

Challenges for Cost-Benefit Analysis of Financial Regulation

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ABSTRACT

I survey the nature of costs and benefits of financial regulation, both macroregulation designed to stop crises and microregulation of products, markets, and institutions. The nature of financial regulatory costs and benefits poses a great challenge for formalized analysis. Health-and-safety or environmental regulation focuses on simple actions, like releasing a pollutant. The costs and benefits of financial regulation focus on the behavioral, market, general equilibrium, and political reactions. I offer some suggestions on the structure of a cost-benefit process that recognizes the nature of financial regulation costs and benefits, lying between pure conceptual cost-benefit analysis and the rigid legal structure currently envisioned.

1. INTRODUCTION

We should enact regulations only if their benefits exceed their costs. That seems obvious. But that's not the point.

Cost-benefit calculation or economic analysis is widely agreed on as a useful conceptual framework for regulatory design and a commonly recommended process for agencies to voluntarily pursue. But “cost-benefit analysis” also means a process, a system of rules for a bureaucracy designed to improve on that bureaucracy's performance. The question is whether or how to design a rule-based, formalized, legal and regulatory

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process based on cost-benefit calculations. Laws or executive orders may force regulatory agencies to produce cost-benefit analyses of certain specified types at certain stages of the regulatory process with codified methods, and allow proponents and opponents of regulation to challenge regulations on the basis of cost-benefit analysis, either in regulatory proceedings or in court. The devil is in the details—what benefits, what costs? How are they measured? What causal channels are recognized? Who has the power, when, and on what basis to challenge regulations on a cost-benefit basis? The need for a better process is clear.

Many critics find that much financial regulation has little benefit and large costs. When it doesn't just gum up the works with legal fees and paperwork, financial regulation is famous for unintended consequences, induced moral hazard, for failure to meet its goals, and for setting the stage for a larger crisis next time. Financial regulations are often enacted with little concrete definition, to say nothing of quantification, of their costs and benefits (for example, see Peirce 2013; Ellig and Peirce 2014). Regulators and economists have little understanding of causal mechanisms that may provide benefits and incur costs. Worse, they often think they know cause and effect, either wrongly or with far more precision than they actually do, and enact regulation on the basis of unverified cause-and-effect speculation. Agencies and regulations often work at cross-purposes, one promoting what the other tries to reduce—lending to poorer and riskier borrowers, for example. Regulations stay in place long after everyone sees they are not working or are counterproductive. Regulators layer on additional rules to combat the consequences of the last round, which have their own adverse consequences. Financial regulation is notorious for industry capture, carving up markets, stifling competition, and creating a revolving door between regulation and highly paid finance-industry jobs that influence that regulation and its application.

Another set of critics complain that we do not have enough financial regulation. These critics are frustrated by the *Jarndyce v. Jarndyce* pace of Dodd-Frank Act implementation and the extent to which industry has been able to delay and derail the process. These critics see great good in financial regulation and are anxious to move on to more sweeping reforms.

But complaining about the idiocy or inadequacy of regulation does little good. Economists have been howling into the wind about silly laws and regulations since Adam Smith, to remarkably little effect. Removing regulation is unlikely politically, and most economists think that financial

markets suffer from genuine externalities or information asymmetries requiring some law and regulation.

We need therefore to pay more attention to the process question than just the result question. Critics and advocates of current and prospective regulation need to get past writing clever optimal policy advice to the benevolent regulator. He isn't there. Instead, we should think harder about how to structure the process by which regulators, regulated industries, and, somewhere, people or representatives of their interest, produce regulations, and how that inevitably political process can incorporate quantifiable, scientific evidence, so that something resembling the economists' optimal policy is more likely to result.

To this end, a legal and regulatory process imposing cost-benefit analysis has proved somewhat successful for improving the quality of regulations in areas such as environmental protection, consumer health and safety, and transportation policy. It is natural to think that such a cost-benefit process could improve financial regulation as well—either to demonstrate the need for good regulations or to stop the bad ones, depending on your tastes. And several legal, administrative, and regulatory initiatives are underway to bring a more formalized cost-benefit process to financial regulation (for an overview, see Coates, forthcoming a, forthcoming b).

It won't be easy. This core of this paper outlines many of the difficulties that cost-benefit analysis must overcome for financial regulation, and some warnings on how it might be counterproductive. Fundamentally, the nature of financial regulation's costs and benefits is quite different from that in areas such as health and the environment, where cost-benefit analysis has proved somewhat fruitful to date. In health and environmental cases, regulation focuses on the actions firms must take—install a piece of equipment, say. Behavioral, microeconomic, and macroeconomic responses—businesses scaling down or closing, markets moving to less expensive alternatives, prices changing—are hard-to-quantify secondary effects. Financial and economic regulation are all about these responses: their goal is to induce such responses, and their costs are such responses. Cost-benefit regulation is supposed to ignore transfers, but much financial regulation is designed to produce transfers—to small banks, home owners, and so on. Like much economic regulation, some of the biggest costs of financial regulation include stifling competition, capture, and enmeshing politics with big money. Current cost-benefit procedures do not consider such costs. But ignoring

what are often the largest costs because they are hard to measure does not lead to better policy.

What to do? In a detailed review of specific financial regulations, Coates (forthcoming a) finds these and similar difficulties so daunting that he advocates eschewing formal cost-benefit analysis for financial regulation. He notes pointedly that nobody argues that we should impose cost-benefit analysis on monetary policy or on the legislation mandating cost-benefit analysis itself. So there is some line beyond which it's pointless. He argues that most financial regulation is beyond that line.

However, he agrees that costs and benefits are the right conceptual framework for evaluating financial regulation. His alternative process—reliance on the expert judgment of agencies—seems like a weak defense against the mischief we have seen, and unlikely to improve the quality and process of the cost-benefit thinking behind regulations. And his criticisms focus on one particular form of cost-benefit analysis, imposed by legislation or executive order, and heavily involving judicial review of cost-benefit findings, not just process. Coates (forthcoming b) recognizes, I think, the weakness of this argument and advocates instead that cost-benefit analysis be used as a managerial tool by agencies.

Surely, it is a bad idea to have no cost-benefit process at all. Just as surely, the traditional legal process used for health and environmental regulation cannot be instantly extended to financial regulation. So the answer must be yes, our government should introduce cost-benefit procedures. But we will have to design those procedures to reflect the nature and uncertainties of financial costs and benefits.

Adopting a more explicitly political and public choice philosophy for this design will be helpful. Cost-benefit proponents such as Posner and Weyl (2013a, 2013b, 2014) seem to regard cost-benefit procedures as a machine, which once set up will deliver good policies without intervention. They tend to be sympathetic to rule by a benevolent technocratic bureaucracy in the progressive tradition, and to the idea that a cost-benefit process will quickly produce agency decisions that reflect their views of desirable regulation.

Some skepticism about cost-benefit analysis overall, including my own, stems from doubt about this underlying view of economic regulation. If you think of economic regulation from a public choice perspective, in which the regulatory arena is a battleground where interested parties fight to use the government's power to direct spoils in their direction, bending arguments and capturing regulators as needed to that end, it's harder to become enthusiastic that any set of bureaucratic pro-

cedures will produce better outcomes. However, that view also leads me to be skeptical of Coates's reliance on agency expertise or management. Discretion is quickly captured too.

As we think about how to design a cost-benefit process for financial regulation, then, I think it is useful to regard it as a social contract, a rules-of-the game or constitutional moment among highly interested parties to guide their fight for the spoils, a set of rules for an inevitably political game. That line of thought leads to a more flexible, open, continually retrospective, and public process, but a process nonetheless, emphasizing the ability of outsiders to challenge regulations produced by an inevitably captured system, on the basis that the regulations so produced have costs exceeding their benefits. It is less useful to regard cost-benefit analysis as a set of rules for a disinterested benevolent bureaucracy to follow in order to promulgate better rules from on high.

2. COSTS AND BENEFITS OF FINANCIAL REGULATION

When people envision cost-benefit analysis, I think they have straightforward examples in mind, such as environmental regulation or occupational or automobile safety. Someone proposes that power plants should install more expensive scrubbers to reduce mercury or sulfur dioxide emissions. The scrubbers cost a lot of money. The Sierra Club and the Environmental Protection Agency (EPA) staff are enthusiastic: save the planet. The power industry and big power consumers oppose the scrubbers, citing the costs of higher electricity prices. The cost-benefit approach says, Let's battle this one out with numbers: how much less mercury, how many more fish, how much lower concentrations in downstream humans, how many lives saved or improved, multiplied by a dollar figure; how many millions to install the scrubbers; how much higher prices. Many proposed regulations have benefits many times greater than costs, and vice versa for many others.

Cost-benefit analysis forces parties to disclose, and open to scrutiny, the causal mechanisms by which they think regulations operate, to good or ill. It forces parties to quantify those mechanisms and to reduce costs and benefits to dollars. Unquantifiable cultural, aesthetic, or social benefits or costs have at least a harder road ahead. Cost-benefit analysis forces parties to abide at least somewhat by utilitarian arguments: pure transfers, though a benefit to the recipient, do not count as a social benefit. Ideally, costs to industry do not count as costs; only costs and benefits to consumers count. (This one is honored more in the breach

than the observance of course). Done properly, cost-benefit analysis forces a comprehensive view. For example, once dollars per ton of carbon are calculated across a range of proposals, a carbon-based argument for subsidizing high-speed trains should evaporate if substituting nuclear for coal electricity reduces carbon at much lower cost.

(I do not mean to imply that cost-benefit analysis is, or should be, entirely utilitarian or ignore distributional questions. The point is simply that cost-benefit analysis can help the policy process to avoid common fallacies of political debate, such as ignoring who pays for transfers or using prices or other large distortions to engineer transfers when more efficient policies are available. See Drèze and Stern [1987] and Blackorby and Donaldson [1987, 1988, 1990] for nonutilitarian cost-benefit analysis.)¹

But even in simple environmental or auto-safety examples, cost-benefit calculations can become muddy. Behavioral elasticities are hard to measure and to consider. When we make planes safer but more expensive, how many people shift to driving much more dangerous cars and trains? When we make cars safer, to what extent do people drive less safely—the famous Peltzman (1975) effect, that a big spike in the steering wheel might be more effective than seat belts to reduce fatalities?

Economic elasticities are harder still to calculate. How many businesses will close if they pay higher electric bills? How many people or businesses will move? What other kinds of power generation will expand, and what are their economic and environmental consequences? Will people switch from electric to oil heating?

Financial regulation, a subset of economic regulation, is all about these troublesome behavioral and economic elasticities, not underlying processes such as scrubbers or health-and-safety rules. Finance is about money, period. The goal of regulation is to modify market outcomes.

Much financial regulation is one step harder still, because it focuses on general equilibrium responses—how do regulations affect prices, gross domestic product (GDP), interest rates, industry structure (classic versus shadow banking), runs and bubbles, housing and business investment, business formation, and so on? For example, much discussion over increasing capital regulation has centered on macroeconomic model estimates of those regulations' effect on long-term GDP growth rates (Admati and Hellwig [2013] offer a good review).

Formalized cost-benefit analysis has not made much headway any-

1. I thank a referee for stressing the point and the citations.

where else in economic regulation—tariffs and quotas, farm price supports and subsidies, occupational licensing, zoning laws, labor and union legislation, price and rent controls, antitrust law, housing subsidies, and low-income housing mandates, among many other examples. It is not considered in social program evaluation, including unemployment insurance, food stamps, health insurance provision, and so forth. It has made even less headway in macroeconomic policy making, including taxation, stimulus spending, and—deeply related to finance—monetary policy, as Coates (forthcoming a) emphasizes. The Joint Committee on Taxation and the Congressional Budget Office have only just started to incorporate individual behavioral responses to tax policy in their analyses—how much more people will work, invest, and so forth, in response to lower marginal tax rates.

The huge national argument over the minimum wage is not headed to a cost-benefit arbitration. Yet a cap on interest rates that banks may charge consumers, exactly the sort of thing that the Consumer Financial Protection Bureau (CFPB) considers imposing on financial markets, is economically an identical intervention.

Maybe that's all to the good; start here and cost-benefit analysis will spread elsewhere. But financial markets are much murkier and less well understood than simple product markets. Stories about fire sales, liquidity spirals, bubbles, predatory lending, and systemic stability are absent in, say, arguments about import restrictions of Mexican tomatoes. Finance seems the hardest place to start the project of subjecting economic regulation to cost-benefit procedures.

With these thoughts in mind, let's look at the nature of costs and benefits that a cost-benefit process will attempt to measure and weigh.

2.1. Financial Stability Regulation

Efforts to prevent another crisis such as happened in 2008 are on the top of the regulatory agenda. Should regulations address assets, liabilities, or prices? Assets: we can send an army of regulators out armed with an encyclopedia of rules and, in practice, wide discretion, to try to regulate the investments of the too-big-to-fail banks, in the hope that those banks will never lose money again. Or perhaps regulators can micromanage the amount or form of executive compensation, so that executives do not choose risk profiles that taxpayers eventually regret. Liabilities: regulations can strongly increase capital requirements, either with quantity limits or—my favorite (Cochrane 2014)—Pigouvian penalties for debt and especially run-prone short-term debt. Markets: mac-

prudential regulation is the new hot idea. The Federal Reserve will intervene in a wide range of financial markets to stabilize prices, precisely diagnose and pop bubbles, manipulate lending flows, and (inevitably) support collapsing prices, all so that the assets held by highly leveraged and irremediably risk-taking banks never fall in value. The Dodd-Frank Act: all of the above and more.

Which of these approaches produces better benefits for its costs? Would a cost-benefit process produce the right answer?

2.1.1. *The Costs of Crises.* What are the costs of a crisis and thus potential benefits of a regulation that eliminated them? Real GDP fell 10 percent in 2008, or about \$1.5 trillion, and in 2014 it has not regained any ground relative to the previous trend line or previous estimates of its potential. So, by that back-of-the-envelope measure, the cost is nearly \$10 trillion and counting. About 10 million people stopped working, and the employment-to-population ratio has not recovered since. And we should include the costs of government policy as well. Trillions of dollars of stimulus, automatic stabilizers, and other recession-induced spending will have to be paid by taxpayers eventually. The benefits of anything that reduces the chance or severity of financial crises would seem to be enormous.

But how many of these costs should we attribute to the financial crisis itself? Even without a crisis, there would have been a boom and bust in housing, like the boom and bust in technology stocks of the late 1990s. Even without a crisis, we would have had a recession. Quite plausibly, we had a boom in housing, the appearance of a normal recession precipitated a bust in housing, and the bust in housing precipitated the shadow-banking run that caused the financial crisis. How deep would the recession have been without a crisis? Opinions can vary, and macroeconomic models are not reliable enough to produce anything like the kind of counterfactual one wants—though one can be sure a cost-benefit hearing would produce armies of high-priced economists bearing models and predictions quoted to three decimal places.

Many observers calculate the loss of housing and asset values as a cost of the financial crisis. But much of the decline in asset values, including housing, turned out to be temporary. The American International Group (AIG) portfolio of credit default swaps recovered, the highly rated tranches of mortgage-backed securities recovered, and stocks gained back their losses. Even some of the government's Troubled Asset Relief Program bailout investments ended up turning a profit. Do we count

the mark-to-market loss, which may have reflected the possibility that things could have gotten much worse, as they did in the Great Depression? Or do we count the long-term loss, if any?

Even if there are permanent losses in asset values, what parts of those losses represent transfers, and what parts represent a loss to national wealth? A sharp decline in housing values is great news if you are 30 and have a job. You will spend a lot less of your lifetime income on housing, and therefore you will spend more on other things, or you will get a much nicer house for the same money. A sharp decline in stock price-to-earnings ratios has a similar, largely distributional effect. We would all welcome a technological discovery that cuts the price of cars in half, despite its effect on used-car prices. Houses that are still there, and factories that are still there, but at lower prices, are conceptually different from houses and factories that have washed into the ocean. In order to get such wealth losses to have much effect in their models, macroeconomists have to assume that asset values are important as collateral for borrowing, not as national wealth, and even this argument requires “frictions” such as collateral value that might more profitably be addressed directly (for example, Mian and Sufi 2014).

Now, there is some loss to national wealth—we built too many houses in the wrong places, as the current values are less than the costs of construction. But how much? Once you recognize the benefit of lower prices, it suddenly becomes much harder to say. Will cost-benefit analysis recognize the benefits of lower housing prices to young families?

More generally, how should cost-benefit analysis handle large transfers? Are huge bailouts, from taxpayers to bank creditors and stockholders, from equity investors to creditors, from old home owners to young home buyers, really neutral in cost-benefit analysis? By standard utilitarian calculus, they are. But of course most of the fights over government policy are exactly about enacting or limiting zero-sum transfers, and much of the public outrage during the financial crisis was about transfers. Much of the explicit goal of the Dodd-Frank Act is to limit future transfers—to end too-big-to-fail scenarios. Since our goal is to think through a political structure that produces better regulation, yet is acceptable to the parties involved, it seems foolish to ignore transfers. Yet it is inconsistent with economic principles to enshrine them as costs.

2.1.2. Self-Inflicted Wounds. The costs of a financial crisis are not inevitable. Reinhart and Rogoff’s (2011) historical survey is more notable for the variety of historical experiences of postcrisis recessions than it

is for the widely reported average of that experience. Many economies recover quickly.

So, here's a hard nut for cost-benefit analysis: if much of the cost of a financial crisis is due to the way financial crises spark inept government policies, or if much of the cause of a financial crisis is due to inept regulations and policies in advance of or during the crisis, does mitigating such crises, by regulations that themselves carry substantial costs, count as a benefit? If I persist in shooting myself in the foot, do we count the value of an iron cast in preventing broken feet as a benefit, when I could simply stop shooting myself in the foot?

Traditional cost-benefit analysis presumes some sort of free-market Eden gone wrong. Unregulated markets suffer some dysfunction that is partially remediable by regulation. How do we address the situation that much of the problem is other poor regulations? Cost-benefit analysis treats each regulation in isolation. How do we treat regulations as a package?

The charge that the government mishandled the crisis, it needlessly prolonged the recession, and much of the crisis came from bungled previous regulations and policies, is shared by critics from every point of view, the only difference being which policies the critics dislike. To some, the recession was completely avoidable because the stimulus was too small. Had the government spent \$2 trillion, \$3 trillion, \$4 trillion per year or more, they say, and even if the spending was completely wasted, output and employment would have recovered swiftly. Some of them claim that the multiplier is so huge, in fact, that extra spending would have been self-financed by the larger tax receipts coming from greater output, a free fiscal lunch (for example, DeLong and Summers 2012).

To others, the disincentives of vastly expanded social programs, continued meddling in housing markets, higher marginal tax rates, macroeconomic and microeconomic policy uncertainty, the looming uberregulation of health care and finance, and the aggressive actions of the National Labor Relations Board, EPA, Equal Employment Opportunity Commission, and others caused our stagnation (see, for example, Mulligan 2013; Baker, Bloom, and Davis 2013; Taylor 2012a).

Despite their apparent differences, the uniform view of these analysts seems to be that the long recession was the fault of bad postcrash policies. I can't think of one analyst who says that government policy after the crisis was optimal, so this is simply the minimal cost we must bear for a financial crisis. In any of these views, then, the true and necessary cost

of a financial crisis is much lower than the pain we have suffered. The ultra-Keynesian view of DeLong and Summers (2012) implies that the true cost of a crisis is zero, because a costless policy can eliminate the following recession. So, in measuring the cost of a crisis, and the benefits of crisis-preventing financial regulation, is it correct to treat inept policy responses as inevitabilities?

Critics from all points of view also identify ham-handed policies as major ingredients in causing the financial crisis in the first place. Some charge that the Community Reinvestment Act was taken to heart by bank regulators, who forced banks to make riskier loans, especially in return for approving mergers, and forced the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Association (Freddie Mac) to buy and guarantee those loans. Some charge that the Federal Reserve sparked the housing boom by holding interest rates too low for too long. The many subsidies for leveraged home ownership, including the tax deductibility of mortgage interest and the limitation on capital gains taxes for homes, encouraged leveraged home buying over less glamorous but financially more stable renting. (The first thing a true consumer financial protection bureau should do is heavily nudge vulnerable Americans not to invest all their wealth in a highly leveraged, illiquid asset marked by huge idiosyncratic risk—the owner-occupied home. Good luck with that.) Some believe that regulators' failure to police predatory lending led people to take out mortgages they couldn't afford and then refinance to take cash out to spend. Fannie Mae and Freddie Mac, which went under in summer 2008, were hardly creations of the free market, and AIG was a heavily regulated insurance company.

The panic or run that was the defining event of the 2008 crisis revealed another morass of bad regulation, ineffective regulation, widely recognized regulatory arbitrage that nobody did anything about, and failure to address obvious and building moral hazard. Auction-rate securities and off-balance-sheet special-purpose vehicles, which hold illiquid risky assets funded by rolling over run-prone short-term debt, were obvious end runs to banking regulation, a way to create a synthetic bank without capital regulation or supervision. Collateralized debt obligations, pools of mortgage-backed securities tranced to the limits of ratings, and rating-agency connivance in providing those ratings, happened only because regulators demanded that institutions hold securities blessed with particular letters bestowed by particular rating agencies.

The moral hazard by which creditors came to expect bailouts rather

than bankruptcy had also built up like underbrush, from the bailouts of Continental Illinois, the savings and loans, bank investments in Latin America, the southeast Asian crisis, Long-Term Capital Management, and finally Bear Stearns. The latter was apparently intended to give Wall Street a little more breathing room to prepare for an eventual default—bailouts have to end somewhere—and instead was apparently interpreted to mean that investment banks like Lehman Brothers were now also guaranteed (Cochrane 2010). Big banks are too complex to go through bankruptcy court, the mantra is repeated, but if so why did anyone lend to them without the consequent protections of bankruptcy law? Only because investors presumed their loans to banks to be government guaranteed, so investors did not need to write contracts more carefully.

Direct, preventable government actions contributed to the severity of the crisis. Treasury Secretary Henry Paulson appeared before Congress asking for \$700 billion, with no clear plan for what he wanted to do with it other than an obviously hopeless quest to prop up the market prices of mortgage-backed securities, while over the previous weekend the government put in place a ban on short-selling bank stocks, in case investors didn't fully get the message of what they should sell, now. It's hard to think of a better way to start a panic (see Taylor 2009, 2012b).

So, how do we interpret any measure of the costs of a financial crisis, and the benefits of a new but costly regulation that might reduce the chance of a crisis, when so much of the crisis and so much of its severity were the effect of poor previous regulation, and poor policy and regulatory response, rather than a pathology of some mythical unregulated free market in need of a single new regulation?

2.1.3. Other Voices. Posner and Weyl (2013a, p. 394) write of the cost of financial crises that “[a]greement on a figure in the range 150 billion to 3 trillion dollars . . . would seem relatively easy to reach given the widely respected estimates of Reinhart and Rogoff.” That is a huge range! And Reinhart and Rogoff's evidence is subject to many qualifications, as described above. What seems “relatively easy” to Posner and Weyl may not seem so easy to a judge of the D.C. Circuit. Posner and Weyl (2013a, p. 394) continue, “We would advocate a figure in the 1–2 trillion dollar range,” offering no further evidence. Others might advocate other figures.

Coates (forthcoming a) reviews the efforts of the Basel Committee to come up with a cost of financial crises in order to do cost-benefit

analysis of capital regulation. Alas for Posner and Weyl's assertion that 1–20 percent of U.S. GDP would be easy to agree on, Coates (forthcoming a, p. 57) quotes estimates of 90–350 percent of world GDP, 18–48 percent of U.K. GDP, and 10–210 percent of U.K. GDP. “To state the obvious: these ranges do not even overlap.”

Coates (forthcoming a, p. 58) continues, “The [Basel] Committee reviewed twenty-one studies. . . . The present value of the average cost . . . ranged from 16% to 302% of pre-crisis GDP. Several include a lower bound of zero (!), while the highest upper bound was 1,041% of pre-crisis GDP.” Much of this uncertainty revolves around the assumption of whether declines in output are transitory or permanent, an issue that is very tricky to resolve in data. A deeper source of uncertainty is a light version of my self-inflicted-wound question: “Should the current legitimacy of otherwise desirable regulation turn, to any significant degree, on debates or assumptions about predictions of future politics? That is what CBA/FR [cost-benefit analysis on financial regulation] advocates effectively if tacitly presume” (Coates, forthcoming a, p. 64).

2.1.4. Regulations to Fix Regulations. The thicket of existing and proposed regulation deeply challenges cost-benefit analysis, which is designed to think about one regulation at a time and to cure market failures, not regulatory failures. Financial regulation often works at cross-purposes. One agency's predatory lending, by which financial companies are accused of forcing borrowing on unsuspecting customers at punitive rates, is another agency's opening of credit markets to underserved income-based, geographical, or racially defined groups. One agency wants lower loan-to-value ratios in the name of financial stability. Another wants higher loan-to-value ratios in the interest of community redevelopment. Taxes strongly distort decisions away from saving and investment and toward consumption, but then our government carves out a myriad of complex special deals for tax-advantaged savings. One arm of the government subsidizes short-term debt by the tax deductibility of interest, deposit insurance, Federal Deposit Insurance Corporation resolution, too-big-to-fail guarantees, and by regulatory preference for short-term debt as an asset by other institutions, for example, lower capital ratios for short-term debt held as an asset and regulations requiring money market funds to hold short-term debt. Another arm of the government wants to reduce short-term debt, for its incendiary stability effects, with higher capital ratios, leverage ratios, clawbacks, and so on. The federal government subsidizes housing and its financing to

lower house prices; local zoning and planning laws limit construction and drive up house prices.

This sort of regulatory contradiction is pervasive. Our government subsidizes and requires the use of corn ethanol to reduce emissions, yet bans the import of sugarcane ethanol, which might actually have that effect. Our government heavily subsidizes solar cell production to lower prices, and then imposes tariffs against cheap Chinese solar cells to raise prices.

A public choice economist might conclude that the purpose of regulation is simply to enhance regulators' power to extract political and financial support from the regulated, in return for subsidies and protection from competition. It would be hard to refute that view in the data.

So do we measure the benefits of a new regulation against the backdrop of the thicket of perverse, contradictory regulation that remains? Or do we measure them as a contribution to an ideal regulatory system?

For example, do we address the costs and benefits of capital regulation, assuming that debt remains subsidized and an effective too-big-to-fail guarantee remains in place? Those distortions are the first-order issue to the benefits and costs of capital regulation (discussed in more detail below). Similarly, do we address the costs and benefits of macroprudential asset bubble pricking, assuming that banks continue to run with ridiculously low capital ratios, where with adequate capital, bubbles and crashes would not cause crises?

Is it right to count as a benefit of one new additional regulation that it will offset the unintended consequences of an existing regulation, which might instead be profitably repealed instead? Since so many of our regulations exist precisely to offset the moral hazards and unintended consequences of previous regulations, is it at all useful or realistic not to do so?

Even in the best case, financial regulations are designed as a system. Capital regulation, enhanced supervision, stress tests, and resolution authority are designed in the Dodd-Frank Act to work together and together with existing deposit insurance and other bank regulation. We can't meaningfully measure the costs and benefits of each one. But can we really measure the costs and benefits of the entire Dodd-Frank Act in a serious way?

2.1.5. Causal Channels. Cause and effect is nebulous in financial matters. "Make the financial system more stable" is easy to claim but hard

to prove and harder to quantify. Pretty much every section of the Dodd-Frank Act is sold as a device to mitigate systemic risk and reduce crises. But how many have any such effects? And by what scientifically documented mechanism?

Resolution authority is a good example. Its authors say it will end too-big-to-fail guarantees and associated moral hazard. Without too-big-to-fail guarantees, people will watch their own risks more carefully; charge appropriate premiums for risks; make sure exit plans, living wills, and bankruptcy systems are in order; and otherwise endogenously create a more stable financial system. There, \$5 trillion of benefits.

But will it work? I see a contradiction at its core (Cochrane 2010, 2013). Given the presumption that large financial institutions are too complex to be unwound by a bankruptcy court, which has behind it centuries of law, centuries of case precedent, and the thousands of pages of what-happens-in-bankruptcy small type in every financial contract that critics decry as excessive complexity, will a few appointed officials be able to figure out who gets how many billions of dollars over a weekend? Or will that attempt lead merely to massive bailouts of politically well connected creditors, who will surely scream of their own “systemic” nature, chaos while nobody knows which contract will be honored, the run of all time as less-well-connected creditors see this coming and try to get out of the way ahead of time, even bigger creditor bailouts to stem that run, and a huge investment by all parties in political influence over the discretionary power of the resolution authority? So, seriously, can the sort of cost-benefit analysis process followed by the EPA possibly consider this kind of argument or at least demand a serious examination of the cause-and-effect stories adduced by regulatory proponents?

We might say that all regulations are somewhat uncertain in their benefits. We don’t know entirely how many lives will be saved by reducing mercury emissions at a particular power plant. Dose-response relationships are debatable. But the uncertainty of even the nature of regulatory effects, to say nothing of the size, is many orders of magnitude larger for the systemic effects of financial regulation than it is in those cases.

That uncertainty is deep, because most proposed regulations, as most diagnoses of financial problems, rely on very thin grounds of causal mechanisms. Policy makers and financial economists bandy around terms like “systemic,” “fire sales,” “illiquidity,” “liquidity spirals,” “bubbles,” or “imbalances” as if they had the same scientific standing

as “morbidity,” “mercury concentration,” or “pollutant transport distance.” But the scientific definition and measurability of any of these concepts would make evolution deniers blush. The Dodd-Frank Act does not even define “systemic”! “Systemic stability” in financial cost-benefit analyses is as solid a concept as “preserving the American way of life” or “cultural” benefits are in transportation studies. Except that the numbers are in the trillions.

This uncertainty—ignorance, really—is an essential part of financial regulation. Finance is all about frictions, ways in which the world departs from the Economics 101 ideal. In an ideal frictionless world, finance doesn’t matter. Savings flow to investment by hundreds of different channels. The structure of actual financial markets and their problems are all about transactions costs, market incompleteness, asymmetric information, adverse selection, collateral, and so on. The effects bandied about are all absent in the Economics 101 ideal world. But economic imperfections, ways in which the standard models fail, will always be much harder to understand and quantify than standard Economics 101 supply-and-demand effects.

Empirical financial research will always be tentative. Among lawyers, there is a tendency to regard data as the limiting factor—as Coates (forthcoming a) bemoans the lack of data to conduct proper studies. But empirical economics is about the harder question of teasing cause and effect out of the correlations in the data. Rich people drive BMWs, but driving a BMW will not make you rich. Economists are still debating whether stimulus works, let alone the fine cause-and-effect mechanisms that financial regulation tries to exploit. Cost-benefit analysis will certainly result in a massive flow of resources to financial economists to conduct difference-in-differences regressions and come to warring conclusions on their basis.

One might say, fine, let’s bring this argument out in hearings, public comments, and, inevitably, court. But with huge sums at stake, a clearly important problem, and armies of easily hired “experts” who can befuddle regulators and judges with these stories, it is hard to place much faith in the outcome.

Ideally, we would say that regulation should await documented scientific understanding of costs, benefits, causes, and effects. That won’t happen in our lifetimes, so the danger is that we instead give fairy tales the patina of scientific respectability and then enshrine them in law. At a minimum, a successful cost-benefit analysis framework must do some-

thing very unusual in Washington: it must embrace uncertainty, of both numbers and channels of analysis.

2.2. Microeconomic Financial Regulation

Much financial regulation is not aimed at preventing systemic crises but instead at the operation of specific markets or the nature of specific financial products. Microeconomic financial regulation therefore may seem more amenable to cost-benefit analysis, since it stays away from nebulous (but important) general equilibrium effects and concentrates on simple questions like what kinds of mortgages you should be allowed to buy.

Financial institutions were already highly regulated before the 2008 crisis. Under the Dodd-Frank Act, the various regulatory agencies are unleashing tens of thousands of pages of new rules governing every nook and cranny of the financial system. A quick look at, say, “Interim Final Rule Authorizing Retention of Interests in and Sponsorship of Collateralized Debt Obligations Backed Primarily by Bank-Issued Trust Preferred Securities,” randomly chosen as the top item on the Federal Reserve’s Web site² as I revised this paper, or “Prohibitions and Restrictions on Proprietary Trading and Certain Interests in, and Relationships with, Hedge Funds and Private Equity Funds” (O’Malia 2012), likewise at the Web site of the Commodity Futures Trading Commission (CFTC), or “Home Mortgage Disclosure (Regulation C): Adjustment to Asset-Size Exemption Threshold” at the Web site of the CFPB³ makes any economist yearn for some sort of vague accounting of costs and benefits—but equally leery of additional layers of process.

Quantifying costs and benefits of microeconomic financial regulation still presents many challenges, however. Consider a simple concrete example, regulations to limit payday loan interest rates, or similar regulations to limit the rates and terms of mortgages offered to consumers, in the interest of reducing predatory lending. How would we measure the dollar value of social benefits of such a regulation? Some people will

2. The Federal Reserve’s Web site has an interesting overview of financial regulation (see Board of Governors of the Federal Reserve System, Regulatory Review: Recent Developments [<http://www.federalreserve.gov/newsevents/reform.htm>]). The Federal Reserve’s admirably transparent accounting of its discussions with industry is a treasure trove for public choice analysis of the regulatory process (see Board of Governors of the Federal Reserve System, Regulatory Review: Communications with the Public [http://www.federalreserve.gov/newsevents/reform_meetings.htm]).

3. See Consumer Financial Protection Bureau, Regulations: 2013 (<http://www.consumerfinance.gov/regulations>).

get loans at lower rates. Some won't get loans at all. At best, we engineer a transfer from owners of existing companies and excluded consumers to the lucky recipients of lower cost loans.

This sort of regulation sounds simple and much like consumer product safety regulation—say, deciding if a company can sell magnetic toys that might pose a danger to young children. Even the name of the CFPB suggests such simplicity. But finance is about money and markets, and financial regulation is about perturbing a market and deliberately engineering transfers, so nothing is as simple as it seems.

Another large branch of microeconomic financial regulation concerns regulations of how markets may operate, and how traders may operate in them, under the Securities and Exchange Commission (SEC), CFTC, and other agencies. Here, the nebulosity of goals and our poor understanding of causal mechanisms conspire to raise big challenges for cost-benefit analysis.

Much SEC regulation, such as the regulations against trading on certain kinds of information, disclosure requirements, or rules on how exchanges must process orders, are motivated by maintaining “orderly,” “fair,” or “liquid” markets. Quantifying such benefits will be tough. There isn't even a really good quantifiable definition of “liquidity.” Causal channels by which interventions in market structure produce more of it are poorly understood at best. Academic finance has debated for half a century whether trading causes volatility or vice versa, and similarly whether insider trading does any harm. Once again, many pathologies of markets trace back to unintended consequences of previous regulations. For example Budish, Cramton, and Shim (2013) trace many pathologies of high-frequency markets to SEC rules: by mandating best execution, discrete prices, continuous time, and that the first order in line, even by a nanosecond, must get everything, the SEC set up the high-frequency arms race.

2.3. Costs of Financial Regulation

The costs of financial regulation are as nebulous and difficult to assess as are the benefits—and just as important. Crews (2014, p. 98) estimates a humorously accurate \$79.125 billion. He also eloquently documents that nobody knows the costs, which could “surpass \$1 trillion.”

The financial industry complains about compliance costs. They are real. But when compliance and paperwork costs become a large part of the argument, we know we are missing the point, because for finance especially the economic side effects and unintended consequences of

regulation on market outcomes are certainly orders of magnitude larger than salaries of people filling out forms.

For example, Batkins and Brannon (2013) examine the costs of the Dodd-Frank Act, savaging the agencies implementing the act for failing even to attempt cost-benefit analysis. They add up official estimates of \$15.4 billion direct costs to financial institutions and 58 million paperwork hours but point out these are vastly understated. Legal costs are more serious. Jenkins (2013) totaled \$108 billion in legal fees since 2008 at the six big banks alone, items usually overlooked in agency cost-benefit analysis. But even if Dodd-Frank Act paperwork consumes \$50 billion of annual paperwork hours, if the act lived up to its promise of ending \$700 billion bailouts, \$1,000 billion stimuli, \$10,000 billion GDP losses, and 10 million unemployed in the United States alone, it would be worth it.

Conversely, the true potential costs of Dodd-Frank Act–style financial regulation are orders of magnitude larger than its legal and compliance costs. The costs of financial regulation are its effects on the flow of credit; on innovation, competition, and entry into the financial system; on capture and misuse of regulation to protect incumbents, including the tendency of regulation to produce perverse outcomes such as making financial crises more likely rather than less. If the Dodd-Frank Act results in 20 years of slow growth, crony corruption of the whole financial sector of the economy, and a bigger crisis next time, those costs also dwarf the paperwork costs.

2.3.1. Capture, Competition, and Growth. Capture and reduced competition are costs that should be considered for any economic regulation. They are particularly severe for finance.

Limits on competition and innovation are an essential part of financial regulation. For example, the most basic banking regulation, going back to the 1930s, gives banks deposit insurance, in order to stop runs. Then it adds risk supervision to keep banks from exploiting deposit insurance. But then the government has to stop nonbanks from offering depositlike securities at higher rates than banks can offer, by investing in riskier securities—it must stop entry.

Dodd-Frank Act regulations specify minimum amounts of capital that swap dealers should have. That makes sense. We want safe, stable, well-capitalized swap dealers, right? Except that requirement imposes a large barrier to entry to anyone desiring to become a swap dealer. And swap dealing, especially in off-exchange over-the-counter markets, is enor-

mously profitable, one reason the industry has fought hard against exchange clearing and trading.

The web of relations between huge banks and the discretionary nature of regulation invites the stifling of competition, and capture. Lucchetti and Steinberg (2013) quote Morgan Stanley's chairman as saying "your No. 1 client is the government" and that there are 50 full-time government regulators working in that firm alone, signing off on every deal. And the CFPB has not really started its work yet. The SEC, the Department of Justice, and other agencies make headlines attacking the big banks in court and rake in billion-dollar settlements. But in the end if the big banks are too big to fail, the government must protect their profits.

It's a pretty safe bet that we will have the same six large banks in 20 years as we have today, just as the Interstate Commerce Commission produced high prices, high wages, and the same few airlines on its demise that were there at its beginning. The Southwest Airlines of banking will not intrude under the Dodd-Frank Act.

How will cost-benefit analysis add up the costs of regulatory capture, the expanding crony-capitalist revolving door between Washington and Wall Street? Capture and stifling competition are among the biggest costs of financial regulation. But traditional cost-benefit analysis and legal procedures are at a loss to consider them. They are not considered at all in current environmental, safety, or drug regulation, though there is a revolving door of EPA and Food and Drug Administration staff to regulated companies. The biggest costs are unseen: the businesses that didn't get started, the people that didn't get hired by those businesses, the innovative financial products that didn't get innovated, the better lives their consumers would have lived, the improved savings and investment vehicles that would have cushioned risks and improved people's lives in their old age, the economic growth that didn't happen.

2.3.2. Unintended Consequences, Moral Hazard, and Induced Instability.

Unintended consequences are pervasive in financial regulation. And practically by definition, unintended consequences are not included in prospective cost-benefit calculations. Special-purpose vehicles, auction-rate securities, overnight repo, and even money market funds, which failed in the financial crisis, were unintended consequences of previous rounds of financial regulation. These structures were in many ways worse than pure free-market banks, because they exploited the weaknesses of the regulated system and government guarantees. For example, special-

purpose vehicles and auction-rate securities bought mortgage-backed securities and issued short-term moneylike paper to finance them, but also had a credit guarantee from the sponsoring too-big-to-fail bank and no equity. But the credit guarantee did not trigger regulatory capital requirements on the bank providing the guarantee. Overall, capital requirements plus debt guarantees, which stayed one step behind clever financial engineers, created a banking system even less stable than the pure free-market system would have been.

Money market funds were an invention of regulatory arbitrage. Regulation Q of the now nostalgically remembered Glass-Steagall regulatory system limited the interest rates that banks could pay, with the explicitly stated goal of maintaining the profitability of banks and reducing competition for deposits. When inflation demanded higher interest rates, money market funds developed to evade the interest rate restriction. And in 2008, there was a run on money market funds, which the government promptly bailed out.

Peer-to-peer lending and bitcoin are small shoots creating new alternatives to regulated banks that are no longer serving many classes of borrowers or providing efficient electronic transaction services. But as money market funds and special-purpose vehicles turned out to have downsides, so may the next round of end runs to regulation and regulation-imposed limits on competition.

Financial regulations often directly and predictably cause the regulated system to become more fragile on its own. If we put a big new firehouse on every block, people neglect their home fire extinguishers, they don't install sprinklers, they store gasoline in the basement, they don't trim back the trees, and they don't watch their neighbors as closely.

Before the Federal Reserve became the lender of last resort, banks had adopted a clearinghouse system that mitigated runs. Banks would declare a temporary suspension of direct convertibility. People could redeem their deposits for clearinghouse shares. Though arguably imperfect, this system at least provided a bulwark against runs. When the Federal Reserve came in, the clearinghouse was abandoned. When the Federal Reserve fell flat in its lender-of-last-resort function in the 1930s, the banking crisis was worse than it would have been otherwise.

Before deposit insurance and too-big-to-fail guarantees, banks voluntarily funded themselves with 20–40 percent equity capital. Depositors would not lend for less. Now we fight to get the banks to issue 5 percent capital.

Policy actions can have the same destabilizing results as regulations.

In the financial crisis, the Federal Reserve stepped in aggressively to prop up the prices of various securities. But your fire sale is my buying opportunity. Each time the government props up a price that fell, it discourages the few prudent souls who did not leverage to the hilt in the boom, and kept some cash handy to pick up bargains in the bust. They will be wiser next time. Looking forward, if the Federal Reserve starts pricking bubbles and limiting price rises, the incentive for investors to get in early is similarly reduced. Asset pricing relies on deep-pocket fundamental investors to hang around and make profits from price dislocations. If the Federal Reserve outbids them at the bottom and cuts off their profits at the top, they won't be around next time.

Where in a legalistic cost-benefit analysis can anyone consider all these costs? Will there be a line "anticipated regulatory capture, lobbying, political credit allocation, and corruption," then a line "anticipated perverse effects of regulatory arbitrage and gaming around the system," and just after that a line "enhanced probability of financial crisis due to unintended effects of regulations"? Given the self-congratulatory nature of all legislation and regulation, this outcome is pretty hard to imagine. So we'll fight about paperwork costs.

If these costs were second order, as plausibly they are for environmental or product-safety regulation, it wouldn't matter so much. But for financial regulation, these costs are first order; they are major concerns that we would like the policy process to balance. Ignoring them and producing a pro forma statement that adds up paperwork costs while ignoring the elephants in the room will be worse than useless.

This issue goes deep to the heart of the foundations of cost-benefit analysis, mentioned in the Introduction. Faith in cost-benefit analysis really is driven by the progressive view of a technocratic elite who will write wise regulations from above to guide the economy but needs a little help figuring out just how much to regulate. The public choice view, emphasizing capture, emphasizing that regulation is an inherently political process that actors in the economy will try hard to twist to their own ends, leaves much less faith in bureaucratic procedure. When public choice considerations are first order, we are faced with the challenge of devising a cost-benefit process enlightened by public choice sensibilities, not those of the aspiring technocratic aristocracy. The best hope is for a cost-benefit process open to challenge from outside the usual industry-regulator nexus, one that provides an opportunity for analysis of this sort of issue to be heard, both prospectively and retrospectively.

2.3.3. *The Costs of Discretion.* Widespread discretion is another aspect of financial regulation that distinguishes it from the areas where cost-benefit analysis developed. Health-and-safety regulation is in large part codified in objective rules. Financial regulation in large part consists of giving regulators wide discretion rather than simple, clean, challengeable rules. There is a huge rule book, of course, but the actual rules are so vague, so overlapping, and so maddeningly complex, they mean whatever the regulator chooses the rules to mean. Procedurally, financial companies have to obtain regulatory approval for their actions rather than follow an objective rule book and then know they are compliant. The 50 regulators of Lucchetti and Steinberg (2013), working full-time at Morgan Stanley signing off on each deal, are not checking boxes. They are making highly subjective decisions about which deals they like and which ones they don't.

The Federal Reserve's stress tests for big banks are a good example. At first glance, one would think that the Federal Reserve would announce the rules for the stress tests in advance, so the banks would know how to behave. But the Federal Reserve's regulators are smarter than that. They know that if they announce the rules of the stress tests, the clever MBAs and accountants at the banks will jigger the books to make sure the banks pass the tests—just as they all reported to be well capitalized on the eve of the 2008 crash. So the clever regulators at the Federal Reserve dream up new and surprising stress tests each time to keep the banks on their toes. Until those regulators quit and go work for the banks, to help them pass the stress tests.

At a minimum, wide discretion makes prospective cost-benefit analysis nearly impossible. How would you analyze ahead of time the costs and benefits of a rule that says “the Federal Reserve staff shall make up imaginative stress tests as it sees fit”? (Such a rule doesn't exist.) How would you analyze an energy rule saying that regulators shall visit each site and sign off on plants that are necessary, proper, and not abusive? The only hope for cost-benefit analysis of this sort of regulation is constant retrospective analysis to see what agencies are doing ex post.

More deeply, wide discretion invites capture, stifles dissent—and will stifle industry participation in retrospective cost-benefit analysis. Investment companies are loath to speak out against the Federal Reserve, SEC, or CFTC, no matter how silly they think the agency's actions might be. Just the announcement of an enforcement action can put firms out of business, even if the action goes nowhere. Companies who want Af-

fordable Care Act waivers from the Secretary of Health and Human Services know better than to talk about the law negatively in public.

Coates (forthcoming b), struggling with alternative structures to better implement cost-benefit thinking, advocates supervision, which is the same thing as discretion with a somewhat nicer tone. The flexibility of supervision, by a powerful, benevolent, disinterested regulator, would indeed allow cost-benefit thinking to apply where judicial quantification is not possible. But supervision is discretion, much more prone to capture when the regulator must bend to the wishes of industry and the public. The question of who supervises the supervisors must be answered.

2.4. Financial Regulation Costs and Benefits: A Summary

Extending and adapting the legal and bureaucratic structures and processes of cost-benefit analysis to financial regulation will not be easy. The important costs and benefits are nearly impossible to quantify objectively. The costs and benefits of financial regulation are all about the behavioral, market, general equilibrium, and political responses that conventional cost-benefit analysis is not very good at and generally ignores. Policies and regulations do not come one at a time but (ideally) in a coordinated mix and (realistically) as stopgaps and a patchwork for unintended effects of existing policies. Financial regulation is, in a sense, all about regulating transfers, who gets how much money at whose expense. Yes, illegitimate transfers may impede markets, but the extent of market damage, not a desire to protect voluntary losers, is supposed to end up in cost-benefit analysis. For every loser there is a winner, and finance is about taking risks to earn rewards. The amount of money at stake raises the potential for capture and other political economy costs and dangers into the trillions.

Formal cost-benefit analysis requires a codification of procedure: what constitutes acceptable science, which cause-and-effect mechanisms matter, and so forth. Knowledge and professional agreement in financial economics do not approach this state, especially for macroeconomic and financial stability issues. The cause-and-effect mechanisms adduced in many financial regulations are hazy cocktail-party stories relative to even the least scientific pollution studies. And that's among academics. Wait until the agencies and lobbyists get to work. Experts will disagree on basic methods, the existence of causal channels, and even the definition of basic terms like "systemic," "liquidity," "bubble," and so forth.

3. POLITICAL ECONOMY

Cost-benefit analysis attempts to enshrine the economist's framework for evaluating policies. We worry about distortions, costs, and benefits to society as a whole. Transfers are at best second-order considerations and better handled by separate, cohesive transfer policies rather than by introducing market distortions to engineer transfers. We express all costs and benefits in dollars—social, cultural, quality-of-life, or other goals that proponents are not willing to reduce to a dollar value don't count. We demand a documentable market failure and a clear cause-and-effect path by which regulation remedies it before acting.

Most of the interested parties, however, are deeply interested in transfers. The political process is all about transfers, and cares little about distortions. All sides are happy to act on the flimsiest of cause-and-effect thinking.

And like all regulation, the cost-benefit review process can turn into one more element of regulatory capture, adversarial delay, or a way to induce transfers out of regulation. Finding a small endangered species on the lawn is a great way to stop the development next door that would block your view. See the Keystone pipeline—a disaster no matter which side of the debate with which you agree.

3.1. Cost-Benefit as a Social Contract

Once we step out of the benevolent-regulator paradigm, then we have to think of cost-benefit analysis process as a social contract, an agreement by parties to adjudicate deep controversies using its methods. Parties must agree that cost-benefit analysis will and should drive the outcome, for example, that most transfers or unquantifiable costs and benefits should be ignored and that costs and benefits must be reduced to dollars. They must agree on at least the basic framework for calculating costs and benefits and cause-and-effect mechanisms.

Federal project evaluation, health-and-safety, and environmental cost-benefit regulation came about in a setting in which all sides of the debate pretty much agreed what costs and benefits mean, that something like a trade-off between costs and benefits should measure desirable policy (though that agreement is strained for environmental questions). Legalized cost-benefit analysis followed an existing cost-benefit tradition in less formal policy analysis (Coates's [forthcoming b] capsule history is useful here).

Cost-benefit analysis falls apart—or is more likely to become mis-

appropriated as a tool for obstruction and rent seeking—when parties are unwilling to agree on that framework. If “leave a clean planet” is a moral imperative above and beyond any documentable costs of a specific kind of pollution, or once social, esthetic, cultural, or other nonquantifiable policy goals are central to one or the other side’s position, cost-benefit analysis falls apart. If there is no agreed-on scientific framework, then it devolves into a battle of befuddlement by high-paid “experts.” If cost-benefit analysis is imposed from on high, it is more likely that parties will conspire to undermine the whole procedure. Our political system doesn’t (yet) try to resolve social policy issues like, say, gay marriage, immigration, abortion, or drug regulation by bureaucratic cost-benefit analysis, precisely because people of deeply held and widely varying views will not concede that the argument can be boiled down to dollars.

I think that much of the wish among economists for cost-benefit analysis amounts to a wish for power rather than a proposed social contract. “If I were in charge, the first thing I’d do is . . .” echoed through comments made at the conference where this paper was first presented. Many economists seem to think that central planning would have worked if only the planners had been as smart as the economists think they are. But noneconomists also think everything would be fine if they were put in charge, to impose their views on us. And it’s not obvious that an aristocracy of benevolent economists would do a whole lot better anyway. Choose your favorite policy disaster: they’ve all been enacted with lots of economists at the helm.

Economists too don’t always respect Hayekian limitations of planning, or stick to utilitarian analysis. At the conference where this paper was presented, for example, the session “Insurance versus Gambling” debated the proposition that the federal government should regulate finance like gambling in a paternalistic manner, anathema to standard utilitarian cost-benefit analysis, and allow only what some panel would bless as “insurance.” I’m not arguing pro or con, just noticing that agreement to abide by cost-benefit analysis as a social contract isn’t uniform even among economists.

3.2. Are We Ready for a Social Contract?

Is financial regulation ready for a cost-benefit process as social contract? It would be reassuring to see policy analysis and debate take on a cost-benefit cast, to see parties making and submitting to cost-benefit arguments of the type recognizable to economists, and to see existing reg-

ulations even foggily motivated by cost-benefit considerations. These would be signs that the parties are ready to accept more formal cost-benefit adjudication. As I look over financial regulation, however, I struggle to come up with any coherent and quantifiable aim describing current regulations that might be formalized in cost-benefit analysis. (Peirce [2013] and Ellig and Peirce [2014] measure more carefully a fairly low standard of cost-benefit analysis in current financial regulation.)

Most banking regulation, financial product regulation, the stack of forms you sign when you get a mortgage, the huge amount of compliance and disclosure regulations, qualified-investor rules, and the whole new so-named bureau are defended on the basis of consumer protection. But the critique of consumer protection goes back to Adam Smith and the guilds. For centuries, economists have complained that consumer protection justifies regulation whose main point is to protect incumbent businesses from competition, safeguard their profits and subsidies, slow down disruptive innovation, and provide a steady source of political support for regulators and politicians. They point out that reputation, competition, and private-sector ratings are far more effective protections. The controversy remains with us pervasively in product regulation, food-and-drug regulation, zoning, occupational licensing, and even taxicab regulation, to say nothing of finance.

In any case, despite the centuries that consumer protection arguments and counterarguments have played out, utilitarian, distortion-reducing, transfer-neutral cost-benefit analysis has never really taken over the framework for economic consumer protection policy analysis, let alone its regulatory process. The language of costs and benefits is often used, but not the basic idea of adding up dollar values and ignoring transfers. The interest rate cap, which is a transfer to those lucky enough to get a loan and an exclusion for those who do not, is a classic example.

Much financial regulation directly aims to subsidize credit for favored groups: small business loans via the Small Business Administration, large business loans via the Export-Import bank, student loans, home loans and home builders, loans to green energy projects, and so on. Much banking regulation has been aimed at supporting small banks against big ones, or savings and loans against banks. The kindest view is that some of this regulation might decrease the political power of financial interests. For example, Zingales (2012) presents a novel view that branch banking restrictions did not just protect local banks from big-city competition but also limited the national political power of big-city banks. That would make an interesting benefit to be balanced against the cost

of financial fragility. But more deeply, parties to that trade-off would be unlikely to submit to cost-benefit arbitration.

And like much regulation, much financial regulation is aimed directly at creating barriers to entry, propping up prices, and limiting competition. Regulation Q capped interest rates that banks could pay, with the explicit goal of raising bank profits. That goal is exactly contrary to proper cost-benefit analysis, unless costs, benefits, and causal mechanisms get so hazy as to allow the argument that subsidizing incumbents leads to greater stability.

Framing regulation of trading activity by the SEC, the CFTC, and other agencies in cost-benefit terms seems harder still. At best these regulations are aimed straight at preventing or creating wealth transfers, to small investors for example. Some regulations, such as perennial rules and occasional bans against short selling, are often motivated by a naked desire to prop up prices for powerful constituencies.

We imagine that cost-benefit analysis will enshrine the utilitarian economists' view of costs and benefits. But surely advocates will want to count as benefits the benefits they count now, such as numbers of customers who use a product, ignoring alternative products; numbers who receive lower interest rates when "protected" from "abusive" loans they would voluntarily have taken, ignoring those who get no credit at all; dollars transferred from banks to customers, ignoring alternative uses of the money; or the value of community redevelopment, ignoring communities that did not get development. Allowing such arguments will make a mockery of cost-benefit analysis. Until advocates accept that arguments contrary to cost-benefit principles cannot drive policy, they will undermine the necessarily fragile financial cost-benefit analysis.

In the economists' framework, we are supposed to start with an analysis of an economic situation, find a distortion or externality, and then craft policies. In the regulatory world, policies are often proposed all on their own, and then (maybe) subjected to analysis, perhaps now including cost-benefit analysis. They are answers in search of questions. Analysts endlessly come up with new theories to justify policies invented for other reasons. But those new theories rarely recommend the original policy as optimal anyway. Transactions taxes are a great example of a policy whose justification changes with the season. Perhaps it's supposed to deter excessive trading. But maybe your "excessive" trading is my "liquidity provision" and "price discovery"? Many, frankly, advocate transactions taxes to punish Wall Street. Clearly, coming up with cost-

benefit arguments *ex post* for policies invented *ex ante* for other purposes—usually to engineer transfers—can lead to all sorts of mischief.

3.3. Summary

So the vast bulk of current financial regulations are motivated by hazy, inconsistent, and incoherent goals that have little quantifiable social benefit. Their goals are often political or social, with “save small banks” being no more economically sound than “preserve the family farm way of life.” They often rely on no scientifically documentable mechanisms to produce their goals and no measurement of whether goals are reached. Regulations work at cross-purposes, and the process is already deeply captured.

To the usual economic view, which paradoxically combines a taste for free markets and utilitarian policy outcomes (that taste at least relative to others in the policy process) with a taste for dirigisme and self-appointed advice to the benevolent dictator in crafting policy, this situation would scream that our government should impose cost-benefit analysis. Someone as critical of current regulation as I am would conclude that forcing cost-benefit analysis on the whole process would lead us to a free-market financial nirvana and throwing out 90 percent of the pointless regulatory structure. Someone more enthusiastic about the possibilities for regulation, and equally nervous that our current structure is not working, would agree in the name of getting sand out of the regulatory gears.

But cost-benefit analysis is a political construct, a social contract, which must be at least roughly accepted by all sides to work. That is especially important for financial regulation, which is all about money, who gets how much and when. With such strong traditions behind us, and with the true costs and benefits and their causal mechanisms so hazy, the effect of a hasty cost-benefit project could well be to enshrine in law and regulation “benefits” that are not benefits in any recognizable economic sense, to create cause-and-effect channels that defy rational analysis, and thus further to ensure the regulator’s power and the industry’s desire and ability to capture regulation. We may dream of what we’d do if we were in charge, but when the actual actors that are in charge get to work, it is not immediately the economist’s framework that will be enshrined.

The resolution, I think, is that we should regard the move to cost-benefit analysis in financial regulation as a long and flexible process. Parties have to gradually move to using and accepting cost-benefit ar-

guments. The nature of the process and its extent has to flexibly adjust over time.

4. PROCESS

If one takes seriously even half of my critiques of current financial regulation, and my invocation to find a better process, some form of cost-benefit analysis seems attractive. But, remembering that cost-benefit analysis is a political process, not a commandment to enshrine economists as advisers to the benevolent dictator, we have to think about how to structure that process. Who does cost-benefit analysis and when? By what methods? Who adjudicates costs and benefits? What kinds of costs and benefits count, and what causal mechanisms count? When does the analysis happen? Who has the right to challenge the costs and benefits of a regulation and when? How transparent are the underlying models, data, and calculations? The legislation underlying most independent agencies already requires something like cost-benefit analysis, and executive-branch agencies are required to perform it. These obligations are largely honored in the breach. What procedures would one put in place to stiffen up these requirements?

There are genuine dangers in a cost-benefit procedure. An additional layer of bureaucracy might stop bad ideas, but it can be used by interested parties to stop good ideas too. For example, there was a run on money market funds prompting a bailout in the 2008 financial crisis. Five years later, the child's play regulation to fix that still has not been enacted by the SEC. (Restrict fixed-value funds to investments in treasuries, require floating values and a secondary market, or make them issue some equity. It's not hard.) The industry has neatly been able to derail the process. Imagine what it would do with another set of cost-benefit hoops ready for objection.

"Cost-benefit analysis" can mean a wide spectrum of procedures applied in a wide spectrum of points in the policy process. We can exhort academics, think tanks, and media who analyze and contribute to public opinion to adopt more cost-benefit analyses. We can recommend that agencies voluntarily adopt better cost-benefit analyses. We can recommend that the administration use it as a management tool for agencies, prospectively or retrospectively as in the Office of Information and Regulatory Affairs (OIRA) review process. We can recommend that agencies use it in a management or supervision role (Coates, forthcoming b) or that Congress do so. It can be mandated by executive order. Or it can

be mandated by law, it can be legally required of agencies, and then regulations could be open to judicial challenge on the basis of the cost-benefit process or even the calculations themselves. Cost-benefit thinking can vary from conceptual—just naming costs and benefits is a good start!—to guesstimated (Coates, forthcoming a) to relentlessly quantitative.

I think my survey of costs and benefits argues that financial regulation is not close to being ready for the legally enforced conventional type of cost-benefit process, as Coates (forthcoming a) also argues persuasively. An attempt to jump the gun and require quantification beyond what science can provide, while so many parties do not accept cost-benefit thinking, will lead to paralysis or to enshrining bad analysis of bad policies.

On the other hand, pretty much everyone agrees that cost-benefit language is the right way to evaluate financial regulations, and they are not being evaluated in this way now. So the opposite extreme, eschew cost-benefit analysis altogether, doesn't make sense either. Instead, let's think about how far in to the process cost-benefit analysis procedures can go, how formalized they should be, and in rough form what kinds of procedures can work or should be avoided.

Better use of cost-benefit analysis in academic and think-tank policy analysis would help a lot. Also, such analysis is completely unconstrained in the kinds of costs and benefits it can consider. It wins not by persuading a judge but by influencing in the court of public opinion. Public opinion is a serious constraint on policy in our still-functioning democracy. It is much harder to get important regulations passed if nobody thinks they are a good idea for the country as a whole.

It's hard to argue with cost-benefit analysis voluntarily undertaken by agencies or used as a management tool by the administration or agencies, as Coates (forthcoming b) suggests. Unlike Coates, I do not think it wise to stop there. A look at current regulation does not persuade me that agencies act entirely disinterestedly for the public good, nor do they quickly retract past mistakes. I take a much more public choice view of regulation. So mechanisms by which the public can challenge regulations on a cost-benefit basis and challenge cost-benefit calculations, including judicial review, are important.

A good cost-benefit process should thus have multiple layers. An agency may be required to conduct cost-benefit analysis along with public comment. People may have the opportunity to challenge that analysis at that stage or later. Subsequent, comprehensive, and retrospective re-

view could occur at a separate level. Judicial review should be rare but a check on true disasters.

A structure that may work well is a separate agency that instigates comprehensive retrospective evaluation. The OIRA serves this function for nonfinancial regulation. The Office of Financial Research could serve a similar function for financial regulation. An agency reporting to Congress, such as the Congressional Budget Office, could serve a similar function. Such an agency's job would be to roam around and reevaluate economic analysis of regulations. However, such an agency must be accountable as well, and have the right incentives to change regulation, not just constantly to recertify the correctness of previous decisions. Such an agency might respond to clamor from the public, academic, and think-tank universe and provide a better channel for those voices to instigate retrospective evaluation than the courts. My review of financial regulation costs and benefits suggests several other attributes of a desirable cost-benefit process, different from current practice.

4.1. Retrospective Analysis

Most cost-benefit analysis is prospective: evaluating a regulation before it is tried in the real world. This is a useful step, as it helps to weed out truly bad ideas and sometimes suggests that good ideas are better than one thought. (Gasoline lead restrictions are an example.)

Already in environmental, safety, and medical cost-benefit analysis, the dangers of purely prospective cost-benefit analysis have been noted. There is a tendency in our legal system to propose a regulation, produce reams of cost-benefit analyses predicting how a regulation will work in practice, make a decision, implement (or not) the regulation, and then enshrine it forever. Doing so we lose the experience of how a regulation actually works. Even for environmental, safety, or transportation policy, there is a lot to learn from experience. Since financial economics is not an experimental science, there is a lot more to learn from experience in financial regulation. We lose the insights that whole classes of unintended costs and benefits have emerged that were not anticipated when the regulation was proposed.

Thus, a useful cost-benefit procedure must constantly reevaluate old regulations in the light of new experience and advances in economic understanding. (Sunstein [2014] also advocates retrospective analysis, noting the uncertainties of the usual prospective analysis.) The big question is, by what institutional structure?

The courts are an important safety valve but hardly an ideal insti-

tutional framework for routine retrospective analysis. The controversy over the D.C. Circuit's review of some financial regulations for inadequate cost-benefit analysis is instructive.

In general, courts are better at evaluating process, not results, and traditionally defer to expert judgment. It is hard to challenge legally a properly rendered cost-benefit determination because new experience bears on the calculation or the weight of professional opinion has shifted. Judges are lawyers appointed by politicians; they are not economists. Legal challenge is adversarial and happens only if somebody brings a case, which is expensive, and people likely to bring cases are usually those who want transfers, or want to avoid transfers, not people who better understand distortions. Judges do, and can, sort through conflicting expert opinions of merits, but judicial review is obviously a cumbersome process.

Moreover, the threat of judicial review in the context of legally enforced cost-benefit analysis can ruin that analysis in the first place. Doing a financial cost-benefit analysis is hard enough, but doing anything that one knows is likely to be dragged into court leads to cautious, fill-in-the-boxes, legally defensive analysis. Or doing everything by phone, not by discoverable writing. Retrospective evaluation does happen within agencies, but that is rare. It will be seen as admitting a mistake and naturally involves rethinking issues that the agency may have worked hard on and regards as settled.

So retrospective evaluation must primarily come from outside. An agency is also unlikely to reevaluate a regulation that works poorly in the context of another agency's regulation, where an outside evaluation can consider groups of regulations together.

Universal sunseting might help. If each regulation had to go through a review, centered on cost-benefit analysis, with public comment, every 5 or even 10 years, failing which the regulation vanishes, the necessary retrospection might occur. Sunseting is a useful concept to fight regulatory bloat more generally (see, for example, McLaughlin and Williams 2014).

4.2. Methods and Channels versus Numbers

In environmental or health-and-safety regulation, the cause-and-effect channels are clear, and the arguments reduce to numbers. In financial regulation, we have to face squarely the fact that most arguments are about the existence and nature of cause-and-effect channels and not simply their numerical importance. Arguments are won and lost on the

logical coherence of adduced mechanisms far more than they are on detailed computer modeling of numbers. Economists have enough experience with computer models to thoroughly distrust any numbers that result. As I have pointed out, bubbles, liquidity spirals, and so on barely have definitions, let alone agreed-on causal channels.

Coates (forthcoming a) bemoans this fact and argues that reliance on agency expertise is the answer. I think a financial cost-benefit structure should embrace the fact and place even more distrust in the in-group thinking that often predominates at agencies. Cost-benefit analysis can start with a nonquantitative listing of costs and benefits, draw up a listing of cause-and-effect channels, and proceed to consider their plausibility.

4.3. Capital Regulation Example

The discussion surrounding capital requirements is a good example of the need for retrospective evaluation, the power of academic and public opinion rather than bureaucratic procedure, and the importance of methods and channels over numbers. In the Dodd-Frank Act, higher capital requirements are a small element in a sea of regulation. But in the subsequent policy discussion, simple and high capital requirements have come to the fore as probably the best idea that has a realistic chance of success.

As a concrete example, the French et al. (2010) *Squam Lake Report* written by a team of academic financial economists (including myself) includes a short chapter on reforming capital requirements. It includes a speculative list of costs of capital requirements, including management discipline by the threat of a run, and potential economies of scale. And it issues a clear call for at least voluntary cost-benefit analysis (though our inelegant language mistakes costs to banks for social costs appropriate in cost-benefit analysis): “When designing capital requirements that address systemic concerns, regulators must weigh the costs such requirements impose on banks during good times against the benefit of having more capital in the financial system when a crisis strikes.” It adds a prescient forecast: “we anticipate that banks will object to this proposal” (French et al. 2010, pp. 44, 46).

But capital isn’t really the focus of the book’s recommendations to prevent financial crises. Chapters on a systemic regulator, a new information infrastructure, regulation of executive compensation, and improving resolution options, plus two chapters on derivatives and prime brokers and a clever proposal for regulatory hybrid securities, really draw the authors’ passions.

In the following years, my own thinking, and I think that of many economists and agencies especially, including the Federal Reserve, shifted away from the view that short-term debt has important disciplining benefits to the view advocated by Gorton and Ordoñez (2014), that short-term debt is held by people who do no monitoring whatsoever—it is an informationally insensitive or moneylike security. The larger consensus has shifted away from clever schemes for convertible debt, farsighted benevolent regulators, and any faith in resolution, to capital, just more capital.

Admati and Hellwig (2013) (see also my review, Cochrane [2013]) argue straightforwardly for more simple equity capital. Their book aims directly at the huge cost-benefit argument that erupted over capital requirements after the Dodd-Frank Act. Banks claim that a switch to equity financing would raise their costs of capital, which would result in decreased lending, capital formation, and economic growth. Admati and Hellwig patiently explain the Modigliani-Miller theorem and the difference between private and social costs, when debt guarantees are included.

Admati and Hellwig (2013) would not have prevailed in a prospective, legalistic cost-benefit analysis in 2009. Admati and Hellwig would not have prevailed in a few rounds of Basel regulatory discussion, until the Rube Goldberg nature of that approach became apparent (see Haldane 2012).

The discussion would be maddeningly unquantitative to a hard scientist. Yes, reams of numbers are produced, but we all know the fragility and malleability of economic models, so we put little faith in those numbers. Rather, the compelling economic logic of Admati and Hellwig (2013), and the lack of much logic on the other side, won converts. This is a vital piece of experience for financial regulatory cost-benefit analysis.

And now much higher simple capital ratios are the only component of the Dodd-Frank Act in which most observers put much faith. Where 5 percent was once radical, the idea that 20 percent, 30 percent, or more capital has very little social cost is now commonplace.

Great. Cost-benefit analysis is prospering! But all of this happened, and had to happen, in the court of academic, think tank, and public opinion, not in endless hearings and commissioned internal agency or industry “studies,” replete with unknowable numbers reported to three decimal places, that dominate legal challenges or agency-based environmental cost-benefit analysis. This process did not consist of simply collecting data on well-posed questions with codified techniques. The pro-

cess involved constantly shifting sands of what the correct questions were.

4.4. Transparency

The voice of academic researchers, think tanks, and public experience, not just agency staff or affected industry, must be brought to bear on retrospective analysis. We produce a lot of knowledge but don't have a lot of money to mount lawsuits.

To that end, transparency is vital. The data and methods of agency economic analysis must be easily and publicly available so that researchers can reproduce all calculations and constantly reevaluate them. Shaming in the court of public opinion would be a lot better discipline than protracted legal discovery and endless lawsuits.

Already, federal agencies collect lots of data that they make selectively available to researchers, leading to the obvious concern that only people who write nice things will get data. All data used in financial cost-benefit analysis must be publicly available. Many privacy concerns—for example, trading data that might reveal a fund's strategy—can be addressed by making data available with sufficient (say, 5 years) delay.

4.5. Flexibility and Comprehensiveness

One might imagine a cost-benefit analysis for financial regulation act of 2015 that lays out precise costs and benefits, methods to be followed, and so forth. This would be a mistake. The nature of costs and benefits and causal mechanisms, and our understanding of them, require a fairly flexible process in which different kinds of costs, benefits, and mechanisms can flexibly intrude, be adopted, or be rejected.

Standard cost-benefit analysis is conducted by the individual agency that wishes to enact a regulation. That's a start. But so many regulations work at cross-purposes, offset unintended consequences of other regulations, or (at best) attempt to do the same thing, that at least some part of the cost-benefit process must consider actions of several agencies together.

4.6. Goals, Measures, Quantification, Errors, and Bias

Cost-benefit analysis in general would be enhanced if regulations (and laws) started with a clear statement of their purpose in the language of economic benefits. Retrospective review would be enhanced if the initial cost-benefit analysis came with metrics by which it should be later re-evaluated.

The two requirements go together. Statutes and regulations are full of lofty goals: they will “increase liquidity,” provide “orderly and fair markets,” or “enhance credit access.” But only by stating some way of measuring liquidity and the regulation’s effect on liquidity, or orderliness, or access, do we get a concrete definition of what the goals are anyway.

A central problem, and a common criticism (Coates, forthcoming a), of cost-benefit analysis is that it attempts to put exact numbers on the unquantifiable. When we are so unsure of so many cause-and-effect channels or even which costs to include, the joke that we know that economists have a sense of humor because they use decimal points rings true.

But rather than abandon the attempt to quantify costs and benefits, I think it would be better for the structures guiding cost-benefit analysis to simply reflect the statistician’s dictum: every number should have a band of uncertainty associated with it. Wide bands would signal areas where retrospective analysis has great potential. Ex post measurements far outside ex ante uncertainty bands would signal sloppy work. The discussion of the statistical and methodological uncertainties underlying the bands invites the ongoing discussion that retrospective analysis should maintain.

Uncertainties mean that in many cases the cost-benefit analysis will be unclear—benefits may exceed costs or not. Should we use the conditional means, that is, enact regulations when the best guess of benefits exceeds the best guess of costs? Law does not always work this way—criminal trials require proof beyond a reasonable doubt, and civil suits require a preponderance of the evidence. These rules are important safeguards against the power of the government and the costs of litigation.

So it should be for regulation. Uncertainties mean that there should be a strong burden-of-proof requirement for proponents of regulation. The federal government has tremendous power and resources relative to the regulated and a bias toward ever-increasing regulation. Many of the regulated want to engineer the process toward transfers. The resources to pay economists to produce nice-looking numbers come from one side. Against all these biases, the standard must be quite strong evidence for benefits over costs before regulations are enacted, and more importantly strong evidence must persist or regulations should vanish.

For example, Coates (forthcoming a, forthcoming b) savages cost-benefit analysis applied to financial regulations and how uncertain we

all are about the costs and benefits of specific examples. His conclusion is that agencies must be given free rein to apply their expertise to judge costs and benefits. My conclusion is that regulations such as these, where even with years of experience we have no idea if costs exceed benefits, shouldn't have been enacted in the first place and should have been killed by retrospective evaluation long before the D.C. Circuit became involved. Agencies are unlikely to do that with their expertise. They need review, and a review strongly biased against regulation.

5. CONCLUDING COMMENTS

In my view, financial regulation routinely imposes costs far in excess of its benefits. The concepts of cost-benefit analysis, as understood by economists, are the right way to think about financial regulation. And financial regulation, like all economic regulation, desperately needs a better process for its enactment and periodic reevaluation than current institutions provide.

“Cost-benefit analysis” typically means the process and legal structure that developed in health, safety, environmental, and project management. Congress passes laws mandating analysis, and agencies perform analysis of proposed regulations, invite public comment and review, and then enact regulations. People can sue on the basis of the process or results of that analysis. I have argued that the nature of finance and financial regulation, and the nature of its costs and benefits, is so starkly different from its nature in areas where the current cost-benefit process developed, that simply extending that process to financial regulation will not work.

Some of that nature I have covered: “systemic stability” is one of the main goals of financial regulation, yet neither “systemic” nor “stability” has an agreed-on, quantifiable definition or measurement procedure. There is much professional disagreement on how financial crises work and how regulations might operate to mitigate them. Whole cause-and-effect mechanisms, not numbers, are under debate. Regulations do not work in isolation, as controlling smokestack mercury and tailpipe nitrous oxide emissions might. Instead, crisis prevention requires a network of regulations, each dependent on the other. Many of the problems we are trying to fix are not the result of clearly understood failures of a free market but are due to poor design of previous and continuing regulations that might be profitably reformed instead of layered with new ones. Financial regulation aims to perturb a market outcome, not to regulate

a specific activity. Many of the important costs of financial regulation consist of the costs of capture, stifling of competition, discouragement of financial innovation, disruption of credit, cronyism, politicization, economic sclerosis, encouragement of moral hazard, and unintendedly making the system more fragile. The documentable costs to the industry, comparable to the costs of buying scrubbers, are minuscule compared with these costs. Yet it seems beyond hope that a congressionally mandated, formal cost-benefit analysis, conducted with an eye to judicial review, will consider, let alone quantify, such costs.

Once we step away from the mirage that agencies are benevolent dictators, needing only expert advice, but recognize instead that regulation is a battleground of interests, it becomes clear that successful cost-benefit analysis processes require a social contract among interested parties. They must agree that cost-benefit analysis is the right way to determine the correct outcome and that costs and benefits can be summarized in dollar terms; they must agree on definitions, procedures, and methods; and they must agree to abide by a cost-benefit determination. These preconditions do not hold for financial regulation.

Like everyone else, I evaluate a process by whether it would produce the policies I like. I think the retail financial system should be quite dramatically deregulated, with robust competition providing consumer protection as it does in every other competitive industry. I think a real cost-benefit analysis would lead to that result. I find current policy incoherent, contradictory, and mostly devoted to protecting rents. Examining the rationales behind current policy choices gives little hope that a competition-focused deregulation would emerge if the United States decided to add another layer of legalistic cost-benefit hurdles to its existing financial regulatory process. I cannot think of a case in which formal cost-benefit analysis has led to competition-fostering regulation or deregulation.

I think systemic stability would be best addressed if the government required financial institutions to fund themselves in large part with equity, long-term debt, or other liabilities that are not prone to runs, and thus seamlessly impose losses on creditors (Cochrane 2014). In such a system the need for anticompetitive asset and risk regulation would disappear, along with the temptations (other than political) to bail out creditors *ex post*. But I don't think that congressional enactment of a formal, adversarial process of cost-benefit analysis on top of the current regulatory process will produce that result. The Basel Committee's cost-benefit studies did not produce the clarity of result that the less formal

analysis of Admati and Hellwig (2013) did produce. I am not naive enough to think that “cost-benefit analysis should be imposed” would fulfill the “if I were in charge” fantasy.

This is not an argument for the status quo, however. Our legal and regulatory process is clearly broken, especially the process surrounding economic regulation and policy. Massive thousand-page bills devolve authority on agencies to write tens of thousands of pages of regulations, more pages of interpretations of the regulations, and those are all so complex, vague, and contradictory that they amount to regulator discretion, not rule of law. Fixing that system is a first-order question.

Forcing agencies to state the goals of regulations, to state measures of when those goals are achieved, to state the market failure theory underlying regulation, to state the cause-and-effect channels by which they believe regulation will work, to attempt a quantitative analysis, and leave all this in the open for public review and review by larger bodies of the administration or Congress seems like a good start, and may nip some genuinely bad regulations in the bud. Sunstein (2014) also argues for such prospective cost-benefit analysis to provide a cooling-off period. But Dodd-Frank Act fans will note it still isn’t implemented years later, and perhaps we’ve had enough cooling off already.

And this is only the beginning, as I have emphasized. So I conclude that we must imagine and construct a new, flexible cost-benefit process, one that is constantly retrospective, is transparent, includes information from the academic and policy analysis community, focuses as much on qualitative understanding of cause-and-effect channels as the conventional attempt to create numbers that nobody believes, and quantifies its uncertainties, with judicial review as a last gasp for regulations gone seriously awry.

Just don’t count on it for a magic bullet, a technocratic machine that will guarantee administrative efficiency, or as a way to put bien-pensant (in their own minds) or smarty-pants (to everyone else) economists on the throne as benevolent regulators. If formalized cost-benefit analysis were a magic bullet, surely we would have adopted it for much simpler economic regulation already. And we could evaluate proposals for cost-benefit analysis by cost-benefit analysis. That nobody even thinks to do so is a sure sign of an important limitation.

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