare occasions, the Newtonian mechanics of rapid deceleration or an abrupt descent may overcome the parental grasp. Why not require that babies be strapped into appropriate flight seats for the duration, like we now do with automobiles? A risk-risk or life-life BCA variant provides us with the tools to reach the correct response: reject the proposed rule, because more babies will perish were it adopted. Airlines will surely charge for the second seat; some fraction of families will substitute away from air travel to an automobile, a much less safe mode of transportation. Most important cases of regulation, however, do not permit the trade-off of risks along such a unidimensional space. This is the appeal of quantification: diverse benefits, risks, and costs are converted to a common metric.

Cases in the health, safety, and environmental areas carry a common theme: that the inputs to the cost-benefit calculation are fundamentally exogenous to the rule that may be adopted. Analysts may disagree about

2. This was created by the Paperwork Reduction Act of 1980, Pub. L. No. 96-511, codified at 44 U.S.C. secs. 3501–3521.

a dose-response curve, for example, but the particular determination about the acceptable exposure level does not change the health hazard of the substance. A rule does not change the toxicity in fact. Determination of benefits by observing revealed preference in employees' wage demands in jobs of different risk does not generally change the wages demanded.³ The costs of a regulation similarly derive from physical processes outside the BCA process. Yes, it is common for industry to overestimate costs, and as the declining permit costs for sulfur dioxide emissions demonstrate, properly designed schemes can give parties strong incentives to reduce the cost of emission or hazard abatement. Regulation may lead to substitution effects, for example, a shift to natural gas in electricity generation as the environmental hazards of coal-fired plants are internalized. Some of the substitution effects may be unforeseen, such as the way that the corporate average fuel economy standards triggered the growth of a new (more polluting) vehicle class, the sport utility vehicle, which is built on a truck frame and thus not covered by the rule. But the ultimate costs themselves derive from industrial chemistry, physics, and engineering, whose principles do not change no matter what the regulation.

3. THE FINANCIAL SYSTEMS AS CONSTRUCTED BY RULES AND ADAPTATIONS TO RULES

By contrast, the financial system is not a natural system. It is constituted by rules and the adaptation to rules. A modern financial system that intermediates massive capital flows through specialized functional actors operating in diverse markets is profoundly a regulatory construction. Yes, early financial systems may have arisen spontaneously, through the cooperation of parties in commercial life, and even without governments (see, for example, Sugden 1989). Small-group dynamics, kinship and clan networks, and nonlegal sanctions may hold together rudimentary financial systems, even over a distance. Certain financial capacities can be provided by specialized private actors even without the support of an advanced regulatory apparatus (see, for example, Gorton [1985] on clearinghouses). Yet the scale, complexity, speed, and anonymity of a modern financial system can be created only through a system of rules

3. Health-and-safety regulation may well have a distributive aspect that will make employees wealthier and thus on a higher isoquant in the safety-wage trade-off. That is, health-and-safety regulation may itself increase the value of statistical life on the basis of which benefits are determined. This element of endogeneity is likely to be small.

(Pistor 2013). Moreover, it is not only the rules but the adaptation to them, including regulatory arbitrage, that create the system of finance. These continuous second-order effects make the benefits and costs of rule adoption impossible to quantify in a meaningful way. Changes in an important rule will change the system of finance not just through direct, immediate effects but through the subsequent adaptations. Indeed, BCA will encourage a myopic focus on what is measurable in a time frame in which it can be measured. This is of course a distraction from the important policy question about the advantages and pathologies of the emergent financial system.

3.1. The Glass-Steagall Act and the Rise of Market-Based Credit Intermediation

Take briefly the example of the separation of commercial banking from investment banking that was a signature result of the Banking Act of 1933, the Glass-Steagall Act (Pub. L. No. 73-66, 48 Stat. 162).⁴ Although this separation was designed to reduce systemic risk by limiting the speculative stock market activity fostered by banks, it is not hard to trace a path from this regulatory intervention to the financial crisis of 2007–9. The Glass-Steagall Act insisted on freestanding investment banks, which could make their success only through securities markets, not through commercial banking. These investment banks quickly learned that credit markets were more profitable than equity markets: firms issue equity only infrequently but are constantly in need of credit. Thus investment banks were powerfully incentivized to develop market-based mechanisms of credit intermediation, which became effective substitutes for bank-based credit. Credit intermediation by investment banks grew on top of separate legislative decisions to limit the geographic reach of banks (Carnell, Macey, and Miller 2013, ch. 4) and to structure retirement savings so as to create large private capital pools (Gilson and Gordon 2013). For competitive reasons, commercial banks felt compelled to follow the investment banks down the market path in credit intermediation, and bank regulators were accommodative. The Glass-Steagall Act's separation of commercial banking from investment banking collapsed well before its formal repeal in the Financial Services Modernization Act of 1999 (commonly known as the Gramm-Leach-Bliley Act [Pub. L. No. 106-102, 113 Stat. 1338]). Market-based credit intermediation turned out to be much harder to monitor than bank-based

4. Building out this sketch is a focus of current work.

credit intermediation, and more fragile in many respects. It turns out that collateralized short-term finance (repo) is not functionally equivalent to deposit insurance and that private ordering cannot replicate the functions of an official lender of last resort. The key point is this: the regulatory changes of the Glass-Steagall Act created a new financial system; the shape of this new financial system was not foreseen and was not foreseeable. The new regulation not only constrained some behaviors but also unleashed a process of adaptation and innovation; we are only now coming to fuller awareness of this new financial system and its distinctive hazards. A BCA would have offered an inadequate set of analytic tools to evaluate the Glass-Steagall Act, the implementing rules, and the subsequent adaptive responses.

3.2. Money Market Mutual Funds, the Savings-and-Loan Crisis of the 1980s, and the Rise of Shadow Banking

Consider another case of a regulatory change with far-reaching effects that no BCA would have captured: MMFs created by SEC rule making in the mid-1970s and early 1980s (Birdthistle 2010). All MMFs are styled as mutual funds but with a twist. Their assets consist mostly of publicly issued debt securities, but as mutual funds, they have no liabilities—the right hand of their balance sheet is all shareholder equity, which is redeemable by investors at the net asset value of the fund’s portfolio, marked to market daily. The twist is that by regulatory design, this net asset value (NAV) is fixed at par in most credit market conditions, and the funds have been allowed to market themselves on that basis. The fixedness of NAV is a function of the high credit quality and short maturities required of portfolio securities and an accounting convention that has permitted the fund to use penny rounding to report \$1.00 NAV so long as the portfolio value does not dip below \$.995. The fixedness also crucially relies on the SEC’s practice of routinely waiving the Investment Company Act of 1940 prohibitions on conflicted transactions to permit sponsors to swap out or guarantee defaulted or value-reduced securities in the fund’s portfolio (Gordon and Gandia 2014; SEC Rule 2a-7 under the 1940 Investment Company Act, 17 C.F.R. 270.17a-9).

The benefits that would flow from the regulatory sanction of MMFs were immediately obvious. Because of high inflation and the Federal Reserve’s clamping down on the money supply, wholesale money market rates were much higher than the yield on bank deposits, capped by Regulation Q, a Depression-era artifact designed to suppress bank competition for deposits. The MMFs gave retail customers access to much

higher money market rates yet daily liquidity and apparently the same security as an insured bank deposit. What were the costs?

3.2.1. *The Savings-and-Loan Crisis.* The costs became obvious only later: a significant causal role in the savings-and-loan (S&L) crisis, a price tag of around \$350 billion, and, subsequently, the instability associated with the shadow banking system, one of the elements of the financial crisis of 2007–9, with costs still accumulating. Here is the causal chain. Until the 1970s, banking in the United States was an inherently safe business. Regulation Q (12 C.F.R. pt. 217, now repealed) capped the amount that banks could pay on deposits, and so banks could earn a reliable spread against their assets.⁵ The advent of MMFs gave depositors an exit option, and of course they used it en masse at a time of a high money market rates. Specifically chartered to finance residential real estate, S&L associations were particularly hard hit, because their assets consisted disproportionately of long-term mortgages, which were yielding less than prevailing short-term rates. The liberalization of Regulation Q to permit depository institutions to compete for retail deposits with MMFs (per the Depository Institutions Deregulation and Monetary Control Act of 1980, Pub. L. No. 96-221, 94 Stat. 132) did not solve the problem because now the S&L associations were earning a negative spread.

The next step was to grant the S&L associations power to engage in businesses that were potentially more lucrative than residential mortgage lending, namely, commercial real estate and the holding of other credit assets, in particular high-yielding debt securities (also known as junk bonds) (Garn–St. Germain Depository Institutions Act of 1982, Pub. L. No. 97-320, 96 Stat. 1469). The theory: new powers would lead to higher-yielding assets; deposit insurance (increased in the 1980 act) would insure a flow of relatively low-cost funds, and profits from this positive spread would cover the losses on the residential mortgage book. It did not work out that way. The competition for retail deposits triggered by the advent of MMFs stirred to life the monstrous moral hazard associated with deposit insurance. The new owners of underwater S&L associations were incentivized to take the predictable gambles, with ruinous results (White 1991).⁶

5. The wisecrack that banking was a 3-6-3 business was not an altogether wrong characterization: pay depositors 3 percent, lend out at 6 percent, and leave the office at 3 p.m.

6. Regulation Q and deposit insurance should be understood as companion, indeed complementary, pieces of the Glass Steagall Act of 1933. Regulation Q limited the capacity of banks to compete for deposits, which also limited their need to make risky loans to

The point of this story is not to villainize MMFs or to charge up the entire cost of the S&L debacle to the MMF account. Among other things, rather than expand S&L powers, the entire insolvent industry could have been liquidated and closed down in the early 1980s for approximately \$15 billion from the S&L deposit insurance fund. Rather than face that politically embarrassing result, regulators and political actors preferred forbearance and various measures to let the industry “grow out of its problem.” Here is the point: BCA as conventionally conceived is not a useful framework for anticipating the new financial system that will be reconstituted by a nontrivial rule and the reactions to it. As this example shows, the relevant questions are not what are the benefits, what are the costs, but how will the financial system change? What are the new opportunities, functions, and pathologies?

3.2.2. *The Rise of Shadow Banking.* The role of MMFs in the development of shadow banking further illustrates the point that BCA as conventionally understood would provide a poor guide to wise exercise of regulatory discretion by financial system regulators. Established as a retail product, MMFs in the 1990s began attracting an increasing share of short-term funds from institutions looking for liquidity, safety, and cash management, in particular nonfinancial corporations, municipalities, and asset managers. This development is depicted in Figure 1. There are many consequences. The most obvious, revealed in the near collapse of the then-\$3.5 trillion MMF industry in fall 2008, is that the growth of MMFs had created a financial intermediary outside the official banking system that bore credit risk without capital, had no lender of last resort, and thus was exposed to runs at times of financial distress (Gordon and Gandia 2014).

Another consequence, more subtle, is that the very rules designed to make MMFs more stable made other parts of the financial system less stable. As noted above, the SEC required MMFs to hold short-term maturities to enhance credit quality and liquidity and thereby reduce the chance that a fund’s value would fall below \$1, or “break the buck.” Such a requirement increased the supply of short-term finance. Non-

make a profit. The strong probability of a positive spread between rates charged on low-risk loans and deposits gave banks a franchise value that reduced their incentive to make risky loans as well, since bank failure would destroy the rent stream. Thus deposit insurance could function as a kind of mutual insurance against exogenous shock that abruptly changed the expected loan default rate, for example, a drought in an agricultural community in which the bank funded the cost of planting. Bank competition for deposits changes the bank’s incentives and the effect of deposit insurance.

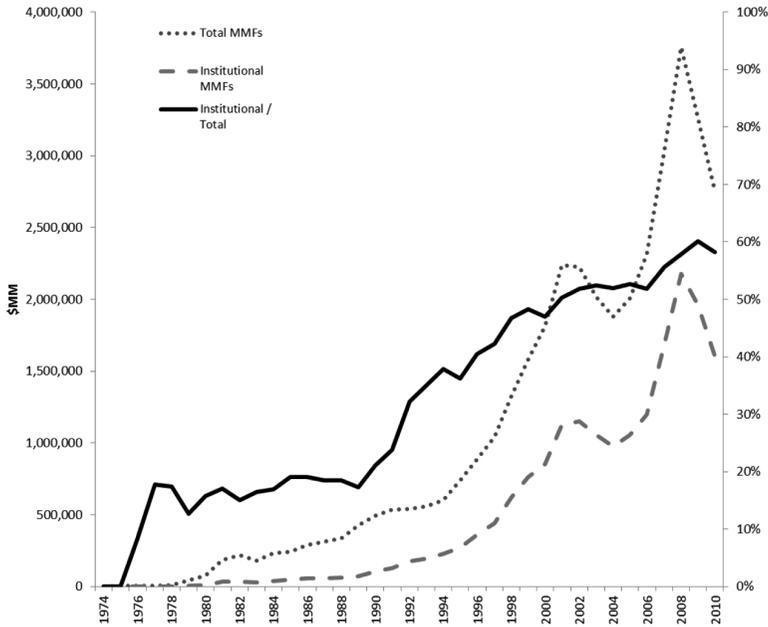


Figure 1. Institutional money market mutual funds (MMFs) as a percentage of total MMFs, 1974–2010.

financial firms were thus encouraged to try to fund long-term projects by rolling over short-term commercial paper. Financial institutions developed deep reliance on funding by MMFs because they were well suited to engage in the maturity transformation that MMFs could not. At times of financial distress, in anticipation of possible runs by their investors, MMFs withdrew funding from the firms, financial and nonfinancial, that had grown reliant on MMFs; these firms then faced immediate liquidity problems. The rules that created MMFs and the way that other institutions adapt have created a new system of finance. The framework and the tools of BCA are an inadequate way to face these issues.

3.2.3. The Securities and Exchange Commission's Money Market Mutual Fund Reforms. Money market mutual funds were a major element in the spread of systemic risk in the onset of the financial crisis. The Lehman Brothers bankruptcy led to the write-down of Lehman Brothers' commercial paper, which in turn meant that a large money fund's value fell below \$1, which in turn triggered a massive run on the then-\$2.5 trillion

prime MMF sector that was halted only by extraordinary intervention by the U.S. Treasury and the Federal Reserve (Gordon and Gandia 2014). The appropriate policy response has been the subject of intense debate, as reflected in a stillborn initial SEC rule proposal (Schapiro 2012), subsequent proposed recommendations by the Financial Stability Oversight Council (Proposed Recommendations regarding Money Market Mutual Fund Reform, 77 Fed. Reg. 69,455 [November 19, 2012]), a quite different SEC rule proposal (Money Market Fund Reform; Amendments to Form PF, 78 Fed. Reg. 36,834 [June 19, 2013]), and now the adoption of final SEC rules (Money Market Fund Reform; Amendments to Form PF, 79 Fed. Reg. 47,736 [August 14, 2014]). These new rules have three main elements: first, for MMFs (other than government funds) that cater to institutional users, a requirement of floating NAV; second, for MMFs that cater to retail users, permission to continue to adhere to the existing fixed NAV structure; third, permission for fund boards to impose redemption fees or the temporary suspension of redemptions (gates) should prior redemptions drain the fund's readily available liquidity below certain thresholds.

This is not the place to assess the new rules (compare Gordon 2013; Gordon and Gandia 2014), but this should be noted: there is sharp division on whether the new rules will reduce the likelihood of runs on MMFs or increase it, reflected in part by the 3–2 SEC vote for adoption. In explaining her positive vote, Chair Mary Jo White (2014) said the new rules “will reduce the risk of runs in money market funds and provide important new tools that will help further protect investors and the financial system in a crisis.” Yet Commissioner Kara Stein (2014) said, in explaining her negative vote, that one of the elements of the new rules, the redemption gates, could “result in a greater chance of fire sales during times of stress, and a spread of the panic to other parts of our financial system, while also denying both investors and issuers access to capital.”⁷ Moreover, the impact of the new rules in the ongoing evolution of the financial system as well as in a future financial crisis will be substantially affected by the Federal Reserve's reform efforts for wholesale short-term funding markets generally (Tarullo 2013b).

7. In observing that “while a gate may be good for one fund because it stops a run in that fund, it could be very damaging to the financial system as a whole,” Stein (2014) cited several expert commentators, including the Federal Reserve Bank of Boston, Goldman Sachs Asset Management, Deutsche Investment Management Americas, the Squam Lake Group (of financial economists), a group of Harvard Business School professors, and Cipriani et al. (2014).

As conventionally understood, BCA played little role in the adoption of this extremely important rule. Earlier in the proceedings the SEC staff made a stab at quantification, looking at the “operational costs that money market funds, intermediaries, and money market service providers might incur in implementing and administering the retail exemption to the floating NAV requirement that we are proposing” (SEC, Money Market Fund Reform, 78 Fed. Reg. 36,865). Discussion of these costs takes up nearly a page in the *Federal Register*. Such costs, and other “operational” costs discussed elsewhere in the SEC’s proposing release, are of course rounding errors on the rule’s effects.⁸ The SEC seemed to recognize this. The 869-page adopting release described the assorted reform proposals, weighed pros and cons, marshalled the filed comments, described empirical work of the SEC staff, and derived conclusions. The parties well understood that the rule making was about revising and recreating the financial system and that while the immediate effect of the rule might be to disrupt the business model of particular asset managers—some likely losers, others likely winners—it would be very hard to project the medium-term, much less long-term, impact on the current participants in short-term financing markets.

4. THE LEGAL FRAMEWORK FOR THE PRAGMATICS OF FINANCIAL REGULATORY ACTION

The argument thus far is that the financial system is not a natural system. It is constituted by regulation, a constructed system. The regulatory consequences are profound: BCA is not conceptually fitted for financial regulation because of the way that regulation constitutes finance. A non-trivial regulatory change to mitigate purported shortcomings will change the system of finance. While the regulator presumably will employ experience and pragmatics in promulgating rules that will fashion this counterfactual world, the conventional tallying of benefits and costs is not realistic. It is not just that measuring the purported benefits is elu-

8. A similar example is provided by the Office of the Comptroller of the Currency’s (OCC’s) benefit-cost analysis (BCA) of the so-called standardized option of the Basel II Accords, which would give small- to medium-sized banks the right to opt in to an adjusted risk-weighting variant of Basel I. The OCC (2008) quantifies “explicit” “implementation costs” associated with tracking, preserving, and retrieving data to comply with the proposed rule, which depends critically on the number of banks that opt in; these costs are estimated at \$73.7 million. The benefits relating to a more stable and efficient banking system are merely listed and extolled. A negligible effect on the supply and cost of credit is simply assumed.

sive—valuation of incremental reductions in systemic risk from a given regulatory change seems like an inherently speculative exercise. And this is also true for assessment of purported costs in incrementally lower gross domestic product or some other economic output variable over a significant time period.⁹ The key point is that the system itself is not stable: parties will adapt in light of the regulation, the system of finance will change, and with it the benefits and costs of the regulation in question. There are no anchoring principles of chemistry, biology, or physics in finance. The attempt to apply the BCA methodologies employed in health, safety, and environmental regulation to financial regulation is inherently faulty and may lead regulators to focus on precisely the wrong questions.

Nevertheless, the Government Accounting Office (2011, 2012), various academics (Ahdieh 2013; Rose and Walker 2013a, 2013b; Sherwin 2006), and some courts (most notably the D.C. Circuit in *Business Roundtable v. SEC*, 647 F.3d 1144 [D.C. Cir. 2011]; see also *Chamber of Commerce v. SEC*, 412 F.3d 133 [D.C. Cir. 2005]; *American Equity Life Insurance v. SEC*, 613 F.3d 166 [D.C. Cir. 2010]) have argued that the legal framework governing financial regulation requires BCA on the traditional model. Close examination of the relevant statutes suggests that this is not true. In general, the agency-specific statutes require the agency to consider a range of relevant factors but do not require a quantification of costs and benefits as is commonly found in genuine BCA statutes¹⁰ and do not call for an explicit weighting of the identified considerations, which often may be cross cutting.¹¹ Moreover, unlike an executive branch agency, independent-agency decision making is not unitary. Adoption of a regulation requires a majority vote among commissioners of different parties who have been separately nominated by a president and confirmed by the Senate for fixed terms. Such a body is structurally designed to produce outputs different from a centralized

9. Against such potential costs (and benefits), for most nontrivial rules, the compliance costs incurred by the immediately affected firms will be a rounding error.

10. Compare, for example, the Safe Drinking Water Act Amendments of 1996 (sec. 103, Pub. L. No. 104-182, 110 Stat. 1613), which set contaminant levels by requiring findings on the “quantifiable and nonquantifiable health risk benefits . . . and costs for which there is factual basis in the rulemaking record,” and the Unfunded Mandates Reform Act (2 U.S.C. secs. 1532–1538), which requires “qualitative and quantitative assessment of the anticipated costs and benefits.”

11. Bartlett (2014) also discusses the limited extent to which financial regulatory agencies are subject to BCA review of proposed regulations via the Office of Information and Regulatory Affairs in the executive branch Office of Management and Budget.

social planner. This point applies even more forcefully for the many regulations to be promulgated under the Dodd-Frank Act as joint products of five different agencies. The Administrative Procedure Act, which is generally applicable to agency rule making, contains an arbitrary-or-capricious test, which, fairly applied, should require no more than minimum rationality.¹²

4.1. The Financial Regulatory Agencies and the Applicable Legal Frameworks

4.1.1. Federal Reserve Board. To be more precise, rule making by the Federal Reserve Board is not subject to any general statute requiring economic analysis (Office of Inspector General 2011). Particular statutory provisions may identify factors that the board must consider in rule making, however. So in implementation of the Dodd-Frank Act, the board may be called to address certain “considerations, assessments, policy goals, or substantive requirements” in its rule making (Office of Inspector General 2011, p. 6) For example, in considering the level of risk retention in mortgage underwriting, the board (along with the other financial regulatory agencies that are to jointly issue the rule) is required to take account of the “potential impact of the risk retention obligations on the access of consumers and businesses to credit on reasonable terms” to assess the allocation of risk-retention obligations between originators and securitizers (Dodd-Frank Act, sec. 941).

Three narrowly targeted provisions apply to all administrative agencies including the board: the Paperwork Reduction Act (44 U.S.C. secs. 3501–3521), which requires evaluation of a proposed rule’s paperwork burden; the Regulatory Flexibility Act (5 U.S.C. secs. 601–612), which requires evaluation of a proposed rule’s impact on small entities; and the Congressional Review Act (5 U.S.C. secs. 801–808), which requires the agency to report whether a proposed rule will produce a \$100 million or more annual impact on the economy and, therefore, constitute a major rule. The Congressional Review Act does not specifically require an economic analysis or BCA. However, if a BCA is completed, it must be submitted to both houses of Congress and the comptroller general, along with materials related to the rule making, before the rule can take effect.

4.1.2. Federal Deposit Insurance Corporation. The FDIC is subject to the

12. This could be buttressed by the courts’ reluctance to intervene in administrative decision making where there are no “meaningful standards” for review (see *Heckler v. Chaney*, 470 U.S. 821, 830 [1985]).

same constraints as the Federal Reserve Board. Thus, apart from the narrowly tailored paperwork and small business impact provisions, the FDIC is not subject to mandatory quantification. To fulfill the mandates under the various statutory provisions that it administers, the FDIC gathers qualitative and quantitative information (FDIC 2011).

4.1.3. Office of the Comptroller of the Currency. The Dodd-Frank Act changed the status of the Office of the Comptroller of the Currency (OCC) from an executive branch agency, as a bureau with the U.S. Treasury Department, to an independent agency. Before the change, the OCC was subject to a BCA requirement as administered by the Office of Management and Budget (Barlett 2014). Like other agencies, the OCC is subject to the trinity of targeted provisions referred to above. The statutes pursuant to which it draws its regulatory power, such as the National Bank Act and the International Lending Supervision Act, do not require economic analysis of proposed regulatory actions.¹³

4.1.4. Financial Stability Oversight Council. Although a coordinating body in many respects, the Financial Stability Oversight Council also has independent regulatory functions under Title I of the Dodd-Frank Act. In particular, it has power to designate a nonbank financial institution as systemic, which brings it under the Federal Reserve’s supervision, and power to make recommendations to functional regulatory agencies for more stringent regulation. For the determination that the consequences of financial distress at a particular nonbank financial firm make it systemic, section 113 of the Dodd-Frank Act sets out 10 specific considerations as well as a catchall—“any other risk-related factors that the Council deems appropriate” (Dodd-Frank Act, sec. 113[a][2]). Judicial review of the determination “shall be limited” to whether the determination was “arbitrary and capricious” (sec. 113[h]). The list of multiple, potentially cross-cutting, considerations as well as the catchall show that Congress did not contemplate a BCA.

4.1.5. Commodity Futures Trade Commission. Of the financial regulatory agencies, the CFTC is subject to the most explicit benefit-cost regime. Section 15(a) of the Commodities Exchange Act (7 U.S.C. sec. 19, added

13. Indeed, in the case of the International Lending Supervision Act of 1983, Congress intended to shield the Office of the Comptroller of the Currency from judicial second-guessing of both its general capital requirements and its determination that a particular bank was undercapitalized. See, for example, *Frontier State Bank Oklahoma City v. FDIC* (702 F.3d 588 [10th Cir. 2012]) and Barlett (2014).

by the Commodity Futures Modernization Act of 2000) requires that the CFTC consider the costs and benefits of a proposed rule but then sets out several objectives to guide that consideration: considerations of protection of market participants and the public; considerations of the efficiency, competitiveness, and financial integrity of futures markets; considerations of price discovery; considerations of sound risk management practices; and other public interest considerations.¹⁴

Given the broad considerations that are to guide the CFTC's determinations, one should not expect a BCA in the conventional sense. Each of these considerations defies easy quantification, and the trade-offs among them are even more conjectural. As I argue below, statutes of this sort call for regulatory pragmatics rather than a fanciful effort at quantification.

4.1.6. Securities and Exchange Commission. The SEC is rather famously subject to section 3(f) of the 1934 Securities Exchange Act, added by section 106 of the National Securities Markets Improvement Act of 1996, which requires the SEC to “also consider, in addition to the protection of investors, whether the action will promote efficiency, competition, and capital formation” (15 U.S.C. sec. 78c[f]). The comparison with the CFTC statute undercuts the claim that this particular statutory provision calls for a detailed BCA process. Indeed, the provision is reminiscent of state corporate law constituency statutes, in which boards are told to consider various stakeholder concerns in addition to shareholder value. Such statutes are roundly criticized as giving boards excessive discretion, because the relevant determinations and discretionary weightings confound objective quantification. Thus, in light of the extensive deliberation by two different commissions over shareholder proxy access over a multiyear period and the extensive analysis in the proposing release, the assertion by the court in *Business Roundtable v. SEC* (647 F.3d 1148) that the decision was “arbitrary and capricious” for its failure to “adequately to assess the economic effects of a new rule” itself seems an arbitrary and capricious conclusion.

The shareholder proxy access rule is a regulation that defies ready economic quantification precisely because of its potential to modify the prevailing corporate governance paradigm and thus the level of agency costs in an economy of firms in which diffuse ownership is reconcentrating (Gilson and Gordon 2013). The benefits from the rule derive

14. For discussion of how the Commodity Futures Trade Commission has conducted BCA and exercised its guided consideration, see Office of Inspector General (2011).

from a policy judgment about the desirable features of a regime that the rule would foster. The “tell” in the opinion is the criticism that the commission “arbitrarily ignored the effect of the final rule upon the total number of election contests. . . . Without this crucial datum the Commission has no way of knowing whether the rule will facilitate enough election contests to be of net benefit” (647 F.3d 1153). But this shows the limits of the received conception of BCA. The point of the rule is to change the governance regime. In this new regime, management behavior may change merely because of the greater potential for proxy contests even if the actual number does not increase (or may decrease). The SEC got caught up in the weak empirics of counterfactual projection instead of defending the normative regulatory judgments out of which the rule emerged and showing how it considered efficiency, competition, and capital formation along with investor protection.

4.2. D.C. Circuit Court Review

In my view, the various recent decisions of the D.C. Circuit Court of Appeals striking down SEC rules on purported BCA grounds are far more intelligible on different principles: a general deregulatory inclination, heightened in cases in which the court perceived the SEC to be extending its reach without an additional congressional mandate, especially in areas traditionally dominated by state law. In *Chamber of Commerce v. SEC*, the court struck down an SEC rule that imposed governance requirements on mutual fund boards—a supermajority of independent directors and an independent chair—despite the fact that funds are, as a governance matter, organized under state law. In *American Equity Investment Life Insurance Company v. SEC*, the court struck down an SEC rule that supplanted traditional state authority to define an annuity for purposes of an exemption under the federal securities laws that was granted in light of the traditional state autonomy in insurance regulation. In *Business Roundtable* itself, the proxy access rule in question plainly trenched on the domain of state corporate governance. What the court appears to be saying is, in order to expand its regulatory reach, especially into non-SEC-traditional and state-law domains, the SEC needs a compelling case on the benefit-cost dimension; otherwise, its rule making is an arbitrary and capricious power grab.¹⁵

15. Defenders of the original SEC actions would strongly resist the claim that the SEC had engaged in turf expansion, explaining that the mutual fund board independence rule came against a backdrop of prior commission governance rule makings for conditions under which mutual funds could obtain exemptive relief under the 1940 Investment Com-

On this reasoning, the D.C. Circuit should take a different view on SEC regulation in its traditional areas of autonomy and, by extension, rule making by the financial regulatory agencies in their implementation of the Dodd-Frank Act. This hypothesis is consistent with the most recent decision of the D.C. Circuit on rule making under the Dodd-Frank Act, *Investment Company Institute v. CFTC*. The CFTC rule at issue in the case required the registration as commodity pool operators of various investment companies that had already registered with the SEC and that had previously been exempt from such CFTC registration under a prior CFTC rule. In sustaining the rule, the court rejected strenuous challenges to the agency's assessment of benefits and costs. The court said the CFTC had sufficiently considered (and found wanting) the protections in the SEC regime, noting that in the prior cases rejecting SEC rule making cited above, the agency had by contrast failed to consider the protections of the state regimes upon which it was encroaching. The court permitted the CFTC to ignore, in assessing this particular rule, "hypothetical costs that may never arise" from a regulatory regime that was not yet complete, because "it would be quite literally impossible to calculate the costs of an unknown regulation" (720 F.3d 378). In response to an objection that the CFTC had not quantified "the benefits of data collection in preventing future financial crises," the court asserted that "[t]he law does not require agencies to measure the immeasurable. CFTC's discussion of unquantifiable benefits fulfills its statutory obligation to consider and evaluate potential costs and benefits. . . . Where Congress has required a 'rigorous, quantitative economic analysis,' it has made that requirement clear in the agency's statute, but it has imposed no such requirement here" (720 F.3d 378).

The court also rebuffed a claim that the CFTC had not collected the market data that commentators had suggested, on the ground that the CFTC had "adequately considered costs and benefits of the rule given this uncertainty," noting that the objection to the data-gathering function of registration amounted to a catch-22: "In essence, the appellants are challenging the very method for obtaining the data they want on the ground that the CFTC has not obtained the data they want" (720 F.3d 380).

Thus *Investment Company Institute v. CFTC* is important on a number of dimensions. First, despite the statutory call for the determination

pany Act and that the SEC had often been called upon to define the boundary of a security product and a insurance product (Coates, forthcoming).

and then consideration of costs and benefits, the court is relaxed about the rigor of the CFTC's approach and accepts the premise that many of the benefits that the CFTC obviously highly values in its consideration will be impossible to quantify. These factors do not undermine the legitimacy of the agency's rule making. Second, the author of the opinion is Judge David Sentelle, who also authored the *American Equity Investment Life Insurance Company* opinion and was on the panel in *Business Roundtable*. So the difference in outcome and tone is not a happenstance of the judicial draw.

Third, the critical distinguishing feature of *Investment Company Institute v. CFTC* is apparent at the outset: "In 2010, the Commission began shifting back to a more stringent regulatory framework. This shift came in the wake of the 2007–2008 financial crisis, which many attributed to poorly regulated derivatives markets, when Congress passed the Dodd-Frank Wall Street Reform and Consumer Protection Act . . . [which] repealed several statutory provisions that had excluded certain commodities transactions from CFTC oversight" (720 F.3d 373).

In other words, there was a problem with a prior approach, which may have contributed to the financial crisis; Congress gave the CFTC the power to take remedial action so that such a crisis would not recur. And further, implicitly, this is different from the rule makings in the prior SEC cases, in which an agency with no new regulatory mandate and no exigency goes looking for problems to solve.

Investment Company Institute v. CFTC therefore provides a basis for optimism that the D.C. Circuit will not interfere with rule making that implements the Dodd-Frank Act by the financial regulatory agencies, even the SEC. Judge Sentelle's opinion seems a harbinger of the pragmatics of financial regulatory action and review rather than a strait-jacketed insistence on measuring the unmeasurable.¹⁶

5. THE PRAGMATICS OF REGULATORY JUDGMENT

The claim is that BCA as conventionally understood will be a noninformative, even anti-informative, guide to the fashioning of nontrivial

16. Some might contend that equally relevant to the likelihood of judicial deference to agency rule making under the Dodd-Frank Act is the change in the composition of the D.C. Circuit with the confirmation of four Obama appointees.

rules of financial regulation.¹⁷ This is because such rules will create a new financial system and thus change the assumptions on the basis of which the purported cost and benefits were calculated. The examples of the Glass-Steagall Act and MMFs show how the financial system reconstructs itself in response to regulatory change. Even less grand regulations can have far-reaching reconstructive effects, as illustrated by purportedly risk-reducing measures undertaken in the run-up to the financial crisis. Basel II, for example, promulgated a system of risk-weighted assets for the assessment of capital charges, based on historical default rates. Among the immediate effects was the massive overproduction of assets—such as residential mortgages—that had been historically low risk. The regulation itself transformed the riskiness of the asset class.¹⁸ More generally, regulatory benchmarks inevitably become a management target; the exogenous becomes endogenous.

How then should a regulator regulate? The emptiness of BCA does not mean that the regulator should give up on the project of applied consequentialism, trying its best to project the new regime and its consequences. But the critical judgments ought to not to be made on the basis of BCA but rather in light of normative principles that the regulator is prepared to defend as undergirding a sound financial system and that may be in competition with one another. For example, consider two strong normative principles: one, the desire to achieve the economic benefits from the free flow of capital and the ready availability of credit, and the other, the desire to avoid serious risk of systemic distress. The need to devise trade-offs across these principles may in turn produce subsidiary principles of pragmatic design, for example, minimize the extent to which financial institutions can free ride on systemic stability costs paid by others, strengthen the resiliency of institutions and systems during financial system stress, provide regulators with sufficient information to observe the consequences of their rules, establish regulatory panopticons with authority only to observe the financial system as it

17. Some may argue that many financial regulatory rules—for example, in consumer finance—are susceptible to more conventional BCA. Yet an *ex ante* BCA is unlikely to have sustained a rule like the Credit Card Accountability Responsibility and Disclosure Act, which surprisingly showed that restrictions on banks' assessment of late fees and other charges did not result in an increase in interest rates or a reduction of consumer credit availability (Agarwal et al. 2014).

18. This is of course a demonstration of the Lucas critique (Lucas 1976) of the effort to forecast the consequences in quantitative terms of regulatory policy change.

evolves and the nonexclusive responsibility of sounding the alarms, and grant regulators the power to make regulatory modifications.

To a significant extent these principles are already reflected in the emerging regulatory regime. Take one example, the stress tests administered by the Federal Reserve Board for large financial institutions per the Dodd-Frank Act (sec. 165[i]; Tarullo 2013a; Policy Statement on the Scenario Design Framework for Stress Testing, 77 Fed. Reg. 70,124 [November 23, 2012]). The Federal Reserve subjects balance sheets that are compliant with applicable capital requirements to stress scenarios to see the impact on capital levels and other measures of financial stability. If the Federal Reserve regards the outcomes as unsatisfactory, it will require the firm to accumulate additional capital through restrictions on dividend payouts or stock repurchases. One critical feature is that the stress scenarios are not spelled out in advance to avoid giving the firm a specific benchmark toward which to manage. The dynamism in such a regime is inconsistent with the stationarity implicit in conventional BCA.

6. CONCLUSION

Benefit-cost analysis aims to solve serious problems of governance. Among other things, BCA can conserve on scarce resources; it can provide a disciplined approach to tough policy choices; the form and appearance of neutrality in BCA may help the regulator gain legitimacy in its rule making. Nevertheless, BCA will not be helpful for rules in which the underlying system is not fixed but is substantially constructed through rule making and in which the ultimate system evolves through adaptation to the rules. A different regulatory model based on the pragmatics of regulatory judgment is necessary.

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