DEREGULATORY COST-BENEFIT ANALYSIS AND REGULATORY STABILITY

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Cost-benefit analysis ("CBA") has faced significant opposition during most of its tenure as an influential agency decisionmaking tool. As advancements have been made in CBA practice and, especially, in monetization of relevant effects, CBA has been gaining acceptance as an essential part of reasoned agency decisionmaking. When carefully conducted, CBA promotes transparency and accountability, efficient and predictable policies, and targeted retrospective review.

This Article highlights an underappreciated additional effect of extensive use of CBA to support agency rulemaking: CBA's role in promoting reasonable regulatory stability. In particular, a regulation based on a high-quality CBA is more difficult to modify for at least two reasons. The first reason relates to judicial review. Courts take a "hard look" at agency fact findings of fact, which are summarized in a CBA, and they require heightened justifications when an agency changes course in ways that contradict its previously found underlying facts. A prior CBA provides a powerful reference point; any updated CBA supporting the new action will naturally be compared against the prior CBA, and the agency will need to explain any changes in CBA inputs, assumptions, and methodology. The second reason relates to the nature of CBA. CBA, by focusing on the incremental costs and benefits of a proposed change, can make it difficult for an agency to justify changing course, especially when stakeholders have already relied on the prior policy. Together, these forces constrain the range of changes that agencies could

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support. As a result, CBA promotes stability around transparent and increasingly efficient regulatory policies.

But admittedly this CBA-based stabilizing influence gives rise to several objections. The Article responds to, among others, concerns about democratic accountability, and, most importantly, the use of alternative methods of modifying policies. Overall, the Article concludes that CBA and judicial review of CBA plays a desirable role in stabilizing regulatory policy across presidential administrations.

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INTRODUCTION

In October 2015, President Obama unveiled the long-anticipated Clean Power Plan ("CPP") issued by the Environmental Protection Agency ("EPA").[1] The CPP would regulate greenhouse gas emissions from existing power plants pursuant to the Clean Air Act. The rule was supported by hundreds of pages of technical analysis of the CPP's expected benefits and costs—an analysis referred to as a cost-benefit analysis ("CBA").[2] According to the CBA, the rule's benefits to society would dwarf its costs. Society on net would be significantly better off under the CPP to the tune of $22.6 billion worth of health and safety net monetized benefits each year in likely scenarios.[3]

But elections have consequences—and President Trump was elected in part based on his campaign promises to rescind, modify, and repeal many Obama-era regulations, especially energy and environmental regulations such as the CPP.[4] In his first few months in office, he issued several executive orders directing agencies to follow through on these promises.[5] Up on the chopping block were several EPA regulations, including Waters of the United States,[6] Methane 111(b) Rule,[7] Landfill Rule,[8] Steam Electric Effluent Limitation Guidelines Final Rule,[9] and Risk Management Plan Rule Amendments.[10] According to the CBAs associated with these rules, the rules were expected to provide at least $350 million in net monetized benefits to society each year.[11]

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[1] *See* EPA, Clean Power Plan, 80 Fed. Reg. 64662 (Oct. 23, 2015).

[2] *See* EPA, Regulatory Impact Analysis for the Clean Power Plan Final Rule, EPA-452/R-15-003, August 2015. Such an analysis is also referred to as a benefit-cost analysis, or BCA.

[3] This number represents the midpoint of the mass-based 2025 annual net benefits estimate included in the Rule's *Federal Register* notice, using a 3% discount rate and reflecting 2016 dollars updated using the Consumer Price Index.

[4] *See* Donald Trump's Contract with the American Voter, https://assets.donaldjtrump.com/_landings/contract/O-TRU-102316-Contractv02.pdf.

[5] *E.g.*, Exec. Order No. 13,777, 82 Fed. Reg. 12,285, 12,286 (Feb. 24, 2017); Exec. Order No. 13,778, 82 Fed. Reg. 12497 (Mar. 3, 2017); Exec. Order No. 13,783, 82 Fed. Reg. 16093 (Mar. 31, 2017).

[6] EPA, Waters of the United States, 80 Fed. Reg. 37054 (June 29, 2015). The EPA has proposed repeal of this rule. *See* EPA, Proposed Repeal of the Waters of the United States Rule, 82 Fed. Reg. 34899 (July 27, 2017).

[7] EPA, Methane 111(b) Rule, 81 Fed. Reg. 35824 (June 3, 2016) (currently stayed, 82 Fed. Reg. 25730).

[8] EPA, Landfill Rule, 81 Fed. Reg. 59276 (Aug. 29, 2016); 81 Fed. Reg. 59331 (Aug. 29, 2016) (currently stayed, 82 Fed. Reg. 24878).

[9] EPA, Steam Electric Effluent Limitation Guidelines Final Rule, 80 Fed. Reg. 67838 (Nov. 3, 2015) (currently stayed).

[10] EPA, Risk Management Plan Rule Amendments, 82 Fed. Reg. 4594 (Jan. 13, 2017). The EPA has proposed repeal of this rule. *See* EPA, Changes to Amendments to Risk Management Plan, 83 Fed. Reg. 24850 (May 30, 2018).

[11] The net benefit estimates are calculated by taking the midpoint of the net benefits range included in the Rule's *Federal Register* notice, using a 3% discount rate where possible and reflecting

Making good on President Trump's most famous repeal promise, EPA revealed its proposed repeal of the CPP in October 2017.[12] It, too, was accompanied by a long CBA summarizing the expected benefits and costs of *repealing* the CPP.[13] According to the new analysis, repealing the CPP would, most likely, not benefit society. In fact, society would lose out on billions of dollars worth of environmental and health benefits under most scenarios,[14] though notably, the estimated losses of repeal were calculated to be significantly lower than the net benefits initially calculated by President Obama's EPA. That's because President Trump's EPA made some changes to the prior CBA's assumptions and inputs. Already, this new CBA has been criticized in the press as exaggerating costs and diminishing benefits,[15] and once finalized, it will likely be challenged in court as demonstrating the agency's "arbitrary or capricious" decisionmaking.[16] When that happens, courts will compare the Trump EPA's CBA to the Obama EPA's CBA. And, importantly, they will require the Trump EPA to explain its changes. Undoubtedly, the difficulty of this task will depend on how well-reasoned and complete the prior CBA was. If the new CBA does not withstand challenges to its new scope, methodology, or assumptions, then it could undermine the agency's entire reasoning for the new rule and lead to judicial vacatur.

This example highlights a surprising obstacle to at least some of the Trump Administration's deregulatory agenda—CBA. Previously, CBA has been characterized as a *deregulatory* tool, which acts by slowing down or blocking regulation.[17] It has also been characterized as one of the means of presidential *control* of agency action.[18] Both characterizations suggest that CBA could facilitate an administration's deregulatory agenda. But, actually, CBA—which, at its best, reflects rational decisionmaking—does not fit neatly into either of these categories.

2016 dollars updated using the Consumer Price Index. The numbers do not include unquantified benefits, which were often deemed "important" notwithstanding lack of quantification and monetization. *See, e.g.*, EPA, Risk Management Plan Rule Amendments, 82 Fed. Reg. at X.

[12] *See* EPA, Proposed Repeal of the Clean Power Plan, 82 Fed. Reg. 48035 (Oct. 16, 2017).

[13] *See* EPA, Regulatory Impact Analysis for the Review of the Clean Power Plan: Proposal, EPA-452/R-17-004 (October 2017).

[14] *Id.* at 13.

[15] *E.g.*, Richard L. Revesz & Jack Lienke, *The E.P.A.'s Smoke and Mirrors on Climate*, N.Y. TIMES (Oct. 9, 2017); Karl Hausker, *The Flawed Analysis Behind Trump Administration's Proposed Repeal of the Clean Power Plan*, WORLD RESOURCES INSTITUTE (Oct. 16, 2017).

[16] 5 U.S.C. § 706.

[17] *See, e.g.*, John C. Coates IV, *Cost-Benefit Analysis of Financial Regulation: Case Studies and Implications*, 124 YALE L.J. 882, 1003-04 (2015). *See also* Marc Granetz, *Deregulation Rodeo: Reagan's Rulebusters Get Ready to Ride*, NEW REPUBLIC 9 (Nov. 12, 1984); David Hoffman, *Election '84: The Reagan Record*, WASH. POST at A6 (Jan. 31, 1984).

[18] *See, e.g.*, Elena Kagan, *Presidential Administration*, 114 HARV. L. REV. 2245, 2385 (2001); Eric A. Posner, *Controlling Agencies with Cost-Benefit Analysis: A Positive Political Theory Perspective*, 68 U. CHI. L. REV. 1137 (2001).

Administrative law has developed certain rules ensuring that when agencies change their minds on regulations based on underlying facts, they provide a reasonable explanation.[19] This requirement protects reliance interests and ensures good governance.[20] A CBA, in essence, provides a summary of the underlying facts that support the agency's decision. In this context, the existence of CBAs supporting the original rules—which I refer to as the prior CBAs—will pose unique challenges for a new administration's effort to repeal, rescind, or modify rules. In particular, for each CBA-supported policy or rule that Trump-era agencies decide to repeal, rescind, or modify, they will need to produce new CBAs,[21] which will be scrutinized by courts for their reasonableness.[22]

Although courts typically give deference to agency CBAs in the first instance,[23] the prior CBA in the administrative record will highlight the changes made by the agency in justifying the new rule and each change will require explanation. Many targeted Obama-era regulations were supported by CBAs that demonstrated large net benefits to society overall. Trump-era agencies will have to ground modifications in scientific evidence supporting different input values, changes in facts that underlie methodological assumptions, or transparent disagreements on policy. While some inputs that make up a high-quality CBA might be subject to reasonable disagreement, there are many inputs that would be difficult to alter given current scientific consensus. In the CPP, for example, the Trump EPA might be able to lower the value of carbon emission reductions, an input referred to as the social cost of carbon, so that the number reflects only the benefits of reducing carbon emissions in the United States,[24] but it cannot estimate

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[19] See generally FCC v. Fox Television Stations, Inc., 556 U.S. 502, 515 (2009); Motor Vehicle Mfrs. Ass'n of the United States, Inc. v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983). For a comprehensive discussion about administrative law rules that apply to deregulation and their abuses under the Trump Administration, see Denise A. Grab & Bethany A. Davis Noll, *Deregulation: Process and Procedures that Govern Agency Decisionmaking in an Era of Rollbacks*, 38 ENERGY L.J. 269 (2017); Robert L. Glicksman & Emily Hammond, *The Administrative Law of Regulatory Slop and Strategy*. Of course, these administrative law constraints do not apply to Congress. In 2017, Congress used the Congressional Review Act to eliminate 14 Obama-era rules, notwithstanding CBA or any other consideration.

[20] *See* discussion *infra* Part II.B.

[21] Executive agencies are required to conduct CBA to comply with Executive Order 12,866. *See* Exec. Order 12,866, *supra* note. If a regulation qualified for CBA, its repeal generally will qualify as well.

[22] *See* 5 U.S.C. § 706.

[23] *See* Caroline Cecot & W. Kip Viscusi, *Judicial Review of Agency Benefit-Cost Analysis*, 22 GEO. MASON L. REV. 575, 592-605 (2015). For one account of how judicial review of agency procedures can improve decisionmaking, see Lisa Schultz Bressman, *Procedures As Politics in Administrative Law*, 107 COLUM. L. REV. 1749, 1761 (2007).

[24] *See, e.g.*, Peter Howard & Jason Schwartz, *Think Global: International Reciprocity as Justification for a Global Social Cost of Carbon*, 42 COL. J. ENVTL. L. 203–295 (2017); Ted Gayer & W. Kip Viscusi, *Determining the Proper Scope of Climate Change Policy Benefits in U.S. Regulatory Analyses: Domestic versus Global Approaches*, 10 REV. ENVTL. ECON. & POL'Y 1–19 (2016); Arden Rowell, *Foreign Impacts and Climate Change*, 39 Harv. ENVTL. L. REV. 371–421 (2015).

the value at zero.[25] In this way, a well-conducted, high-quality CBA, a conduit for presidential oversight and control once thought to be simply a hindrance to issuing regulations, becomes an obstacle to *repealing* regulations by presidential fiat.

This Article highlights an underappreciated additional effect of extensive use of CBA to support agency rulemaking: CBA's role in promoting reasonable regulatory stability.[26] Scholars have argued that agency procedures, especially when reviewed by courts, have significant costs of constraining agency responsiveness and delaying action that might outweigh any benefits they have in improving decisionmaking.[27] Simply put, the argument is that the potential for CBA to constrain agency action is a cost of CBA. And that is undoubtedly true. But the potential to constrain *is also a benefit of CBA*—and, in fact, the benefits of CBA-based constraints are likely to outweigh the costs of CBA-based constraints.

Unconstrained agency responsiveness could be beneficial, but it could also be hasty, unpredictable, and unstable. CBA constrains some agency action and reduces responsiveness, but the procedure is likely to strike the right balance by ensuring that any CBA-induced stabilization takes hold around *efficient* policies. Reliance on CBA does not generally freeze regulatory policy because net beneficial changes could always be made—and what counts as "net beneficial" is subject to reasonable interpretation and, moreover, is a dynamic concept, evolving based on the available evidence. But a world in which agency decisionmaking is driven by CBA is necessarily a world in which the available moves away from current regulatory policy are more limited, especially when the current policy was justified by a high-quality CBA. A commitment to CBA, then, promotes the development of regulatory policy in predictable and science-based ways. This focused and discriminating

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[25] *See* Ctr. for Biological Diversity v. NHTSA, 538 F.3d 1172, 1200 (9th Cir. 2008) (holding that NHTSA cannot value at carbon emission reductions at zero given scientific evidence without explaining its reasoning); Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66,496 (Dec. 15, 2009) ("The Administrator finds that six greenhouse gases taken in combination endanger both the public health and the public welfare of current and future generations.").

[26] Aaron Nielson recently made a similar argument about the unsung benefits of ossification, though without focusing on the role of CBA in particular. *See* Aaron L. Nielson, *Sticky Regulations*, 85 U. CHI. L. REV. 85, 90 (2018). Nina Mendelson has also argued that there are benefits to agency "entrenchment" or "burrowing" actions before a new administration, such as "midnight" rulemaking and late-term hiring. *See* Nina A. Mendelson, Agency Burrowing: Entrenching Policies and Personnel before a New President Arrives, 78 N.Y.U. L. Rev. 557, 616 (2003).

[27] *See, e.g.*, William W. Buzbee & Robert A. Schapiro, *Legislative Record Review*, 54 STAN. L. REV. 87,128 (2001) (agreeing that detailed judicial scrutiny of agency rationales has contributed to "ossification" of the regulatory process); William S. Jordan, III, *Ossification Revisited: Does Arbitrary and Capricious Review Significantly Interfere with Agency Ability to Achieve Regulatory Goals Through Informal Rulemaking?*, 94 NW. U. L. REV. 393, 394 (2000); Thomas O. McGarity, *The Courts and the Ossification of Rulemaking: A Response to Professor Seidenfeld*, 75 TEX. L. REV. 525 (1997); Thomas O. McGarity, *Some Thoughts on "Deossifying" the Rulemaking Process*, 41 DUKE L.J. 1385, 1387 (1992) (noting that "it is difficult to disagree with the conclusion that it is much harder for an agency to promulgate a rule now than it was twenty years ago").

stickiness—as opposed to stickiness around arbitrary and unpredictable policies—is likely to be more desirable than unconstrained agency action that, while responsive, is unlikely to track efficiency and generates significant costs of over- and under-regulation. In other words, this Article argues that a commitment to agency CBA promotes beneficial ossification around reasonable rulemaking.

This Article proceeds as follows. Part I defines CBA and traces its increasing importance in agency rulemakings. CBA is a decisionmaking tool that allows regulators to identify welfare-maximizing policies by considering the expected costs and benefits of the policies if implemented and converting those effects into dollar values.[28] Agencies increasingly rely on CBA to support rulemakings, propelled by the agencies' obligations under the Administrative Procedure Act ("APA") to act rationally,[29] statutory directives to analyze benefits and costs,[30] and executive orders dating back to President Reagan requiring agencies to choose welfare-maximizing regulatory options.[31] When carefully conducted, CBA promotes transparency and accountability, efficient and predictable policies, and targeted retrospective review.

Parts II and III form the heart of the Article, describing and applying the constraints that flow from a commitment to CBA-based policymaking. Part II dives into the special role of CBA when an agency changes course. Simply put, the original CBA wields significant influence. First, judicial review of agency CBA constrains available agency changes. Although courts are generally deferential when first encountering CBA, courts are likely to subject an *updated* CBA to more scrutiny—not because it is legally obligated to review a new CBA more thoroughly but because the prior CBA, which provides a succinct summary of the underlying facts that the agency previously found, acts as an important reference point from which the agency must explain any changes. Second, a commitment to using CBA constrains future changes due to CBA norms. By design, CBA highlights the incremental costs and benefits of changing regulatory stringency. The baseline—or the status quo—is the world under the original policy. The costs and benefits of, say, *repealing* that original policy are different than the costs and benefits of *never issuing* that policy in the first place. And, fundamentally, reliance on CBA means that a proposed policy must have a basis in scientific or other evidence, which constrains the available moves away from prior policies based on CBA. Rules whose CBAs have become obsolete—due to different estimates of health, safety, or environmental risks and their value or due to different costs associated with mitigating those risks—would be ripe for CBA-based updating. But more recent CBA-based rules would be more difficult to alter in any dramatic and still cost-benefit justified way. This effect constrains the timing of swings,

[28] For a detailed description of CBA and its philosophical origins as a decision procedure, see MATTHEW D. ADLER & ERIC A. POSNER, NEW FOUNDATIONS OF COST-BENEFIT ANALYSIS 1 (2006).

[29] 5 U.S.C. § 706(2)(A).

[30] *See, e.g.*, Section 112(n)(1)(A) of the Clean Air Act, 42 U.S.C. § 7412(n)(1)(A) (which the Supreme Court has interpreted as requiring comparison of costs and benefits, *see* Michigan v. EPA, 135 S. Ct. 2699, 2707 (2015)).

[31] Exec. Order No. 12,291, 46 Fed. Reg. 13,193 (Feb. 17, 1981); Exec. Order No. 12,866, 58 Fed. Reg. 51,735 (Oct. 4, 1993); Exec. Order No. 13,563, 76 Fed. Reg. 3821 (Jan. 21, 2011).

making it less likely that regulatory policy will swing wildly from one administration to another. Part III, then, describes how CBA-based constraints could apply to deregulatory actions under the Trump Administration.

Part IV responds to several challenges to the desirability of a CBA-based stabilizing role—whether it would exacerbate agency bias toward rulemaking, prevent agency flexibility, make elections meaningless, reduce accountability, and promote deregulation by other means. Most importantly, I address whether, in light of CBA-based constraints, an agency might pursue its goals (whether regulatory or deregulatory) by avoiding CBA-based justifications altogether. In other words, instead of arguing that its new policy reflects "better standards" or "better decisionmaking," an agency might shift to arguing about statutory authority—that the arguably "better" policy, based on CBA, is not authorized. Case in point: EPA is justifying its proposed repeal of the CPP by arguing that, under its new interpretation of a provision of the Clean Air Act, the CPP as originally proposed would exceed EPA's statutory authority.[32] And such arguments have not been limited to the CPP.[33] Arguably, instability regarding statutory interpretation is worse than instability regarding regulatory stringency. But CBA culture is not to blame. And, more importantly, CBA can still play a role in mitigating such interpretative instability. Courts give deference to agency interpretations of their authority, but it is not clear that such deference should extend to agency interpretations that limit agencies' abilities to promulgate welfare-enhancing policies that, under some interpretations, would be allowable. Overall, this Article argues that CBA's stabilizing role is not only justified notwithstanding these criticisms but also likely to reduce concerns about agency bias and enhance accountability through transparency. The last Part concludes.

I. AGENCY COST-BENEFIT ANALYSIS

A. Practice

Since 1981, when President Reagan issued Executive Order 12,291,[34] all agencies have conducted CBA, making it a staple of all important U.S. regulatory policy development. Pursuant to Reagan's Order, all "major" rules, defined as those regulations likely to have an annual effect on the economy of $100 million or more, would be accompanied by a CBA.[35] CBA is a decisionmaking procedure that has its

[32] *See* EPA, Proposed Repeal of the Clean Power Plan, 82 Fed. Reg. 48035, 48036 (Oct. 16, 2017).

[33] *See, e.g.*, EPA, Proposed Repeal of the Waters of the United States Rule, 82 Fed. Reg. 34899 (July 27, 2017).

[34] Exec. Order No. 12,291, *supra* note.

[35] *Id.* § 1(b). The currently applicable order, Executive Order 12,866, applies the analysis to "significant" regulatory actions, defined as those that "have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy," among other things. *See* Exec. Order No. 12,866, *supra* note 35.

origins in welfare economics. Economic theory identifies the socially desirable level of environmental quality as the level that maximizes satisfaction of individual preferences. CBA sheds light on policies that potentially improve aggregate welfare by converting gains (the value of the benefits to the beneficiaries) and losses (the costs to those who are burdened) onto a monetary scale and attempting to maximize net benefits.[36] And, in fact, Reagan's Order required the agency to choose the regulatory objective that, according to the analysis, "maximize[d] the net benefits to society."[37] The Reagan Administration hoped that CBA would prevent the issuance of regulations, most of which were thought to be net costly, and in this way support President Reagan's deregulatory agenda.[38]

Not surprisingly given the Administration's motivations, Reagan's CBA requirement was met with considerable criticism and skepticism from scholars and pro-regulatory groups.[39] In particular, because many health and environmental regulations affect non-market goods, there was real concern that these hard-to-value benefits would be underestimated—or not estimated at all.[40] In the view of these skeptics, CBA—or at least, incomplete and poorly conducted CBA—would prevent agencies from issuing regulations that actually were beneficial. The early CBAs, with large categories of benefits left unquantified, appeared to confirm some of these fears.[41] But it is unclear how much agencies relied on these CBAs and whether it would have been sensible to do so. And in at least a few cases, well-conducted CBAs actually convinced regulators to issue more stringent regulations.[42]

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[36] CBA identifies the Kaldor-Hicks efficient policy as the one that maximizes the difference between the value of the gains to the winners and the losses to the losers without requiring the winners to compensate the losers.

[37] Exec. Order No. 12,866, *supra* note 35, § 2.

[38] *See* RICHARD L. REVESZ & MICHAEL A. LIVERMORE, RETAKING RATIONALITY: HOW COST-BENEFIT ANALYSIS CAN BETTER PROTECT THE ENVIRONMENT AND OUR HEALTH (Oxford University Press, 2008).

[39] *See* Marc Granetz, *Deregulation Rodeo: Reagan's Rulebusters Get Ready to Ride*, NEW REPUBLIC 9 (Nov. 12, 1984); David Hoffman, *Election '84: The Reagan Record*, WASH. POST at A6 (Jan. 31, 1984).

[40] *See, e.g.*, Steven Kelman, *Cost-Benefit Analysis: An Ethical Critique*, 5 REG. 33, 35-36, 38-40 (1981).

[41] *See* Robert W. Hahn & Patrick M. Dudley, *How Well Does the U.S. Government Do Benefit-Cost Analysis?*, 1 REV. ENVTL. ECON. & POL'Y 192, 192–211 (2007).

[42] One example is the Reagan Administration's imposition of a stricter standard for phasing out lead in gasoline based on the results of the CBA. *See* Statement of Christopher DeMuth, in AMERICAN ECONOMIC POLICY IN THE 1980S, at 508 (Martin Feldstein ed., 1994) ("A very fine piece of analysis persuaded everyone that the health harms of leaded gasoline were far greater than we had thought, and we ended up adopting a much tighter program than the one we had inherited."). For more information about the CBA and the resulting standard, see Albert L. Nichols, *Lead in Gasoline*, in ECONOMIC ANALYSIS AT EPA: ASSESSING REGULATORY IMPACT 49, 49–86 (Richard D. Morgenstern ed., 1997).

Perhaps that's why President Clinton did not abandon the CBA requirement, though he replaced Reagan's Order with his own Order, Executive Order 12,866.[43] Like Executive Order 12,291, Clinton's Order encouraged agencies to "select those approaches that maximize net benefits" "to the extent permitted by law."[44] And it doubled down on transparency, providing several additional ways that transparency would be preserved during the White House review process.[45] It also explicitly recognized "that some costs and benefits are difficult to quantify."[46]

It turned out that Clinton's formulation would have staying power. Presidents G.W. Bush and Obama retained Clinton's Order, though issuing their own supplements,[47] and so far, President Trump has reaffirmed the Order's goals of ensuring that regulations are net beneficial.[48] Over the course of a few decades, CBA has shed its anti-regulatory origins. Instead, it has emerged as one of several tools for presidential oversight of agencies, and, in particular, one that promotes rational agency decisionmaking.

Although there is no counterfactual, the reliance on CBA does not seem to have deterred the issuance of net beneficial regulation. For one, great strides have been made in valuation methodology that have significantly improved the quality of benefit estimates overall and especially in the environmental context.[49] In recent years, the tool has been effectively used to justify many stringent environmental regulations, including those aimed at mitigating climate change, leading even some skeptics to at least tentatively accept the technique.[50] Under the Obama Administration, agencies such as EPA, the Department of Energy ("DOE"), and the Department of the Interior ("DOI") conducted CBAs in which quantified and monetized benefits outweighed the costs. In particular, over the eight years of the

[43] Exec. Order No. 12,866, *supra* note 35.

[44] *Id.* § 1.

[45] *Id.*

[46] *Id.* § 1(b)(6).

[47] Exec. Order No. 13,422, 72 Fed. Reg. 2763 (2007), revoked by Exec. Order No. 13,497, 74 Fed. Reg. 6,113 (2009; Exec. Order No. 13,563, 76 Fed. Reg. 3,821 (2011).

[48] *See* Exec. Order No. 13,777, *supra* note. That said, President Trump has directed agencies to fulfill additional requirements, such as requiring each agency to repeal at least two existing regulations before issuing a new regulation and imposing a regulatory budget that sets a cap on total incremental regulatory costs. These additional requirements are unlikely to improve welfare and might hinder some of the goals of CBA. *See* Caroline Cecot & Michael A. Livermore, *The One-In, Two-Out Executive Order Is a Zero*, 166 U. PA. L. REV. ONLINE 1 (2017).

[49] Richard L. Revesz, *Quantifying Regulatory Benefits*, 102 CAL. L. REV. 1423 (2014).

[50] RICHARD L. REVESZ & MICHAEL A. LIVERMORE, RETAKING RATIONALITY: HOW COST-BENEFIT ANALYSIS CAN BETTER PROTECT THE ENVIRONMENT AND OUR HEALTH (Oxford University Press, 2008) (describing how several environmental groups have embraced CBA).

Obama Administration, these agencies issued significant rules in which monetized benefits greatly exceeded costs.[51]

These developments all took place largely without Congress's explicit endorsement, but there is some evidence that Congress, too, has embraced the role of CBA in agency decisionmaking, at least in recent years. For example, one bill considered by Congress would, among other things, codify requirements for CBA in most agency rulemakings.[52] At least on the CBA issue, there appears to have been bipartisan support.[53] In addition, during confirmation hearings for Administrator of the Office of Information and Regulatory Affairs ("OIRA"), senators no longer questioned the legitimacy of White House CBA review. In fact, during the June 2017 confirmation hearing of Administrator Rao, the hardest-hitting questions from Senator Heitkamp, Democrat from North Dakota, were about demanding rigorous CBAs from federal agencies, even for deregulatory actions.[54]

B. Nuts and Bolts

What explains the staying power of CBA in guiding agency decisionmaking? No doubt, all presidents certainly appreciate the review process for oversight purposes. But part of its appeal for regulators is that it provides a clear goal and process for achieving statutory goals. When a statute gives an agency authority to manage a certain risk, the key decision for regulators is the degree of risk reduction to require through regulation. This decision invariably requires trading off the costs of additional risk reduction with the benefits of such reduction. Congress sometimes determines how this tradeoff should be made: in some statutes, Congress requires maximum risk reduction,[55] all feasible risk reduction,[56] or cost-benefit justified risk reduction.[57] But often it leaves these risk-management details to the agency, relying on the agency to decide what regulatory stringency is "requisite,"

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[51] For details, see Reports to Congress issued by the Obama Administration. OIRA Reports to Congress, https://www.whitehouse.gov/omb/information-regulatory-affairs/reports/#ORC. Still, a large percentage of rules had missing costs or benefits estimates.

[52] See Regulatory Accountability Act of 2017, S. 951, 115th Cong. (2017).

[53] *See, e.g.*, Cass R. Sunstein, *A Regulatory Reform Bill That Everyone Should Like*, BLOOMBERG (June 22, 2017). Other features of the Act have been more controversial. For more information, see the essays published on this topic in the Regulatory Review's series Assessing the Regulatory Accountability Act, *available at* https://www.theregreview.org/2017/05/30/assessing-regulatory-accountability-act/.

[54] Heitkamp questions to Rao, C-SPAN, https://www.c-span.org/video/?c4672872/heitkamp-questions-neomi-rao.

[55] *E.g.*, "Delaney Clause," § 706(b)(5)(B) of the Food, Drug and Cosmetic Act, 21 U.S.C. § 376(b)(5)(B).

[56] *E.g.*, 29 U.S.C. § 655(b)(5) (requiring OSHA to "set the standard which most adequately assures, to the extent feasible . . . that no employee will suffer material" health impairment).

[57] *E.g.*, Safe Drinking Water Act, 42 U.S.C. § 300g-1(b)(3)(C)(i) (allowing the Administrator to set a contaminant level that maximizes health risk reduction benefits at a cost justified by the benefits).

"appropriate," or "necessary" to fulfilling Congress's objective of, say, "protect[ing] health and welfare."[58] Such language has been held to allow—and, in some statutes, require—the use of CBA to inform regulatory stringency.[59] Unlike other risk-management tools, CBA has the desirable feature of pointing toward a particular level of regulatory stringency, and it makes the relevant basis for the agency's decision transparent in the regulatory process.[60] In fact, conducting some form of CBA is increasingly associated by courts with engaging in basic rational decisionmaking as required by the APA.[61] For these reasons, agencies routinely conduct CBA and rely on its insights when the agencies' statutory mandates permit them to do so.[62]

CBA requires agencies to explicitly list, quantify, and monetize the effects—positive and negative—of the proposed regulation as compared to the status quo and other alternatives. The estimated costs are largely regulatory compliance costs, which approximate the social or opportunity costs of regulation. Social benefits, meanwhile, may include health improvements from cleaner air or water. Agencies use CBA to identify the level of stringency that maximizes aggregate welfare. Theoretically, that level occurs when marginal costs equal marginal benefits. Thus, an agency would proceed with a rule requiring a certain level of stringency only when the additional benefits justify the additional costs of moving from the status quo.

For many regulations, these benefits are the monetized value of, say, having a cleaner environment or a safer workplace.[63] To value such environmental, health, and safety benefits, economists estimate society's willingness to pay to reduce these risks.[64] These estimates are typically based on revealed-preference studies. For example, EPA has adopted a "value of a statistical life" (VSL) measure to place a

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[58] *See, e.g.*, 42 U.S.C. § 7409(b) (provisions governing the establishment of national ambient air-quality standards under the Clean Air Act).

[59] *See, e.g.*, Michigan v. EPA, 135 S. Ct. 2699, 2707 (2015).

[60] It is possible that the agency's true motivation is not actually based in the CBA. But if the agency asserts reliance on the CBA, then the soundness of the CBA is what is ultimately relevant for transparency and accountability purposes. This is because a reviewing court may uphold an agency's action only on the grounds upon which the agency purportedly relied on when it acted. SEC v. Chenery Corp., 318 U.S. 80 (1943); *see generally* Kevin M. Stack, *The Constitutional Foundations of* Chenery, 116 YALE L.J. 952 (2007) (discussing how the *Chenery* principle promotes transparency and accountability).

[61] Cass R. Sunstein, *Cost-Benefit Analysis and Arbitrariness Review*, 41 HARV. ENVTL. L. REV. 1 (2017); *but see* Amy Sinden, *A "Cost-Benefit State"? Reports of Its Birth Have Been Greatly Exaggerated*, 46 ENVTL. L. REP. NEWS & ANALYSIS 10933, 10934 (2016).

[62] The CBA requirements pursuant to Executive Order 12,866 technically extend only to executive agencies. However, independent agencies must still adhere to their statutory mandates and the APA when conducting rulemaking, and their rules must withstand judicial review; these forces will continue to push them to conduct and rely on CBA in decisionmaking as well.

[63] Kenneth Arrow et al., *Is There a Role for Benefit-Cost Analysis in Environmental, Health, and Safety Regulation?* 272 SCIENCE 221 (1996).

[64] *Id.*

monetary value on reductions in mortality risk that is calculated using information about workers' risk-wage tradeoffs in the labor market.[65] Generally speaking, the benefits associated with the reduction of these risks make up the largest component of all regulatory benefits. A similar type of revealed preference methodology has been used to value local environmental amenities by analyzing how property values change as the environmental attributes of otherwise comparable properties change.[66] Where revealed preference studies cannot be carried out, economists have relied on stated preference surveys that obtain individuals' willingness to pay or accept specific risk changes based on their answers to hypothetical scenarios.[67]

The costs, in turn, would ideally be measured as the losses implied by the increased prices that the regulation causes. But typically agencies estimate direct compliance costs and some indirect costs to proxy for these losses. In this context, too, there is uncertainty. Direct compliance costs can be difficult to estimate. When the regulation embraces flexible compliance methods, it has been particularly difficult for agencies to measure compliance costs, often overestimating such costs.[68]

A complete CBA quantifies and monetizes all important benefits and costs. Of course, qualitative assessment is valid and an important aspect of CBA, recognizing that monetization is not always possible given the state of research.[69] Executive Order 12,866 explicitly recognizes the role of unquantified benefits and costs in high-quality CBA.[70] But for CBA to be most useful, agencies should quantify and monetize effects to the extent possible.[71] For this reason, CBA has been most controversial when it is applied to effects that are difficult or controversial to quantify or monetize.

Over time, however, the set of unquantified effects gets ever smaller as research into impacts improves. When EPA first set out to monetize the health and welfare benefits associated with reducing air pollutants, for example, its task was not easy. But the analyses have improved over the years due to improvements in

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[65] *E.g.,* W. Kip Viscusi, *The Value of Life: Estimates with Risks by Occupation and Industry* 42 ECONOMIC INQUIRY 29 (2004).

[66] Rosen, Sherwin, *Hedonic Prices and Implicit Markets: Product Differentiation in Pure Competition*, 82 J. POL. ECON. 34 (1974).

[67] *See* ROBERT MITCHELL & RICHARD CARSON, USING SURVEYS TO VALUE PUBLIC GOODS: THE CONTINGENT VALUATION METHOD (Washington, D.C.: Resources for the Future, 1989).

[68] *E.g.*, Hart Hodges, *Falling Prices: Cost of Complying With Environmental Regulations Almost Always Less Than Advertised*, Econ. Pol'y Inst. Briefing Paper (1997).

[69] *See* discussion *infra* Part I.C.

[70] *See* Exec. Order No. 12,866, *supra* note 35, § 1 ("Costs and benefits shall be understood to include both quantifiable measures (to the fullest extent that these can be usefully estimated) and qualitative measures of costs and benefits that are difficult to quantify, but nevertheless essential to consider.").

[71] *Id.*

underlying studies, and the agency now routinely monetizes a wide variety of benefits and costs, even those that were once thought unquantifiable.[72]

A high-quality CBA not only quantifies and monetizes effects but also does so based on the best available scientific evidence and makes reasonable and transparent assumptions and policy-based decisions.[73] In contrast, a low-quality CBA might rely on problematic studies, consider few regulatory alternatives, or analyze a small subset of relevant impacts.[74] Just as the concept of completeness, the concept of "high quality" is constantly changing. By design, a CBA must rely on ex ante estimates of benefits and costs, and these estimates might not coincide with the actual benefits and costs of the rule once implemented. As new evidence on the actual effects of a policy emerges, CBAs that were previously considered high quality when originally conducted might need to be reevaluated.[75]

Of course, the choice of the "best available" evidence and reasonable assumptions in order to estimate benefits can be fraught with controversy. Consider, for example, the value of reducing greenhouse gas emissions, referred to as the "social cost of carbon."[76] Economists have developed integrated assessment models that link greenhouse gas emissions, temperature changes, and monetary damages, but there is still considerable uncertainty concerning the accuracy of the model estimates.[77] Notwithstanding their flaws, estimates from these models are likely the best available—and the use of other methodology would require significant explanation.[78] In addition, valuing greenhouse gas reductions raises controversial normative questions that include the appropriate discount rate,[79] the treatment of catastrophic risk,[80] and the use of global damages.[81] In these debates,

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[72] *See* Richard L. Revesz, *Quantifying Environmental Benefits*, 102 CAL. L. REV. 1423, 1436 (2014).

[73] *See* Cecot & Viscusi, *supra* note X, at X (finding that courts pay attention to these features when reviewing agency CBA).

[74] *Id. See, e.g.*, Corrosion Proof Fittings, 947 F.2d 1201 (5th Cir. 1991) (rejecting the agency's CBA for not considering relevant regulatory alternatives and impacts).

[75] *See* Jonathan Weiner & Daniel Ribeiro, *Environmental Regulation Going Retro: Learning Foresight from Hindsight*, J. LAND USE & ENVTL. L. 32 (2016).

[76] The social cost of carbon reflects the cost to society of the higher global temperatures caused by each ton of carbon emitted into the atmosphere. *See* INTERAGENCY WORKING GROUP ON THE SOCIAL COST OF GREENHOUSE GASES, SOCIAL COST OF CARBON FOR REGULATORY IMPACT ANALYSIS UNDER EXECUTIVE ORDER 12,866 (2010).

[77] *See, e.g.*, Robert Pindyck, *Climate Change Policy: What Do the Models Tell Us?*, 51 J. ECON. LIT. 860–872 (2013).

[78] *See* Richard L. Revesz et al., *Best Cost Estimate of Greenhouse Gases*, 357 SCIENCE 655 (2017).

[79] *E.g.*, Christian Gollier & Martin Weitzman, *How Should the Distant Future be Discounted When Discount Rates are Uncertain?*, 107 ECON. LETTERS 350–353 (2009).

[80] *E.g.*, Mark Weitzman, *Fat-Tailed Uncertainty in the Economics of Catastrophic Climate Change*, 5 REV. ENVTL. ECON. & POL'Y 275–292 (2011).

[81] *E.g.*, Peter Howard & Jason Schwartz, *Think Global: International Reciprocity as Justification for a Global Social Cost of Carbon*, 42 COL. J. ENVTL. L. 203–295 (2017); Ted Gayer &

there are reasonable arguments in support of different perspectives, and some moves are likely supportable. But even in this value-laden area, CBA would still serve a salutary role of making any policy choices transparent.

In light of such methodological and other challenges, some critics have argued that CBA can be perfectly manipulated to justify any goal or regulation.[82] But this is simply not true. While there is considerable leeway in estimating the benefits and costs of regulation given limitations in scientific studies and different normative considerations, it is not without any bounds.[83] For example, estimates should not be based on disreputable studies, especially when reputable studies are available. Nor should benefits or costs be left unquantified when there is useful data available. In the case of the social cost of carbon, for example, an agency might be able to lower the value of carbon emission reductions to reflect only the benefits of reducing carbon emissions in the United States, but it cannot estimate the value at zero.[84] The available evidence supports this view of CBA. After reviewing economic analyses across presidential administrations, Art Fraas and Richard Morgenstern conclude that the key elements of the analyses have been "generally insulated from politics," with differences "largely in areas for which there is reasonable debate within the academic community."[85] If it's "rhetoric," it's constrained rhetoric. But of course, that's not to say CBA is completely deterministic and static. Facts on the ground change, and new scientific studies are published.

C. Benefits of CBA

Generally speaking, agencies conduct CBA to determine whether and how stringently to regulate. CBA by its nature is difficult, time-intensive, and expensive. Agencies make countless decisions when conducting CBA—from deciding which

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W. Kip Viscusi, *Determining the Proper Scope of Climate Change Policy Benefits in U.S. Regulatory Analyses: Domestic versus Global Approaches*, 10 REV. ENVTL. ECON. & POL'Y 1–19 (2016); Arden Rowell, *Foreign Impacts and Climate Change*, 39 Harv. ENVTL. L. REV. 371–421 (2015).

[82] *E.g.*, Karl Coplan, *Pruitt's Arbitrary Cost Accounting is Built into the Concept of Cost Benefit Analysis*, GREEN L. (Oct. 10, 2017) ("Unfortunately, the manipulability of cost benefit analysis is an inherent feature of an analysis that seeks to apply monetized accounting concepts to values for which there are no dollar values and no accounting rules. Which argues against ever relying on cost benefit analysis for regulatory rulemaking in the first place.").

[83] *See* Eric A. Posner, *Controlling Agencies with Cost-Benefit Analysis: A Positive Political Theory Perspective*, 68 U. CHI. L. REV. 1137, 1197-98 (2001) (arguing that "it is not usually easy to manipulate cost-benefit data" though acknowledging that some variables are hard to measure).

[84] *See* Ctr. for Biological Diversity v. NHTSA, 538 F.3d 1172, 1200 (9th Cir. 2008) (holding that NHTSA cannot value at carbon emission reductions at zero given scientific evidence without explaining its reasoning); Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66,496 (Dec. 15, 2009) ("The Administrator finds that six greenhouse gases taken in combination endanger both the public health and the public welfare of current and future generations.").

[85] Art Fraas & Richard Morgenstern, *Identifying the Analytical Implications of Alternative Regulatory Philosophies*, 5 J. BENEFIT-COST ANALYSIS 137, 142 (2014).

impacts to measure to choosing underlying studies to include in its estimation of impacts. For complicated rulemakings, the CBA itself can cost millions.[86]

But the procedure has many virtues. In the first instance, it helps agencies adopt more efficient policies by encouraging real consideration of policy impacts such promoting transparency in agency science and policy decisions.[87] The procedure incentivizes agencies to conduct ever better and more complete analysis of costs and benefits. In addition, it pressures agencies to engage in retrospective review as a means of gathering the science- or evidence-based information needed to identify and change prior policies that are no longer efficient. Thus, increased reliance on CBA not only promotes rational agency decisionmaking in the first instance but also improves regulatory policy over time.

1. More Transparency and Accountability

Critics of CBA often describe it as prone to a dangerous kind of manipulation, where policy preferences are more, not less, obscured because they hide behind science-based arguments.[88] This criticism relies on two assumptions. First, it assumes that, if agencies did conduct CBA, policy preferences would be easier to discern. Second, it relies on CBA being perfectly malleable, able to justify any predetermined and underlying policy outcome. Neither assumption is reasonable.

Because agency decisionmaking almost always involves making difficult tradeoffs about costs and benefits, the *actual* alternative to conducting CBA is not transparency about some abstract policy preferences. Instead, the alternative is making these decisions while largely uninformed about costs and benefits usually by pointing vaguely to some statutory directive or citing agency expertise. The alternative would be no more meaningfully transparent. But it would be more likely to result in decisions that are profoundly misguided. For example, consider a context where an agency is not allowed to rely on CBA: EPA setting air quality standards for criteria pollutants under the Clean Air Act.[89] EPA cannot openly consider costs, so it engages in surreptitious and uninformed cost guesswork when

[86] As an example, an environmental impact assessment, a type of specialized cost-benefit analysis required under the National Environmental Policy Act, can take between one and six years to prepare and range in cost from $250,000 to $2,000,000. *See* THE NEPA TASK FORCE, REPORT TO THE COUNCIL ON ENVIRONMENTAL QUALITY: MODERNIZING NEPA IMPLEMENTATION 65–66 (2003).

[87] These features of CBA are enforced by courts under standard "arbitrary or capricious" review of agency decisionmaking under the APA. *See* Cecot & Viscusi, *supra* note 21.

[88] *See, e.g.*, John C. Coates IV, *Cost-Benefit Analysis of Financial Regulation: Case Studies and Implications*, 124 YALE L.J. 882, 1003-04 (2015).

[89] *See* 42 U.S.C. § 7409(b); Whitman v. Am. Trucking Ass'ns, 531 U.S. 457 (2001).

deciding what's sufficient to protect health.[90] This guesswork results in a standard that is less protective than one that CBA would justify.[91]

Perhaps, then, the issue is that CBA-based decisions receive more respect when they shouldn't—because they do not actually reflect more informed decisionmaking. This would be if CBA could be perfectly manipulated to justify any predetermined policy outcome. But CBA is not prone to that level of manipulation.[92] CBA methodology, assumptions, and inputs generally have not varied significantly across administrations.[93]

One notable exception might be when costs or benefits are not quantified. Of course, just because an impact cannot be quantified at the current time does not mean that it is not a real, even important, impact. CBA-based decisionmaking must allow an agency to consider such impacts. But scholars have found that agencies could do more to quantify impacts. In a review of major regulations from 2010 to 2013, Jonathan Masur and Eric Posner found that agencies failed to monetize the benefits and costs of regulations when in most cases they could have monetized or partially monetized those benefits and costs.[94] They also concluded that these failures were "almost certainly masking errors of over-regulation and under-regulation."[95]

But unquantified impacts occur when CBA is *not* strictly followed. The alternative to CBA would leave all impacts unquantified and, a fortiori, more prone to manipulation. Nonetheless, assuming that unquantified effects within the context of CBA are prone to a more concerning brand of manipulation, they still could not be used to make CBA outcomes essentially unconstrained. Courts limit reliance on unquantified effects as a "trump."[96] This limit on the use of unquantified effects cabins their influence even if those effects are justifiably thought to be substantial.[97] It means that agencies generally cannot justify predetermined

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[90] Michael A. Livermore & Richard L. Revesz, *Rethinking Health-Based Environmental Standards*, 89 N.Y.U. L. Rev. 1232-33 (2014);

[91] *Id.*

[92] *See* discussion *supra* Part I.B.

[93] *See* Fraas & Morgenstern, *supra* note.

[94] See Jonathan S. Masur & Eric A. Posner, *Unquantified Benefits and the Problem of Regulation Under Uncertainty*, 102 CORNELL L. REV. 87, 92 (2016)

[95] *Id.*

[96] *See Corrosion Proof Fittings*, 947 F.2d 1201, 1225 (5th Cir. 1991).

[97] Masur and Posner provide a framework for agencies to use to help quantify and monetize effects within CBA when data is incomplete. See Masur & Posner, *supra* note 144, at 92-93. Richard Revesz argues for agencies to use breakeven analysis. *See* Richard L. Revesz, *Quantifying Regulatory Benefits*, 102 CAL. L. REV. 1423 (2014). Robert Hahn argues that unquantified effects should carry zero weight in order to incentivize quantification. *See* Robert W. Hahn, *The Economic Analysis of Regulation: A Response to the Critics*, 71 U. CHI. L. REV. 1021, 1037-38 (2004).

outcomes by manipulating the "value" of unquantified effects to make up any shortfall in the estimated effects.[98]

Increased CBA reliance, then, *improves* on the alternative and reduces manipulation, promoting better policies by *encouraging* sound quantification whenever possible. It opens the "black box" of agency decisionmaking, increasing transparency in order to allow for meaningful accountability and judicial review. Even assuming that decisionmaking is actually driven by some political or policy preferences, an explicit reliance on CBA commits the agency to attempt to justify these preferences based on underlying science and economics.[99] This is because the *Chenery* principle requires a reviewing court to uphold an agency's action only on the grounds upon which the agency relied when it acted.[100] When an agency purports to rely on CBA, then, regardless of its true underlying motivation, the agency's action will be judged based on the soundness of its CBA. And a sound CBA will impose some constraints on the available regulatory policies—those that are arguably welfare-enhancing. In other words, CBA procedure forces agency officials to articulate and defend science-based rationales for their proposed regulatory policy. Thus, the *Chenery* principle dovetails with CBA to promote relevant transparency and accountability, even if it doesn't get agency officials to reveal their true motivations.[101] Instead of obscuring decisionmaking behind science, it provides the best chance for elevating agency decisionmaking above policies and making it about science.

2. Better Policies

CBA is a flexible constraint available to agencies, that, in some circumstances, could promote the staying power of agency regulation.[102] In other words, CBA procedure give agencies the opportunity to issue rules that are more likely to stick. In order to capture the benefits of increased staying power by tying a

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[98] This limit is likely to result in underregulation because benefits are more likely to be unquantified. And, quantifying and monetizing benefits often leads to them having higher value in the analysis than the implicit value when they were unquantified. For example, economic estimates of the value of statistical lives are often much higher than the implicit values used when lives remain unmonetized. *See* W. KIP VISCUSI, PRICING LIVES 1, 1-6 (2018).

[99] And, as discussed in the next Part, there are also real economic and judicial constraints to policy changes grounded in CBA.

[100] SEC v. Chenery Corp., 318 U.S. 80 (1943).

[101] *See* Stack, *supra* note X, at 993-98 (discussing how the *Chenery* principle generally promotes transparency and accountability, though not in the context of CBA).

[102] In this account, CBA could be considered a tool that could help agencies maximize the staying power of the regulations they issue. Typically, scholars model CBA as a constraint on agency action within a principal-agency context, wherein CBA helps the president control agency decisionmaking. *See generally*, Eric A. Posner, *Controlling Agencies with Cost-Benefit Analysis: A Positive Political Theory Perspective*, 68 U. CHI. L. REV. 1137 (2001); Elena Kagan, *Presidential Administration*, 114 HARV. L. REV. 2245, 2277 (2001); Shapiro, Sidney A. Shapiro, *Political Oversight and the Deterioration of Regulatory Policy*, 46 ADMIN. L. REV. 1, 5 (1994).

policy to a CBA, the agency will face incentives to maximize reliance on best-available estimates of costs and benefits and minimize reliance on unquantified effects. And if data is currently incomplete or unavailable, the agency will face incentives to promote the necessary research.[103] Although it is sometimes impossible to fully quantify and monetize some effects, incentivizing quantification and monetization to the extent possible is a good thing. Once these effects are monetized, it will set a floor on the value in the analysis. As a result, regulatory policy will be more efficient.

And finally, the argument is not that CBA itself will lead to the best policies. Rather, it is that reliance on CBA encourages better consideration of impacts, which leads to better policies. But there are things that CBA, by itself, simply cannot do. Important criticisms include its failure to account for distributional impacts and other fairness-based considerations. These considerations are outside of the CBA. An agency could and should still deviate from a CBA-based policy based on considerations of equity or dignity, but, in light of the CBA, it would have to transparently state and defend its decision to do so.[104] This, too, is desirable from the perspective of accountability. It actually ensures that such decisions are not masked by the technical process of agency rulemaking.

3. Real Retrospective Review

Virtually everyone agrees that it is important to look back and evaluate how regulations are actually working and modify, update, or repeal them if they are not. In fact, every President since Carter has sought to identify and address inefficient existing regulations, through a process of retrospective review of regulatory costs and benefits.[105] Most recently, President Obama's Executive Order 13,563 called on each agency to "periodically review its existing significant regulations to determine whether any such regulations should be modified, streamlined, expanded, or repealed so as to make the agency's regulatory program more effective or less burdensome in achieving the regulatory objectives."[106] Even President Trump has embraced this idea to the extent that his Executive Order 13,771 encourages

[103] Of course, these predictions rely on continued access to and support for underlying scientific research. Without ongoing research, regulations will be based on increasingly outdated studies. But research is diffused and funded by multiple sources, making it difficult for any one group to eliminate it.

[104] *See, e.g.*, Cass R. Sunstein, *Cost-Benefit Analysis and Arbitrariness Review*, 41 HARV. ENVTL. L. REV. 1 (2017).

[105] Curtis W. Copeland, *The Role of the Office of Information and Regulatory Affairs in Federal Rulemaking*, 33 FORDHAM URB. L.J. 1257, 1264-66 (2005).

[106] Exec. Order No. 13,563, *supra* note 7, § 6(b). *See also* Exec. Order No. 13,579, 3 C.F.R. 256 (2012) (urging independent agencies to establish plans for periodic review); Exec. Order No. 13,610, 77 Fed. Reg. 28,469 (May 14, 2012) (setting policies to reduce "unjustified regulatory burdens").

agencies to look closely at their existing stock of regulations to identify regulations to repeal or adjust.[107]

But it is difficult to get agencies to actually get agencies to look back at existing regulations and evaluate their effectiveness. According to Susan Dudley, past initiatives failed largely because agencies have no incentives to look back at regulations that they have already issued.[108] She's optimistic that a regulatory budget concept, like the one in President Trump's Executive Order 13,771, might create those missing internal incentives.[109] Although the Order's budget and offset requirements might indeed provide some pressure for agencies to get rid of existing regulations, they are not likely to provide the incentives needed to ensure that existing *ineffective* or *net costly* rules are identified and repealed.[110] The Order does not require agencies to prioritize net costly regulations for repeal, and there are reasons to suspect that agencies would not prioritize such regulations.[111]

An ongoing, and judicially encouraged, commitment to CBA, however, could create exactly the right incentives for real retrospective review of regulations. If CBA functions as a gatekeeper for promulgating significant regulatory changes, then an agency that wants to change a prior policy because, say, it believes that policy is not effective has to go out and *find evidence* for its belief. Its best bet is to investigate the on-the-ground costs and benefits of the policy. And that's exactly what real retrospective review is about.

Of course, CBA has been around, and gaining momentum, for years. If CBA itself is enough, then why hasn't retrospective review taken off? But sporadic CBA, the results of which can be discarded or ignored when expedient, is not enough. What is needed is a commitment to the practice across administrations, and an understanding of its role in policy changes. The signposts for an emerging commitment have been appearing in judicial opinions in the last few years, most prominently in the Supreme Court's decision in *Michigan v. EPA*[112] and in decisions promoting rigorous CBA of financial regulations handed down by the D.C.

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[107] Exec. Order No. 13,771, *supra* note

[108] Susan E. Dudley, *Can Fiscal Budget Concepts Improve Regulation?*, 19 N.Y.U. J. LEGIS. & PUB. POL'Y 259, 267–68 (2016) (footnote omitted).

[109] *Id.* at 268.

[110] Caroline Cecot & Michael A. Livermore, *The One-In, Two-Out Executive Order is a Zero*, 165 U. PA. L. REV. ONLINE (2017).

[111] *Id.*

[112] Justice Scalia, writing for the Supreme Court's majority in *Michigan v. EPA*, declared that "[n]o regulation is 'appropriate' if it does significantly more harm than good," *Michigan v. EPA*, 135 S. Ct. at 2707, and Justice Kagan, writing for the dissent, agreed that harms of regulation must be considered, *id.* at 2714 (Kagan, J., dissenting) ("I agree with the majority—let there be no doubt about this—that EPA's power plant regulation would be unreasonable if '[t]he Agency gave cost no thought at all.'").

Circuit.[113] The next Part describes on the particular role that CBA plays in constraining policy changes.

II. CBA-BASED CONSTRAINTS ON POLICY CHANGES

CBA can "constrain" agency decisionmaking—and, in particular, changes in agency policy over time. Whenever a new administration gains control of the White House, changes in regulatory priorities are expected and often desirable. But administrative law has created a system of rules in order to ensure that any changes in course are rational and predictable, propelled by the APA's requirement that agency actions not be "arbitrary" or "capricious."[114] These requirements ensure that regulatory programs are not created and destroyed based solely on changing political tides. One of these administrative law checks is CBA, a powerful summary of the agency's factual findings on the costs and benefits of regulations, and it ensures that changes to policy are based on some even-handed analysis of costs and benefits.

If done well, the agency's original CBA can wield great influence. First, judicial review of agency policy changes in the context of CBA constrains swings in rulemaking. Courts already review all CBAs to make sure they are transparent and sensible. Although courts are generally deferential when first encountering an agency CBA, courts have taken a closer look at agency changes, requiring reasoned explanations. In particular, they require agencies to explain why a new CBA is different from the old one. This will make it more difficult in some cases for the agency to change policy to perfectly align with its new priorities or preferences. Second, accepted CBA procedure further constrains changes. The status quo would now involve the old rule, and this baseline alters the costs and benefits of moving to a new policy. Thus, CBA reliance prevents huge welfare-reducing swings while allowing reasonable and transparent policy- or science-based modifications.

A. Judicial Review

Judicial review in the context of CBA constrains swings in rulemaking. In particular, the APA requires agencies to act rationally by explaining their decisions, especially when changing course from prior policies or regulations.[115] When the prior policy relied on a CBA, then a change from that policy must confront that prior CBA—its underlying facts and its conclusions. This means that, although

[113] *See, e.g.*, Bus. Roundtable v. SEC, 647 F.3d 1144, 1149-51 (D.C. Cir. 2011).

[114] 5 U.S. Code § 706.

[115] *See* 5 U.S.C. § 706(2)(A); *see also* FCC v. Fox Television Stations, Inc., 556 U.S. 502, 515 (2009); Motor Vehicle Mfrs. Ass'n of the United States, Inc. v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983).

courts are generally deferential when first encountering an agency CBA, courts are likely to closely scrutinize a new CBA to ensure that those explanations are present.

1. Soft Look on CBA . . .

Courts have long reviewed the adequacy of an agency's CBA under appropriate challenges based on the APA. When an agency permissibly relies on a CBA in its decisionmaking, courts have been asked to review whether the scope of the CBA is appropriate in light of the agency's statutory mandate (scope), whether the assumptions or methodology underlying the CBA were sound (methodology), and whether agency provided sufficient information in its CBA for notice and comment rulemaking and judicial review (transparency).[116] Generally speaking, courts have been deferential when evaluating CBAs.[117]

A CBA's scope refers to the categories of benefits and costs that are considered, quantified, and monetized in the CBA. As discussed, a CBA is most useful when it quantifies and monetizes all relevant direct and indirect benefits and costs of each regulatory alternative. That way, regulators can make decisions based on complete information, minimizing the likelihood of unintended consequences. But deciding *which* benefits and costs to consider and *how thoroughly* to quantify and monetize each category of benefits and costs will often depend on available information and the agency's resources. The previous Part explained that, from the perspective of CBA, readily available impacts should be included. The arguments for omitting impacts, however, are often couched in terms of statutory "authority." This kind of constraint is not a CBA-based constraint. In thinking through this question, courts generally defer to agency judgments on scope unless the statute specifies factors that must be considered,[118] or the agency does not treat costs and benefits similarly.[119] And, if the overall statute is committed to improving social welfare, then courts should be especially hesitant in reading any statutory restriction on an agency's ability to account for important welfare changes.[120] Already, courts have recognized the unreasonableness of willful ignorance about expected impacts in the context of indirect costs of regulatory intervention.[121]

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[116] *See* Cecot & Viscusi, *supra* note 21.

[117] *Id.*

[118] *Id.* at 593-595.

[119] *See* Sierra Club v. Sigler, 695 F.2d 957, 979 (5th Cir. 1983).

[120] *See* U.S. Sugar Corp. v. EPA, 830 F.3d 579, 625–26 (D.C. Cir. 2016) (explaining that, when the statutory "text does not foreclose the Agency from considering co-benefits and doing so is consistent with the [statute's] purpose," the agency may consider co-benefits). I would go further and suggest that the agency *should* consider co-benefits unless clearly foreclosed from doing so by the statutory text or the statute's purpose.

[121] *See, e.g.*, Michigan v. EPA, 135 S.Ct. 2699, 2707 (2015) (explaining that the advantages and disadvantages of regulation included not just direct compliance costs, but indirect "harms that regulation might do to human health or the environment"); Corrosion Proof Fittings v. EPA, 947 F.2d 1201, 1225 (5th Cir. 1991) (holding that EPA must consider the indirect safety effects of

In addition, courts have ensured that agency CBA is transparent.[122] As discussed in the previous Part, one of the advantages of CBA in agency decisionmaking is its transparency. It limits the agency's ability to obscure the reasons for its judgments by requiring the agency to list, quantify, and monetize its considerations. A well-conducted CBA will reveal and explain all its components: assumptions, methodologies, and underlying models and studies. In that way, stakeholders can comment on these aspects of the CBA during the notice-and-comment rulemaking process, pointing out any errors or deficiencies or challenging the agency's explanations while providing the agency with an opportunity to correct its analysis. CBA transparency thus serves an important role in the deliberative rulemaking process. Courts have enforced transparency and disclosure obligations, even on seemingly obscure details such as the specific methodology behind an agency's crash-risk analysis or the origin of statistics underlying a few estimates.[123]

Courts generally do not weigh in on the substance of an agency's assumptions, methodology, choice of model, or other technical issues.[124] In part, this reluctance recognizes that many of these decisions cannot be made solely on the basis of science, but to some extent reflect underlying values and judgments. These are also the kinds of challenges that are most often considered beyond the expertise of the judicial branch. But even in these types of challenge, courts have sometimes undertaken a more thorough review when the statute appears to require one,[125] demonstrating that they are capable of doing so.

2. But "Hard Look" on Policy Changes

Historically, there are many examples of agencies changing course, and courts have closely evaluated such agency policy changes. More than thirty years ago, the National Highway Traffic Safety Administration ("NHTSA") changed a prior policy, rescinding a passive restraint requirement for motor vehicles that it had previously promulgated.[126] The resulting litigation defined the contours of review under the "arbitrary and capricious" standard. [127] In *Motor Vehicle Manufacturers Ass'n of the United States v. State Farm Mutual Automobile Insurance Co.* ("*State Farm*") the Supreme Court scrutinized whether the agency

substitute options for car brakes when banning asbestos-based brakes under the Toxic Substances Control Act). It is difficult to argue that agencies should treat indirect benefits differently than indirect costs. *See* Richard L. Revesz, *Pruitt Would Like Us to Ignore the Indirect Benefits of Environmental Regulation*, SLATE.COM, June 13, 2018.

[122] *See* Cecot & Viscusi, *supra* note 21, at 602-03.

[123] *Id. See also* Owner-Operator Indep. Drivers Ass'n v. FMCSA, 494 F.3d 188, 199-202 (D.C. Cir. 2007); Natural Res. Def. Council, Inc. v. Herrington, 768 F.2d 1355, 1419 (D.C. Cir. 1985).

[124] *See* Cecot & Viscusi, *supra* note 21, at 598-601.

[125] *Id.*

[126] Motor Vehicle Manufacturers Ass'n of the United States v. State Farm Mutual Automobile Insurance Co., 463 U.S. at 57.

[127] *Id.* at 43.

"has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise."[128] The majority held that NHTSA had failed to adequately explain why it had rescinded this requirement.[129] Specifically, the Court held that "an agency changing its course by rescinding a rule is obligated to supply a reasoned analysis for the change beyond that which may be required when an agency does not act in the first instance."[130] In fact, the Court reasoned that "[i]f Congress established a presumption from which judicial review should start, that presumption . . . is not against safety regulation, but against changes in current policy that are not justified by the rulemaking record."[131] While it speculated that "it may be easier for an agency to justify a deregulatory action," the Court emphasized that "the direction in which an agency chooses to move does not alter the standard of judicial review established by law."[132]

The Supreme Court again confronted judicial review in the context of changing policy fifteen years later in *Federal Communications Commission v. Fox Television Stations, Inc.* ("*Fox*").[133] In doing so, the majority in *Fox* clarified that an agency is not subject to greater review when it changes a policy than it was or would have been when it created the initial policy in the first instance.[134] But the agency must display awareness that it is changing its position and provide "good reasons" for the new policy.[135] And in particular, "a reasoned explanation is needed for disregarding *facts* and circumstances t*hat underlay or were engendered by the prior policy*" because "[i]t would be arbitrary or capricious to ignore such matters."[136] In other words, it is not that the judicial review is more stringent; it is that the agency may have to develop a more comprehensive record because it must confront and explain the facts developed in the first record. According to the Court, the matters that require attention and explanation include the facts and evidence that the agency previously found controlling.[137] It also suggested that the agency would have to consider the serious reliance interests created by the initial policy.[138]

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[128] *Id.*

[129] *Id.*

[130] *Id.* at 42 (emphasis added).

[131] *Id.*

[132] *Id.*

[133] *Fox*, 556 U.S. at 514. It previously hinted at these issues in other cases, such as INS v. Yang, 519 U.S. 26, 32 (1996).

[134] *See Fox*, 556 U.S. at 514.

[135] *See id.* at 515.

[136] *Id.* (emphasis added).

[137] *Id.*

[138] *Id.*

Most recently, in *Encino Motorcars, LLC v. Navarro*,[139] the Supreme Court again cited *Fox* for the idea that "a reasoned explanation is needed for disregarding facts and circumstances that underlay or were engendered by the prior policy."[140] In fact, it stated that a regulation that does not explain an inconsistency is arbitrary and capricious, and an arbitrary and capricious regulation, in turn, "receives no *Chevron* deference."[141] This language, in particular, is striking, suggesting that defects in agency decisionmaking reflected in CBA could doom an agency's regulation—even when the agency enjoys significant discretion. As previously, the Court was concerned about the "reliance interests" at stake, which required the agency to give more than a "conclusory" explanation of the policy change.[142]

Taken together, these cases roughly outline how judicial review reinforces CBA-based regulatory stability. When an agency relies on CBA in developing its policy, it relies on a summary of facts about the likely impact of the policy. When an agency wants to change course pursuant to a new CBA, it relies on a new summary of facts. According to *Fox*, disregarding a prior CBA in favor of a new CBA requires the agency to develop a more comprehensive record that includes reasoned explanations for the deviations.

This transforms the judicial review from one assessing technical inputs to one ensuring that the agency provides reasoned explanations for any deviations. Judicial review of agency reasons has bite; inadequate explanation is one of the more common grounds for judicial reversal and remand.[143] Kevin Stack explains how, in *State Farm*, the agency's initial reasons acted as commitment device as well as "a basis for evaluating its own future actions implicating those grounds."[144] In the same way, by relying on CBA initially, the agency committed itself to a technical welfare-based analysis and tied its future self to that sort of analysis. If the new policy improves on the old one in terms of welfare, as summarized in a well-reasoned and updated CBA, then judicial review has nothing to say. But if the new policy is not an improvement on those terms, courts will require the agency to explain why.

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[139] 136 S. Ct. 2117 (2016).

[140] *Id.* (quoting *Fox* at 515-16).

[141] *Id.*

[142] *Id.*

[143] *See, e.g.*, Peter H. Schuck & E. Donald Elliott, *To the* Chevron *Station: An Empirical Study of Federal Administrative Law*, 1990 DUKE L.J. 984, 1035 tbl.6 (showing about 20% of remands in1985 were based on an inadequate agency rationale); Richard J. Pierce, Jr., *Judicial Review of Agency Actions in a Period of Diminishing Agency Resources*, 49 ADMIN. L. REV. 61, 72 (1997) (suggesting that inadequate agency reasoning is the most frequent ground for judicial rejection of agency decisions).

[144] Stack, *supra* note X, at 997-98; *see also id.* at 998 (concluding that the reason-giving practice promoted by the *Chenery* doctrine "promotes conditions for rationality, regularity, stability, and principled accountability within the boundaries of acceptable discretion").

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Of course, courts are not experts in what makes for a well-reasoned CBA. But in this regard, too, its task is simplified when an agency changes a CBA-based policy in light of a new CBA. The record before the court includes the prior CBA and the new CBA. The prior CBA essentially announces to courts: *here* are the facts and evidence that the agency previously found persuasive and controlling. It thereby focuses the review, highlighting which seemingly technical inputs in underlying risk assessments might be ultimately important in driving the agency's policy. And by monetizing the benefits to the prior policy's beneficiaries, the prior CBA identifies and underscores the reliance interests at stake.

B. CBA Updating Rules

In order to update regulations in a reasonable, CBA-justified way, the agency must follow certain "rules." These rules are based on economic and accounting principles that support the practice of CBA and are described in guidelines on CBA from the Office of Management and Budget or agencies themselves.[145] Most important for CBA-updating purposes, the agency must include all relevant impacts, calculate costs and benefits relative to the appropriate baseline, and estimate impacts based on the best evidence it has available.[146] The application of these rules is particularly important in the context of deregulation, where decisions on the baseline, input estimates, and the scope carry significant weight.

Under a welfare economics framework, a CBA should contain all effects of the policy on social welfare. This ensures that regulators base their risk management decisions on an accurate picture of the actual effects of regulatory action. But in practice, it is impossible to estimate all effects. How many effects should the agency analyze in its CBA? When deciding where to draw the line, the economics perspective suggests that an agency should consider an effect as long as the value of the information to the decision exceeds the costs of obtaining the information. Even then, however, it is difficult to figure out which costs and benefits are important and to assess the costs and benefits of additional information ex ante. Agencies must also prioritize the use of their resources over a variety of rulemakings. This might explain the deference courts have given agencies on issues of CBA scope.[147]

But when a prior CBA exists in the administrative record, then there is a reference point on the achievable scope of CBA. Any changes to the scope of benefits or costs would require some explanation. If the scope expands to include additional effects in light of new scientific evidence of causal connections and harm, then the CBA, by all accounts, is improved and provides a clearer picture of the actual impacts on social welfare. But it's difficult to find any economically grounded reason

[145] *See, e.g.*, Office of Mgmt. & Budget, Exec. Office of the President, OMB Circular A-4, Regulatory Analysis (2003); EPA, *Guidelines for Preparing Economic Analyses* (2014).

[146] *See, e.g.*, OMB, *supra* note X, at 26; EPA, *supra* note x, at 11-2.

[147] Cecot & Viscusi, *supra* note 21.

to reduce the scope of CBA, especially when there is readily available information on relevant impacts. In the deregulatory context, any new CBA should include all categories of benefits that were previously considered important and on which information has already been obtained.

In addition, once issued and implemented, a policy becomes part of the baseline, or the status quo. Any modification of that policy would require a CBA that calculates costs and benefits from the baseline of that policy. In that way, a deregulatory CBA is not the inverse of the prior CBA, unless the prior policy was issued recently and never implemented. In the context of deregulatory actions that rescind rules that have already been implemented, the CBA would have to compare the benefits of reducing stringency or eliminating a technology-based requirement (sometimes referred to as cost savings) against the costs of reductions in air quality or other prior health- and welfare-related benefit of the policy (sometimes referred to as foregone benefits).

Even assuming that some regulations were not cost-benefit justified when issued, the benefits and costs of continuing the regulation are different. On the cost side, firms may have already made expensive capital investments in pollution-control technology. These costs are, as economists put it, sunk. This dynamic was recently highlighted when a letter from the electric power industry urged EPA to keep the mercury and air toxics ("MATS") rule in place.[148] The industry had been fighting the rule since it was issued, but at this point it had spent more than $18 billion to comply with it.[149] Now, "[g]iven the scale of investment, the industry groups said that regulatory certainty is 'critical.' "[150] Given that one-time investments have already been made, the benefits of rescinding the MATS rule would be very small. It will be difficult for the Administration to justify repealing the rule even if it re-evaluates the foregone benefits to society as being much smaller.[151] Alternatively, the use of that technology might have become the market standard (or, perhaps required by states)—and adjusting to an alternative, even if cheaper, technology might require significant adjustment costs. This could be understood as a form of path dependence. In all these cases, the benefits of reducing stringency—the cost savings from lifting the regulatory requirements—might approach zero. This effect would make it especially difficult to justify deregulatory actions unless the prior policy required high ongoing compliance costs. In this way, some *forms* of regulatory action are stickier than others from a CBA perspective. And overall, the existence of sunk costs and adjustment costs suggest that it might

[148] *Utility industry urges EPA to keep mercury emissions rule in place and speed reviews*, ENERGIZE WEEKLY (July 18, 2018); *see also* Coral Davenport & Lisa Friedman, *The EPA's Review of Mercury Rules Could Remake Its Methods for valuing Human Life and Health*, N.Y. TIMES (Sept. 7, 2018).

[149] *Utility Industry Urges EPA*, *supra* note 72.

[150] *Id.*

[151] *See* Davenport & Friedman, *supra* note 72 (discussing how the Trump Administration might exclude consideration of important categories of benefits of the MATS rule).

be more difficult to move away from some old, long-accepted regulatory requirements.

Finally, rational rulemaking through CBA requires comprehensive, valid, and reliable measures of costs and benefits of alternative policies. Although these input values might reflect policy decisions, they are largely based on the available scientific and economic evidence. A new administration might understand and characterize such evidence differently, but it cannot ignore the scientific evidence previously relied on and cannot use new scientific evidence if it does not yet exist, constraining the moves it could make from the old rule. This constraint cuts in the opposite direction as the previous constraint; it suggests that it would be difficult to justify a new policy shortly after the prior policy was implemented because the scientific evidence supporting the prior policy is unlikely to have changed. But this feature of CBA might not have much constraining power when the deviation is from an old prior policy, where the intervening years likely produced new facts and realities. In those cases, the prior CBA might look quite obsolete, even if it was path breaking for its time. For example, CBA led the Reagan Administration to adopt a much stricter standard for phasing out lead in gasoline than it (and the previous administration) initially thought warranted[152]—but if EPA were to revisit that decision, a modern CBA would likely have justified an even faster phasedown; more recent studies suggest that the benefits of phasing out lead in gasoline were *substantially higher* than initially estimated.[153]

In ongoing research, economist Kerry Krutilla has tried to estimate the magnitude of cost savings and benefit losses from repealing technology rules, behavioral rules, and certification rules from DOT and EPA.[154] He has identified four critical characteristics that drive the level of benefits and costs from deregulatory actions: capital intensity, degree of voluntary market adoption, the regulation's scope, and the nature of health and safety risk. His initial findings reveal that current deregulatory CBAs often fail to consider these important characteristics, in some cases overstating the cost savings from deregulation.

III. DEREGULATORY CBA UNDER THE TRUMP ADMINISTRATION

As discussed in the previous parts, agency CBA is prevalent, with new policies typically supported by CBA. In this CBA world, policy changes are more

[152] See DeMuth, *supra* note 40.

[153] *See, e.g.*, *See, e.g.*, Joel Schwartz, *Societal Benefits of Reducing Lead Exposure*, 66 ENVTL. RESEARCH 105 (1994) (estimating net benefits of $17.2 billion per year for each 1 microgram reduction in average blood lead concentrations); Debra J. Brody et al., *Blood Lead Levels in the US Population*, 272 JAMA 277 (1994) (estimating a 10 microgram decline in average blood-lead levels in children due in large part to the lead phasedown).

[154] Kerry Krutilla, A Taxonomy for Improved Regulatory Evaluation, Presentation at Society for Benefit-Cost Analysis Annual Meeting March 15, 2008, Washington, D.C. [Update when paper available.]

difficult. That's because, while CBA accommodates changing facts and values, there are constraints on valid updates to a CBA. As the prior policy becomes the new status quo, the benefits of moving away from it will often be smaller, especially in the case of deregulatory actions after investments have already been made. In addition, Supreme Court precedent suggests that, when evaluating agency reasoning underlying policy changes, the agency must provide a reasonable explanation for deviating from the prior policy. When the prior policy was supported by CBA, the agency will have to confront the prior CBA and explain any deviations from that CBA's assumptions and methodology. Courts have also required that agencies treat benefits and costs equally, again demanding a reasoned explanation for any differential treatment. Taken together, I argue that these principles constrain agency policy changes. The degree of constraint will depend on three factors: (1) the statutory mandate to conduct and consider CBA; (2) the quality and completeness of the prior CBA; and (3) the agency's reliance on the prior CBA.

A. Degree of Constraint

Generally speaking, when a court confronts a prior CBA in the record, it will require the agency to explain any deviations from it, unless the agency is prohibited from relying on CBA.[155] Sometimes the record will include a prior CBA that the agency *could have* but *did not* rely on. This might happen when an agency conducts CBA pursuant to executive order but disavows any reliance on it in determining regulatory stringency—even when the CBA would support its action. An agency might purposefully do this in order *not* to commit itself to CBA-based policy explanations and development (in other words, to preserve its power to act without reliance on CBA). For example, when EPA set out to regulate hazardous air pollutant emissions from power plants, it was required to first determine whether such regulation would be "appropriate and necessary."[156] As part of its decisionmaking, EPA conducted a CBA showing that the net benefits of regulating hazardous air pollutants would be up to $80 billion, especially when taking into account the particulate matter that would also be reduced.[157] Nonetheless, the agency refused to rely on this CBA to support its determination in the rulemaking as well as in the subsequent litigation.[158] Instead, the agency's preferred justification for the rule relied on less formal and more qualitative analysis that did

[155] Sometimes the agency's statutory mandate does not allow it to consider costs and, by extension, a CBA. For example, the Clean Air Act prohibits EPA from relying on cost when setting national air quality standards for criteria pollutants. *See* 42 U.S.C. § 7409(b); Whitman v. Am. Trucking Ass'ns, 531 U.S. 457 (2001). In that case, the CBA—prior or new—is legally irrelevant to the agency's decision, which must be based on the statutorily permissible factors. Of course, this situation may present other limits on deregulatory actions. In particular, such statutory mandates prohibit CBA by prohibiting the consideration of costs. If so, deregulation motivated by cost considerations such as cost savings to industry may be impermissible

[156] 42 U.S.C. § 7412(n)(1)(A).

[157] *See* EPA, Regulatory Impact Analysis for the Final Mercury and Air Toxics Standards at ES-1 to ES-2 (2011).

[158] *See Michigan v. EPA*, 135 S. Ct. at 2711.

not explicitly refer to costs, presumably in an effort to retain authority to set more stringent standards.[159]

In these cases, the power of the prior CBA to constrain future policy deviations will be low. But even then, the CBA might still be relevant if it in fact supports the prior policy (notwithstanding the agency's decision not to rely on the CBA) and if it is persuasive. For example, in *R.J Reynolds Tobacco Co. v. FDA*, the D.C. Circuit held that the U.S. Food and Drug Administration ("FDA") did not provide substantial evidence that graphic warnings on cigarette advertising would directly advance its interest in reducing smoking rates to a material degree.[160] Although the case was about limits on commercial speech,[161] it is relevant here because the court used the agency's own CBA against it; the CBA essentially conceded that graphic warnings would *not* directly advance the asserted government interest to a material degree.[162] This case suggests that a prior CBA, if persuasive enough, could still have some constraining influence on agency policy even if the agency promulgating the initial rule did not rely on it. Any move to change such a policy should therefore confront that CBA.

But it is when these three features coincide—statutory authority to rely on CBA, actual agency reliance, and high-quality or, at least, complete CBA—that the prior CBA will have maximum constraining power. In such cases, the agency must not only acknowledge the CBA justification of the agency's prior policy but also explain why it is departing from that justification. If the agency throws out a CBA-justified policy for no good reason, the agency's decision is vulnerable to attack as arbitrary and capricious under the APA and, likely, the relevant statute.[163] If the prior CBA were incomplete, the agency could more easily make out good reasons for changing course. For one, it could simply complete the CBA without having to justify its science- or policy-based choices against those in the prior CBA. If the prior CBA, for example, relied on qualitative assessment of benefits because reliable

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[159] Of course, the Supreme Court ultimately held that Section 112(n)(1)(A)'s "broad reference to appropriateness encompasses *multiple* relevant factors," which "include but are not limited to cost." *Michigan v. EPA*, 135 S. Ct. at 2709 (emphasis in original). In fact, Justice Scalia, writing for the Supreme Court's majority in *Michigan v. EPA*, declared that "[n]o regulation is 'appropriate' if it does significantly more harm than good," *id.* at 2707, and Justice Kagan, writing for the dissent, agreed that harms of regulation must be considered, *id.* at 2714 (Kagan, J., dissenting) ("I agree with the majority—let there be no doubt about this—that EPA's power plant regulation would be unreasonable if '[t]he Agency gave cost no thought at all.'").

[160] 696 F.3d 1205 (D.C. Cir. 2012), overruled in part by Am. Meat Inst. v. USDA, 760 F.3d 18 (D.C. Cir. 2014) (en banc).

[161] In 2014, the D.C. Circuit overruled part of the decision that limited application of rational basis review to narrow circumstances. Am. Meat Inst., 760 F.3d at 22-23. This perceived limitation on the application of rational basis review led the panel to apply the stricter intermediate scrutiny.

[162] R.J. Reynolds Tobacco, 696 F.3d at 1219-21.

[163] Of course, the agency might put forth a non-CBA-based reason for the departure. For example, the agency may argue that it no longer believes that it has authority to regulate. In Part V.D.1, I discuss this kind of "slippage."

studies were not available, then the agency should be able to quantify and monetize these estimates once such studies become available. Similarly, if the prior CBA were low-quality, making questionable assumptions or relying on outdated methodology or inputs, then the agency should and would have an easier time explaining deviations from those decisions in its new CBA.

Thus, relying on a high-quality CBA to support its policy is one way the agency could protect against future unwarranted abandonment of the policy. If the agency reassesses the CBA, it will have to explain any differences it makes to the prior CBA. Under both the economics framework and the Supreme Court's emphasis on reliance interests, the agency will have to acknowledge the different costs and benefits of moving from the old policy to the new one. The new CBA would have to support this change. While courts review the agency's initial decisions on scope and methodology deferentially, courts will likely require reasoned explanations for any changes to scope and methodology in order to evaluate whether such changes were arbitrary or capricious.

As discussed in the previous Part, providing a good reason for changing course is not as easy as it sounds. Courts have been strict when requiring reasoned explanations—even in the context of science-based or otherwise technical considerations. Recently, the D.C. Circuit rejected EPA's decision to loosen a prior rule's stringency in regulating carbon monoxide ("CO") under some circumstances as arbitrary and capricious.[164] The court explained that "EPA was operating against the backdrop of its own prior reasoned judgment that 'minimizing CO emissions will result in minimizing non-dioxin organic [hazardous air pollutants],' " and "its conclusion appears to be counter to the only empirical evidence EPA had before it."[165]

Requiring a reasoned explanation might be especially constraining when the agency attempts to alter the scope of a CBA. When reviewing the adequacy of a CBA, courts have demanded equal treatment of benefits and costs. A prior CBA provides a reference point for the achievable scope of a CBA. Any changes to the scope of benefits or costs could raise issues of unequal treatment, promote unbalanced analysis, or raise the risk of unintended consequences. For example, one district court has pointed to a prior Environmental Impact Assessment ("EIS"), an analysis focused on environmental impacts that is otherwise similar to CBA, to cast

[164] Sierra Club v. EPA, No. 16-1021, Decided March 16, 2018.

[165] *Id.* In another example, EPA promulgated a maximum contaminant level goal of 0 chloroform in drinking water under the Safe Drinking Water Act, *see* Final Rule: National Primary Drinking Water Regulations: Disinfectants and Disinfection Byproducts, 63 Fed. Reg. 69,390, 69,398/3 (1998), despite earlier concluding that chloroform exhibits a "nonlinear mode of carcinogenic action," with exposures below some level posing no risk of cancer, *see* Notice of Data Availability: National Primary Drinking Water Regulations: Disinfectants and Disinfection Byproducts, 63 Fed. Reg. 15,674, 15,686/1 (1998). The D.C. Circuit agreed with industry petitioners that EPA could not backtrack from its previous conclusion without sufficient explanation.

doubt on the Bureau of Land Management's reasons for quantifying the benefits but not the costs of a coal lease modification in a new EIS.[166] Already the Trump Administration has suggested that it might seek to limit the consideration of some benefits (i.e., indirect benefits) in its regulatory and deregulatory CBAs.[167] If such changes to the treatment of benefits are not tied closely to the statutory language, then they will be suspect, especially if the scope of costs (i.e., indirect costs) is not similarly constrained.

B. Constraints in Action

How will these CBA-based constraints apply to the Trump Administration's deregulatory agenda? In several stays of rules pending reconsideration, the Trump Administration has ignored the costs and benefits of the original rules. For example, DOI justified its decision to stay the implementation of the Methane Waste Rule by pointing to "substantial time and resources to comply with regulatory requirements" that would be wasted if industries were forced to comply with the rule before the agency decided whether it would change course.[168] But it made no similar effort to consider the foregone benefits to society from the agency's decision to stay the rule. Depending on the length of the stay, the foregone benefits could be substantial, as the rule was estimated to generate $127 million in annual net benefits to society.[169]

Such one-sided consideration of costs to support repeals or modifications of regulations would likely be deemed arbitrary and capricious. Although questions of CBA scope or depth are sometimes difficult for courts to evaluate, an agency decision based on an analysis that ignores benefits completely is easily seen as irrational. As discussed previously, courts look to statutes to define the appropriate scope of CBA. While the statute might limit or expand the categories of costs or benefits that could be considered, almost every energy and environmental statute has a specific goal of achieving some benefit and tasks the agency with achieving that benefit under specific circumstances. Not addressing these statutory benefits at all would miss an important aspect of the problem. And even assuming that a statute is ambiguous as to the consideration of benefits, these actions would rely on quantitative analysis of impacts without treating costs the same way as benefits. In fact, they would ignore benefits completely—defying "[s]imple logic, fairness, and the premises of cost-benefit analysis . . . ."[170] Simply put, when the agency relied on a prior CBA to justify its rulemaking, it cannot change course without

[166] High County Conservation Advocates v. U.S. Forest Service, 52 F. Supp. 3d 1174, 1184, 1189 (D. Colo. 2014).

[167] EPA, Proposed Rule, Increasing Consistency and Transparency in Considering Costs and Benefits in the Rulemaking Process, 83 Fed. Reg. 27524 (June 13, 2018).

[168] Stay, 82 Fed. Reg. 27430.

[169] DOI, Methane Waste Rule, 81 Fed. Reg. 83008.

[170] *Sierra Club v. Sigler*, 695 F.2d at 979.

acknowledging the foregone benefits and considering them equally with the cost saving from repealing or modifying the rule.

Of course, the Trump Administration has only pursued this strategy in stays of Obama-era rules.[171] It is unlikely that the Administration would do so when actually proposing to repeal or modify a rule (and hasn't done so to date). But in proposed repeals, the Trump Administration agencies have signaled that they might deemphasize certain categories of benefits by leaving them unquantified or unmonetized, might expand the categories of monetized costs, and might recalculate CBAs, modifying the estimates of benefits or costs to support their new policies. For example, when the Trump EPA proposed the repeal of the so-called Waters of the United States Rule, it left unquantified several categories of benefits that the Obama EPA had previously calculated.[172] In particular, while it admitted that the rule would benefit wetlands, it refused to provide an estimate of the value of these benefits, determining that the prior estimates relied on studies that were too old to provide meaningful guidance as to the value of these benefits.[173] In this case, the CBA supporting the Waters of the United States Rule had quantified and monetized these benefits, providing default benefit estimates that the agency could have used in its new analyses. Alternatively, agencies might seek to remove previously considered categories of benefits or include previously unconsidered categories of costs. Newly omitted benefits could include the indirect benefits of regulations, the consideration of which has been opposed by regulated entities. Newly expanded categories of costs might include job impacts of regulations.

By removing these categories of previously calculated benefits or by adding categories of costs that were previously not considered, an agency would improve the optics of the CBAs underlying its deregulatory actions. But even these decisions on details of CBA scope and the reliability of studies underlying estimates—generally granted substantial deference by courts—may be vulnerable, depending on the agency's rationale for its decisions. The prior CBA provides a powerful default for the appropriate scope and assumptions, and any deviations from this default would have to be explained. In the proposed repeal of the Waters of the United States rule, EPA *did* provide an explanation for its choices, one that courts are likely to scrutinize. In particular, it argued that the studies used to value wetlands protection were too old, creating uncertainty given improvements in statistical and economic methods and possible changes in public attitudes toward

[171] The agency's omission could already be problematic at this stage, as the stays themselves are challenged and the reasons underlying the stays are litigated. *See, e.g.*, Clean Air Council v. Pruitt, 862 F.3d 1 (D.C. Cir. 2017) (invalidating stay, but not on CBA grounds); Becerra v. DOI, Case No.17-cv-02376-EDL (N.D. Cal. Aug. 30, 2017). Even stays of regulations have costs (the foregone benefits of the regulation during the duration of the stay) and benefits (the delayed incidence of compliance and other costs). And it makes sense for the agency to consider such costs and benefits before deciding to freeze the implementation of final regulations

[172] *See* Economic Analysis at 8-11.

[173] *Id.* at 8-9.

nature protection.[174] Although courts are less likely to pass judgment on technical issues of scope, underlying methodology, and assumptions, there is evidence that EPA was inconsistent in its treatment of costs and benefits—as studies used to support the cost estimates were as old or older than studies used to support the benefits.[175] The repeal is thus vulnerable to challenge given the inconsistency in its explanation for departing from the prior CBA.

Similarly, agencies might remove previously considered categories of benefits such as the indirect benefits of regulation. For example, to support the repeal of the CPP, the new CBA included calculations that ignored all the indirect benefits (sometimes called "co-benefits") of reducing carbon emissions from power plants. Courts have held that the consideration of indirect costs is often necessary to reasoned decisionmaking unless precluded by statute.[176] This is no less true for indirect benefits.[177] Thus, many of these arguments will center on whether underlying statutes preclude consideration of indirect benefits.[178] But it seems reasonable that, unless the statute clearly and explicitly precludes the consideration of indirect benefits, such benefits (just as similar costs) must be considered, especially in cases where limited resources are not at issue given that the agency already calculated these benefits.[179]

But when the original rule failed to quantify or monetize some category of benefits or costs, the agency has more leeway to change its qualitative judgment of those impacts. In such cases, a new judgment that the unquantified benefits do not justify costs, for example, is much more difficult to challenge on judicial review. In its proposed rescission of the Hydraulic Fracturing on Federal and Indian Lands Rule, DOI failed to quantify and monetize any benefits,[180] focusing on only cost

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[174] *Id.*

[175] For a detailed description of inconsistencies in EPA's treatment of costs and benefits, see Jason Schwartz & Jeffrey Shrader, Muddying the Waters: How the Trump administration is obscuring the value of wetlands protection from the Clean Water Rule, Inst. For Pol'y Integrity Report (2017).

[176] *See* Michigan v. EPA, 135 S.Ct. 2699, 2707 (2015) (explaining that the advantages and disadvantages of regulation included not just direct compliance costs, but indirect "harms that regulation might do to human health or the environment"); Corrosion Proof Fittings v. EPA, 947 F.2d 1201, 1225 (5th Cir. 1991) (holding that EPA must consider the indirect safety effects of substitute options for car brakes when banning asbestos-based brakes under the Toxic Substances Control Act).

[177] *See* Richard L. Revesz, *Pruitt Would Like Us to Ignore the Indirect Benefits of Environmental Regulation*, SLATE.COM, June 13, 2018; *see also* Christopher C. DeMuth & Douglas H. Ginsburg, *Rationalism in Regulation*, 108 MICH. L. REV. 877, 888 (2010).

[178] So far, the D.C. Circuit has concluded that the consideration of indirect benefits is permissible when not expressly precluded by statute. *See U.S. Sugar Corp. v. EPA*, 830 F.3d 579, 625–26 (D.C. Cir. 2016).

[179] *See State Farm*, 463 U.S. at 43 (limiting an agency's consideration of an otherwise important factor only when the agency "has relied on factors which Congress has not intended it to consider"). *See also* discussion *infra* Part V.D.1.

[180] 82 Fed. Reg. 34464.

savings. But in this case, the original rule also failed to quantify and monetize benefits.[181] Because the benefits were not quantified, the initial judgment to proceed with the regulation was based on the agency's judgment of the value of the rule's requirements. It is easier to explain the agency's reversal given no change in the underlying evidence when the original analysis was qualitative and essentially relied on value judgments.

Finally, the Trump Administration might also encourage agencies to conduct new CBAs that recalculate the benefits and costs of regulations, subject to different valuations, assumptions, or methodologies. For example, in March 2017, President Trump signed Executive Order 13,783, withdrawing the technical documents prepared by the Interagency Working Group on the Social Cost of Greenhouse Gases,[182] leaving agencies without specific guidance for how to incorporate the social cost of greenhouse gases. This move signaled the possibility that the administration might encourage use of a different value for the environmental benefits of reducing greenhouse gases. Agencies could use different discount rates, underlying models, assumptions, and time horizons to recalculate benefits and costs. These changes could be based on policy preferences, new studies, or new information about the actual benefits and costs of implemented rules. As long as agencies explain departures from the prior CBAs and treat benefits and costs equally, courts are likely to uphold such reassessments. That said, the explanations must still be *reasoned* explanations. It remains to be seen how much bite this limitation will have in this context. Overall, the Trump Administration might be more successful in these cases, where the change in regulatory policy confronts the prior CBA and provides an alternative but reasonable view on the value of benefits and costs. This recognizes that agencies should be able to pursue different policy considerations that are supported by the underlying evidence or to change their assessments of costs and benefits over time as new evidence emerges. CBA updating norms and judicial review provide basic constraints to ensure that the reassessments still support rational agency decisionmaking.

IV. DEFENSE OF CBA-BASED REGULATORY STABILITY

As discussed, several forces—the prevalence of CBA-based agency decisionmaking, the hurdles inherent to CBA updating, and the nature of judicial review of policy changes—combine to generate a role for CBA in stabilizing regulatory policy. Whenever a new administration gains control of the White House, changes in regulatory priorities are expected and often desirable. But administrative law has created a system of rules in order to ensure that any changes in course are rational. CBA, once simply thought of as a tool of presidential control, fits into the administrative law landscape as a commitment device constraining the terms of future policy changes. Its substantive component confines

[181] 80 Fed. Reg. 16128.

[182] Exec. Order No. 13,783 § 5(b), 82 Fed. Reg. 16093 (Mar. 28, 2017).

presidential control through methodological norms and judicial review. Regulations that are grounded in analysis, even if the analysis invariably combines science with policy considerations, will be more difficult to change, hindering the agency's ability to change policy to perfectly align with new priorities or preferences. This Part responds to several challenges to the overall desirability of allowing CBA to play such a role in stabilizing regulatory policy.

A. Agency Bias

Some critics of agency rulemaking argue that agencies have a bias toward regulation or, at least, value the benefits of regulation more highly than society in general.[183] If this is true, then my account of CBA-based constraints on changes, especially deregulatory changes, could exacerbate this bias. Thus, one criticism of CBA-based regulatory stability is that it leads to fixed overregulation.

As an initial matter, there is no clear evidence that agencies have this sort of bias or, if they do, that current CBA-based constraints do not help to counteract it. Many of the perceived mechanisms for such a bias could work in the opposite direction [184] And in some cases, it is clear that agencies might need significant prodding to act—especially if, as this challenge assumes, my account that CBA actually constrains is correct. As one example, consider the aftermath of *Corrosion Proof Fittings*.[185] In that case, the Fifth Circuit ripped apart the CBA underlying EPA's decision to ban asbestos-based brakes under the Toxic Substances Control Act ("TSCA").[186] This decision significantly raised the bar for CBA under TSCA—so much so, that EPA never revisited the analysis underlying its effort to ban asbestos and, in fact, stopped using TSCA altogether to restrict chemicals.[187]

And even assuming that there is bias, the push toward high-quality CBA—one consequence of CBA-based constraints and judicial review—will limit the most burdensome policies and have a moderating effect on policy. In a paper, Yehonatan Givati and Matthew Stephenson present a model that describes how an

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[183] *See* Christopher C. DeMuth & Douglas H. Ginsburg, *White House Review of Agency Rulemaking*, 99 HARV. L. REV. 1075, 1080 (1986) (lamenting that regulation "tends to be excessively cautious (forcing investments in risk reduction far in excess of the value that individuals place on avoiding the risks involved)"); Yair Listokin, *Bounded Institutions*, 124 YALE L.J. 336, 369-70 (2014) (explaining why CBA would not correct this type of bias).

[184] *See* Nicholas Bagley & Richard L. Revesz, *Centralized Oversight of the Regulatory State*, 106 COLUM. L. REV. 1260, 1283-1305 (2006) (critically evaluating various theories of agencies' tendencies to overregulate); Michael A. Livermore & Richard L. Revesz, *Regulatory Review, Capture, and Agency Inaction*, 101 GEO. L.J. 1337, 1352 (2013) ("[F]or each claim there is a 'counter-cannon' that weighs in the opposite direction.").

[185] 947 F.2d 1201, 1225 (5th Cir. 1991).

[186] *Id.*

[187] In response to EPA's inaction, Congress in 2016 passed the Frank R. Lautenberg Chemical Safety for the 21st Century Act, amending several key provisions of the TSCA, in an effort to prod EPA into action. Time will tell whether this effort will be successful.

intermediate level of judicial review drives agencies to adopt moderate policies.[188] Although CBA was not the focus of their paper, CBA reliance triggers what I describe as intermediate review—not fully deferential but also not typically very aggressive.[189] Without CBA-based constraints (and related judicial review) that go both ways, each administration would impose its preferred policy. In such a regime, any "bias" during pro-regulatory administrations would be fully reflected in policies—and the inevitable swings would create uncertainty that would almost certainly reduce welfare. In other words, CBA could have its most dramatic consequences in constraining "biased" agencies as compared to any alternative decisionmaking framework. It allows such agencies to "commit" to cabining their bias somewhat and adopting their most preferred option *among CBA-justified options* in return for intermediate review and staying power. Overall, policies will tend to be more efficient for society than in a world without CBA.

B. Suboptimal Ossification

A related challenge is based on the ossification literature. One of the justifications for agency—as opposed to congressional—action is to promote flexibility, but CBA-based constraints could limit the agency's ability to react to new facts and values.[190] I call this regulatory stabilization, but others have referred to it as ossification.

Undoubtedly, there are costs and benefits to reducing an agency's ability to make unconstrained policy changes. This Article highlights the benefits of making these constraints via a commitment to CBA. CBA-based constraints introduce a narrow kind of ossification that balances responsiveness with stability in a predictable way. Regulated agencies can assess a regulation's staying power—and the reasonableness of their reliance on the regulation—by assessing the quality and persuasiveness of the CBA.[191] As facts on the ground change, CBA does not constrain agency responsiveness. And CBA does not interfere with agency responsiveness during emergency situations that are governed by statutory or APA procedures. The APA, for example, allows agencies to cite "good cause" under limited circumstances to temporarily reduce rulemaking procedures.[192] Instead,

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[188] *See* Yehonatan Givati & Matthew C. Stephenson, *Judicial Deference to Inconsistent Agency Statutory Interpretations*, 40 J. LEGAL STUD. 85, 86 (2011). In their model, when judicial review is too stringent or too deferential, agencies adopt highly partisan positions that are quickly reversed when a new administration takes control. Within that model, CBA could act like a commitment device that *triggers* an intermediate standard of review. If agencies care about the staying power of their regulations, then they might choose the most preferred CBA-justified position in order to trigger an intermediate level of review.

[189] *See* Cecot & Viscusi, *supra* note 21.

[190] *See, supra*, note 30.

[191] Aaron Nielson has recently argued that ossification can promote regulatory compliance by giving regulated parties some confidence in the regulation's staying power, making costly investments worthwhile. Nielson, *supra* note.

[192] APA. Whether that system is optimal is not the focus of this Article.

CBA-based constraints make taking quick action costly: the original analysis might not be very good—and it will be easier to change course as soon as the emergency ends or another administration takes over. This strikes me as a good thing. Hasty policies should not be sticky; only well-reasoned policies should be sticky.

C. Elections with Bounded Consequences

At worst, my account might suggest that, once Congress delegates administration of a statute, agencies are accountable to no one. Elections, meanwhile, should have consequences. President Trump was likely elected in part due to his deregulatory agenda.

Admittedly, the desirability of my account ultimately depends on one's beliefs about how the President, Congress, and the public interact to influence agency action and on one's theory of democratic accountability. First, CBA allows for changes supported by reasoned decisionmaking and transparent policy differences, while affording regulated parties and society valuable predictability and stability. Nothing in my account suggests, however, that elections shouldn't or wouldn't have consequences. Elections would still have consequences, but they would be moderated by commitments to CBA. Even Justice Rehnquist, concerned about democratic accountability in his partial dissent from the majority's opinion in *State Farm*, argued that "[a] change in administration brought about by the people casting their votes is a perfectly reasonable basis for an executive agency's *reappraisal of the costs and benefits of its programs and regulations*," "[a]s long as the agency remains *within the bounds established by Congress* . . . ."[193] CBA-based constraints are not inconsistent with Justice Rehnquist's view of the proper role of presidential influence on agency action. They can be thought of as the economic and accounting rules for "reapprais[ing] . . . costs and benefits" that keep the agency within the Congress-established APA bounds of reasonable agency action.[194] CBA constrains the swings—but it's still possible to move the meter a lot.[195]

Second, while democratic elections should have consequences, it does not follow that regulatory policy should swing with the preferences of the declared election winner. As long as the median voter is unlikely to shift dramatically between elections, this system does not result in a rejection of democratic principles—and may even enhance democracy through the transparency and accountability inherent in high-quality CBA-based decisionmaking. Thus, my account is also desirable under some theories of democracy if resulting policies actually align more with the median voter.

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[193] *Id.* at 59 (Rehnquist, J., concurring in part and dissenting in part) (emphasis added).

[194] There is always the possibility that Congress could specify a different decisionmaking rule for agencies in specific circumstances.

[195] Although not necessary to this argument, in my view society should be able to commit to constraining regulatory swings.

D. Undesirable Alternatives

Finally, if CBA truly does raise the cost of changing course *via rulemaking*, then does it encourage changing course through other less visible and less desirable means? There are two possibilities that I consider in this Section.[196] First, agencies might choose to justify deregulation based on narrower readings of statutory authority. If agencies can't adjust policies easily because of CBA-based constraints, then they might instead rely on legal arguments that get *Chevron* deference. Second, agencies might try to achieve deregulation through nonenforcement of federal law. If agencies can't adjust policies easily because of CBA-based constraints, then, if their goal is to deregulate, they might simply not enforce regulations. I argue that both of these critiques are overstated—or can at least be mitigated.

1. *Chevron* Slippage

This Article opens by discussing the Trump Administration's efforts to repeal the CPP. But whatever you think of the Trump EPA's CBA, the Trump Administration is not relying it to justify its repeal of the CPP. In fact, EPA argues that its policy change is actually based on a different interpretation of a provision underlying the CPP:

> EPA proposes a change in the legal interpretation as applied to section 111(d) of the Clean Air Act, on which the CPP was based, to an interpretation that is consistent with the Act's text, context, structure, purpose, and legislative history, as well as with EPA's historical understanding and exercise of its statutory authority.[197]

EPA's new interpretation of the *statutory* constraints in the Clean Air Act renders some of the CPP's requirements outside its authority.

Under administrative law principles, if the relevant agency action is a *legal* interpretation of a statute administered by that agency, then courts apply what's known as "*Chevron* deference" to evaluate the agency's action. Under the *Chevron* doctrine, if the statutory provision is ambiguous (Step One), then the court will defer to any reasonable agency interpretation (Step Two).[198] Presumably it wouldn't

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[196] I start from the premise that there exists a regulation that a later administration would like to modify. I, therefore, do not consider the possibility that agencies might shift to modifying policies by guidance, which is not subject to CBA requirements, because courts have generally held that agencies are not allowed to modify regulations via guidance.

[197] EPA, Proposed Repeal of the Clean Power Plan, 82 Fed. Reg. 48035, 48036 (Oct. 16, 2017).

[198] *See* Chevron U.S.A. Inc. v. Nat. Res. Def. Council, Inc., 467 U.S. 837, 842–43 (1984) ("When a court reviews an agency's construction of the statute which it administers, it is confronted with two questions. First, always, is the question whether Congress has directly spoken to the precise question at issue. If the intent of Congress is clear, that is the end of the matter; for the court, as

matter if the new interpretation leads to an admittedly welfare-reducing change in policy, prior or new CBAs notwithstanding, as long as it is a "reasonable interpretation" of the statutory language.

This potentially large difference in the level of review—*Chevron* deference versus *State Farm*'s "hard look" review—based on the agency's description of what it is doing could result in agencies painting their actions more in terms of legal interpretations than in terms of differences in the value of policy to society. Such a shift would be undesirable as it would sidestep deliberation on the key factual and policy disputes that drive the agency's action. For one, it would reduce accountability because the underlying policy preferences, couched as issues of statutory interpretation, would be less explicit. Second, it would limit the effect of debate on the desirability of different policies during the notice-and-comment process. When the agency action is based on an assessment of costs and benefits, the notice-and-comment feature ensures that issued regulations reflect deliberative and informed decisionmaking by eliciting information that could shed light on the relevant effects. Finally, an agency should have to defend its policy by defending the goals and the ability of the policy to achieve those goals—not defend its preferred method of figuring out the contours of, arguably, a legal fiction: that Congress truly had anything more specific in mind than a desire for the agency to use its expertise to act in the public interest on some technical issue.

One way to reduce this distortionary difference in level of review is to apply the *State Farm* analysis under *Chevron*'s Step Two, which is when the court determines whether the agency's interpretation is permissible or reasonable. In other words, *Chevron* Step Two's reasonableness inquiry would encompass "arbitrary and capricious" review, so that courts could refuse to give *Chevron* deference to an interpretation that would not pass muster under the *State Farm* analysis. This would force agencies to clearly articulate and defend policy preferences and—to the extent that these preferences rely on some faulty or misguided assumptions—allow their policy preferences to shift based on new information.

The nature of the analysis at *Chevron*'s Step Two has been the subject of significant scholarly attention and dispute. Ronald Levin first powerfully proposed merging *Chevron*'s Step Two with *State Farm*.[199] In his view, there is no distinct dividing line between agency interpretation and policymaking that warrants any

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well as the agency, must give effect to the unambiguously expressed intent of Congress. If, however, the court determines Congress has not directly addressed the precise question at issue, the court does not simply impose its own construction on the statute, as would be necessary in the absence of an administrative interpretation. Rather, if the statute is silent or ambiguous with respect to the specific issue, the question for the court is whether the agency's answer is based on a permissible construction of the statute.").

[199] Ronald M. Levin, *The Anatomy of* Chevron*: Step Two Reconsidered*, 72 CHI.-KENT L. REV. 1253, 1254-55 (1997).

different treatment.[200] Over the years, some prominent scholars have agreed with Levin's argument,[201] while others have been hesitant to fully embrace the simplification.[202] Recently, Catherine Sharkey has reinvigorated this proposal in light of recent Supreme Court decisions.[203] Sharkey points to cases such as *Judulang v. Holder*[204] and *Encino Motorcars*[205] as signaling a "subtle yet momentous shift" toward implementing *State Farm* analysis at *Chevron*'s Step Two.[206] In her restatement, an agency would not get *Chevron* deference for its resolution of ambiguities "unless it can articulate a *policy* basis for that resolution that can meet the standards of *State Farm*."[207]

If the Supreme Court goes in this direction, then it would close this potential loophole and increase transparency of policy-based preferences. Applied to the CBA context, the proposal would be implemented as follows: A court would decide whether a "legal" interpretation about ambiguous statutory authority is reasonable by looking at the agency's CBA, which evaluates the welfare effects of the interpretation. An interpretation that admittedly results in net costs to society should be more likely to be deemed an unreasonable one in light of overall welfare-enhancing purposes of most statutes. [208]

In practice, however, courts have generally deferred to agencies under a broad range of circumstances,[209] even if the new interpretation might be less efficient from an economic perspective, and have rejected a *State Farm* analysis in some of these cases.[210] Many scholars have noted the increasing disdain for the

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[200] *Id.*

[201] *See, e.g.*, RICHARD J. PIERCE, JR., ADMINISTRATIVE LAW TREATISE § 7.4, at 604 (5th ed. 2010) ("[T]he question whether an agency engaged in reasoned decision-making within the meaning of *State Farm* often is identical to the question a court must answer under step two of the test announced in Chevron . . . —is an agency's construction of an ambiguous provision in an agency-administered statute reasonable?").

[202] *See, e.g.*, Cary Coglianese, Chevron*'s Interstitial Steps*, 85 GEO. WASH. L. REV. 1339, 1343 (2017); Kenneth A. Bamberger & Peter L. Strauss, *Chevron's Two Steps*, 95 VA. L. REV. 611, 624–25 (2009); Matthew C. Stephenson & Adrian Vermeule, *Chevron Has Only One Step*, 95 VA. L. REV. 597, 602 (2009).

[203] Catherine M. Sharkey, *Cutting in on the* Chevron *Two-Step*, 86 FORD. L. REV. 2359 (2018).

[204] 565 U.S. 42 (2011).

[205] 136 S. Ct. 2117 (2016) (holding that an arbitrary and capricious regulation "receives no Chevron deference"). *See also* Michigan v. EPA, 135 S. Ct. 2699 (2015) (majority and dissent broadly supportive of agency accounting of welfare impacts of regulation).

[206] Sharkey, *supra* note 169, at 2368.

[207] *Id.* at 2388-89.

[208] Courts could even define "reasonable" interpretations as those that are net beneficial to society and can be supported by some informal CBA.

[209] Reversals at Step Two are rare. *See, e.g.*, Kent Barnett & Christopher J. Walker, Chevron *in the Circuit Courts*, 116 MICH. L. REV. 1, 34 (2017).

[210] For example, Sharkey points to *Catskill Mountains Chapter of Trout Unlimited, Inc. v. EPA*, 846 F.3d 492 (2d Cir. 2017). The district court had applied a *State Farm* analysis at *Chevron* Step Two, but on appeal the Second Circuit reversed, holding that the district court erred in incorporating the stricter *State Farm* analysis into its *Chevron* Step Two analysis.

Chevron doctrine by members of the Supreme Court. Justice Gorsuch, for example, has complained that *Chevron* deference enables an agency to "reverse its current view 180 degrees anytime based merely on the shift of political winds and still prevail."[211] Applying *State Farm* analysis at *Chevron*'s Step Two is one way to limit the range of discretion that *Chevron* seems to sanction by focusing on the welfare effects of the policy and the reasonableness of the underlying factual findings, summarized in an agency's CBA. This focus on CBA would alleviate Justice Gorsuch's concerns about *Chevron* deference, promoting regulatory stability around reasonable policies through the operation of the CBA-based constraints.[212]

2. Nonenforcement

A related concern is that if agencies cannot easily modify regulatory stringency because of CBA-based constraints, then they might seek to change the *de facto* regulatory stringency by changing their enforcement strategies. According to a rational actor model, firms comply with environmental regulations in order to avoid civil and criminal penalties. In particular, a firm will decide whether to comply with environmental regulations by comparing the expected cost of compliance with the expected cost of noncompliance (probability of detection multiplied by the amount of the penalty). If an agency wants to make regulations less (more) stringent, it would reduce (increase) enforcement efforts and lead to less (more) regulatory compliance. Arguably, this is a less desirable approach to changing regulatory stringency because it is less visible.[213]

This concern has been heightened in the context of environmental regulation. Historically, EPA enforcement has been sensitive to perceived preferences of the President and Congress.[214] More so than in the rulemaking context, Presidents and federal agencies have historically enjoyed significant discretion when it came to enforcement policy. And for good reason: an agency like EPA simply does not have the resources to comprehensively investigate all entities under the purview of federal environmental law. This discretion means that the Administration could significantly curtail enforcement efforts without many legal obstacles. And in fact, the Administration has been open about its hands-off approach to federal

[211] *See, e.g.*, Gutierrez-Brizuela v. Lynch, 834 F.3d 1142, 1152 (10th Cir. 2016) (Gorsuch, J., concurring).

[212] This solution, however, might not be appealing to those who oppose *Chevron* deference due to its perceived threats to individual liberty and democratic accountability, as part of a wider attack on the administrative state. *See generally* Lisa Heinzerling, *The Power Canons*, 58 WM. & MARY L. REV. 1933 (2017). This solution would still authorize broad agency action as long as it is CBA-justified.

[213] Matthew D. Zinn, *Policing Environmental Regulatory Capture: Cooperation, Capture, and Citizen Suits*, 21 Stan. Envtl. L.J. 81 (2002).

[214] JOEL MINTZ, ENFORCEMETN AT THE EPA (2012).

environmental enforcement.[215] A *New York Times* report, analyzing data on EPA-led formal enforcement actions, suggests this hands-off approach has been implemented.[216]

But environmental enforcement is not that simple. Many environmental statutes are organized under a principle of "cooperative federalism," where the federal government issues national standards and then works together with states to implement and enforce those standards. Some statutes, such as the Clean Water Act, outline a process by which states could seek "authorization" in order to take control of implementation and enforcement of environmental regulations.[217] Others, such as the Clean Air Act, require states to develop implementation plans that include enforcement programs.[218] Forty-seven states are authorized to enforce the Clean Water Act, and all states primarily enforce the Clean Air Act.[219] In other words, enforcement is primarily driven by states.

What might this mean for overall enforcement and compliance? It is difficult to say. On the one hand, the scholarly literature has argued that the federal government's role in environmental enforcement is minimal.[220] If so, states will continue to enforce environmental law as they please, regardless of the federal government's enforcement efforts. On the other hand, there is literature on state tendencies to skimp on enforcement when, for example, the benefits accrue to other states.[221] To the extent it gives states more freedom to allocate their enforcement resources, a hands-off federal enforcement policy could exacerbate these and other tendencies.[222] In other words, it might give states *more freedom* to enforce federal environmental law according to their preferences. To those that generally prefer state control in this area, this might be a good thing. It might tailor regulations more to local conditions and enhance the net benefits of federal regulation. To those generally skeptical of state control, this might not be a good thing. It could make

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[215] *See, e.g.*, EPA, FY 2018 EPA BUDGET IN BRIEF (May 2017), https://www.epa.gov/sites/production/files/2017-05/documents/fy-2018-budget-in-brief.pdf (calling for significant reductions to EPA's enforcement budget); SUSAN PARKER BODINE, INTERIM OECA GUIDANCE ON ENHANCING REGIONAL-STATE PLANNING AND COMMUNICATION ON COMPLIANCE ASSURANCE WORK IN AUTHORIZED STATES (Jan. 2, 2018) (outlining a more hands-off approach to federal enforcement).

[216] *See* Eric Lipton & Danielle Ivory, *Under Trump, E.P.A. Has Slowed Actions Against Polluters, and Put Limits on Enforcement Officers*, N.Y TIMES (Dec. 10, 2017).

[217] *See, e.g.*, 33 U.S.C. § 1342.

[218] *See, e.g.*, 42 U.S.C. § 7410.

[219] Massachusetts, New Hampshire, and New Mexico are not authorized to enforce the Clean Water Act. Idaho received authorization to enforce the Clean Water Act in June 2018.

[220] *See, e.g.*, Victor B. Flatt, *A Dirty River Runs Through It (The Failure of Enforcement in the Clean Water Act)*, 25 BOSTON COLLEGE ENVTL. AFF. L. REV. 1 (1997); Daniel A. Farber, *Taking Slippage Seriously: Noncompliance and Creative Compliance in Environmental Law*, 23 HARV. ENVTL. L. REV. 297, 303–04 (1999).

[221] *See, e.g.*, Hilary Sigman, *Transboundary Spillovers and Decentralization of Environmental Policies*, 50 J. ENVTL. ECON. & MGMT. 82 (2005).

[222] [Placeholder]

capture by powerful local interests more likely or exacerbate exposures to environmental harms faced by disadvantaged groups.

The source of this type of response is presidential and agency enforcement discretion—and such discretion is unlikely to go away. To the extent CBA-based constraints encourage more drastic uses of enforcement discretion, there are other actors that might constrain the overall effectiveness of this strategy. These would include citizen suits, which are authorized under many environmental statutes; other litigation strategies based on state common law; public pressure, especially if significant regulatory noncompliance is visible; and market-based drivers toward regulatory compliance, such as incentives to obtain lower insurance premiums.[223]

CONCLUSION

CBA was once considered a tool for implementing conservative regulatory policies in part because benefits—which could justify increasing the stringency of regulations—were difficult to monetize. As advancements have been made in monetization, CBA has shed some of its conservative associations and achieved more nonpartisan support. In fact, when the analysis is deployed thoughtfully, this Article argues that CBA—a limit on irrational government action—is as much a limit on deregulation as it is a limit on regulation. In fact, CBA might be the unlikely champion for many progressives seeking to derail the Trump Administration's deregulatory agenda and preserving at least some of the Obama Administration's regulatory legacy. If any rules are vulnerable to modification, repeal, or replacement, it is Obama-era rules that were not supported by thorough CBAs.

This Article argues that ultimately the increased acceptance of CBA should be applauded by all, regardless of political affiliation. In particular, recognition of the potential stabilizing influence of CBA on agency decisionmaking should incentivize more thorough analysis, more research into accurate assessments of costs and benefits, and appropriate retrospective review of existing regulations. The theory of delegating to the agency is that what society loses in accountability, it gains in expertise and in flexibility to respond to changes on the ground. CBA works well to ensure that we fully utilize agency expertise while still providing flexibility to respond to real changing facts and values. And it does so while promoting accountability in this system by making it easier for presidential oversight and (CBA-bounded) control, especially when values play an important role in policymaking, and by forcing decisions to be transparent, allowing stakeholders to participate in the rulemaking and litigate if necessary. Overall, by encouraging rational decisionmaking and reasonable updating, CBA and judicial review of CBA

[223] [Placeholder]

promotes predictability and plays a desirable role in stabilizing regulatory policy across presidential administrations.