DEREGULATORY COST-BENEFIT ANALYSIS AND REGULATORY STABILITY

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ABSTRACT

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, especially in more complete 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: reasonable regulatory stability. In particular, a regulation based on a well-supported 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 findings of fact, which are summarized in a CBA, and they require justifications when an agency changes course in ways that contradict its previous factfinding. A prior CBA provides a powerful reference point; any updated CBA supporting a new course of action will naturally be compared against the prior CBA, and the agency will

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need to explain any changes in CBA inputs, assumptions, and methodology. The second reason relates to the nature of CBA. By focusing on the incremental costs and benefits of a proposed change, CBA 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 rationally support. CBA thus promotes regulatory stability around transparent and increasingly efficient policies.

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

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INTRODUCTION

In October 2015, President Barack 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 costs and benefits—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 would be significantly better off under the CPP to the tune of $22.6 billion worth of net health and safety benefits each year in likely scenarios.[3]

But elections have consequences—and President Donald 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, President Trump issued several executive orders directing agencies to follow through on those promises.[5] On the chopping block were several EPA regulations, including the Waters of the United

1. *See* Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 80 Fed. Reg. 64,662 (Oct. 23, 2015) (to be codified at 40 C.F.R, pt. 60).

2. *See* EPA, REGULATORY IMPACT ANALYSIS FOR THE CLEAN POWER PLAN FINAL RULE, EPA-452/R-15-003 (Aug. 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 monetized benefits estimate included in the Rule's *Federal Register* notice, using a 3 percent discount rate and reflecting 2016 dollars updated according to the Consumer Price Index.

4. *See* Press Release, Donald J. Trump, Donald Trump's Contract with the American Voter (Oct. 22, 2016), https://assets.donaldjtrump.com/_landings/contract/O-TRU-102316-Contractv02.pdf [https://perma.cc/98VH-BWGJ].

5. *See, e.g.*, Exec. Order No. 13,783, 82 Fed. Reg. 16,093 (Mar. 31, 2017); Exec. Order No. 13,778, 82 Fed. Reg. 12,497 (Mar. 3, 2017); Exec. Order No. 13,777, 82 Fed. Reg. 12,285 (Mar. 1, 2017).

States Rule,[6] the Methane 111(b) Rule,[7] the Landfill Rule,[8] the Steam Electric Effluent Limitation Guidelines Final Rule,[9] and the Risk Management Plan Rule Amendments.[10] According to their CBAs, these rules were expected to provide at least $350 million in net monetized benefits to society each year.[11]

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, one that summarized the expected costs and benefits 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] Notably,

6. Clean Water Rule: Definition of "Waters of the United States," 80 Fed. Reg. 37,054 (June 29, 2015) (to be codified at 33 C.F.R. pt. 328 and scattered parts of 40 C.F.R.). EPA has proposed repeal of this rule, *see* Definition of "Waters of the United States"—Recodification of Pre-Existing Rules, 82 Fed. Reg. 34,899 (proposed July 27, 2017) (to be codified at 33 C.F.R. pt. 328 and scattered parts of 40 C.F.R.), and proposed a revised rule to take its place, *see* Revised Definition of "Waters of the United States," 84 Fed. Reg. 4,154 (Feb. 14, 2019).

7. Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources, 81 Fed. Reg. 35,824 (June 3, 2016) (to be codified at 40 C.F.R. pt. 60) (currently stayed at 82 Fed. Reg. 25,730).

8. Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills, 81 Fed. Reg. 59,276 (Aug. 29, 2016); 81 Fed. Reg. 59,331 (Aug. 29, 2016) (currently stayed at 82 Fed. Reg. 24,878).

9. Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category, 80 Fed. Reg. 67,838 (Nov. 3, 2015) (currently stayed).

10. Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act, 82 Fed. Reg. 4,594 (Jan. 13, 2017) (to be codified at 40 C.F.R. pt. 68). EPA has proposed repeal of this rule. *See* Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act, 83 Fed. Reg. 24,850 (May 30, 2018) (to be codified at 40 C.F.R. pt. 68).

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 percent discount rate where possible and reflecting 2016 dollars updated according to the Consumer Price Index. The numbers do not include unquantified benefits, which were often deemed "important" in the CBA notwithstanding the agency's failure to quantify or monetize them. *See, e.g.*, Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act, 82 Fed. Reg. 4,594, 4,598 (EPA Jan. 13, 2017) (codified at 40 C.F.R. pt. 68) ("However, the monetized impacts omit many important categories of accident impacts including lost productivity, the costs of emergency response, transaction costs, property value impacts in the surrounding community (that overlap with other benefit categories), and environmental impacts.").

12. *See* Approval and Promulgation of Air Quality Implementation Plans; Virginia; Amendment to Ambient Air Quality Standard for Ozone, 82 Fed. Reg. 48,035 (Oct. 16, 2017) (to be codified at 40 C.F.R. pt. 52).

13. *See* EPA, REGULATORY IMPACT ANALYSIS FOR THE REVIEW OF THE CLEAN POWER PLAN: PROPOSAL, EPA-452/R-17-004 (Oct. 2017).

14. *Id.* at 13.

however, the estimated net losses of repeal were calculated to be significantly lower than the net benefits initially calculated by President Obama's EPA. That is 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 the costs and diminishing the benefits of the regulation.[15] And, once finalized, the repeal of the CPP will likely be challenged in court as demonstrating EPA'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, courts will require the Trump EPA to explain its changes. The difficulty of this task will depend in part on how well reasoned and complete the original, Obama-era 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 that slows down or blocks regulation.[17] CBA has also been described 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.

Administrative law has developed certain rules ensuring that when agencies change course based on a new assessment of underlying

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15. *See, e.g.*, Karl Hausker, *The Flawed Analysis Behind Trump Administration's Proposed Repeal of the Clean Power Plan*, WORLD RES. INST. (Oct. 16, 2017), https://www.wri.org/blog/2017/10/flawed-analysis-behind-trump-administrations-proposed-repeal-clean-power-plan [https://perma.cc/JM3M-63PQ]; Richard L. Revesz & Jack Lienke, *The E.P.A.'s Smoke and Mirrors on Climate*, N.Y. TIMES (Oct. 9, 2017), https://www.nytimes.com/2017/10/09/opinion/environmental-protection-obama-pruitt.html [https://perma.cc/4AK7-FLVG].

16. 5 U.S.C. § 706(2)(A) (2012).

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 9–12 (Nov. 12, 1984); David Hoffman, *Election '84: The Reagan Record*, WASH. POST, Jan. 31, 1984, at A6.

18. *See, e.g.*, Elena Kagan, *Presidential Administration*, 114 HARV. L. REV. 2245, 2277–86 (2001); *see generally* Mathew D. McCubbins, Roger G. Noll, & Barry R. Weingast, *Administrative Procedures as Instruments of Political Control*, 3 J.L. ECON. & ORG. 243 (1987) (discussing how procedural requirements can facilitate political control by Congress and the president); Eric A. Posner, *Controlling Agencies with Cost-Benefit Analysis: A Positive Political Theory Perspective*, 68 U. CHI. L. REV. 1137 (2001) (analyzing "cost-benefit analysis as a method by which the President, Congress, or the judiciary controls agency behavior").

facts, they provide a reasonable explanation for the change.[19] This requirement protects reliance interests and ensures good governance.[20] A CBA, in essence, provides a summary of the underlying facts that support an agency's decision. In this context, the existence of CBAs supporting the original rules—which I refer to as "prior CBAs"—poses unique challenges for a new administration's efforts 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] and those CBAs will be scrutinized by courts for their reasonableness.[22]

Although courts typically give deference to agency CBAs in the first instance,[23] any new CBA will be judged against a prior CBA in the administrative record. This comparison will highlight the changes made by the agency in justifying the new rule, and each change requires explanation. Many Obama-era regulations that have been targeted for repeal by the Trump administration were supported by CBAs that demonstrated large net benefits to society overall. Trump-era agencies will have to ground their modifications in scientific evidence that supports different input values, in changed conditions that motivate different methodological assumptions, or in transparent disagreements on policy. Although some inputs that make up a high-quality CBA

19. *See, e.g.*, FCC v. Fox Television Stations, Inc., 556 U.S. 502, 515–16 (2009); Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43–44 (1983). For a comprehensive discussion about administrative law rules that apply to deregulation and about the abuse of those rules under the Trump administration, see generally Robert L. Glicksman & Emily Hammond, *The Administrative Law of Regulatory Slop and Strategy*, 68 DUKE L.J. 1651 (2019); Bethany A. Davis Noll & Denise A. Grab, *Deregulation: Process and Procedures that Govern Agency Decisionmaking in an Era of Rollbacks*, 38 ENERGY L.J. 269 (2017). Of course, these administrative law constraints do not apply to Congress. In 2017, Congress used the Congressional Review Act to eliminate fourteen Obama-era rules, notwithstanding CBA. *See* Dylan Scott, *The New Republican Plan to Deregulation America, Explained*, VOX (Apr. 25, 2018, 9:30am EDT), https://www.vox.com/policy-and-politics/2018/4/25/17275566/congressional-review-act-what-regulations-has-trump-cut [https://perma.cc/38RK-EED3].

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

21. Under Executive Order No. 12,866, executive agencies are required to conduct CBA for significant regulations. *See* Exec. Order No. 12,866, 3 C.F.R. 638 (1994). If a regulation required CBA, then its repeal will generally also require CBA.

22. *See* 5 U.S.C. § 706(2)(A) (2012).

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, 1761–62 (2007). *See* Dylan Scott, *The New Republican Plan to Deregulation America, Explained*, VOX (Apr. 25, 2018, 9:30am EDT), https://www.vox.com/policy-and-politics/2018/4/25/17275566/congressional-review-act-what-regulations-has-trump-cut [https://perma.cc/38RK-EED3].

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] The Trump EPA cannot, however, estimate the value at zero.[25] In this way, a well-supported, 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: reasonable regulatory stability.[26] Scholars have argued that agency procedures, especially when reviewed by courts, have significant costs—for example, they can constrain responsiveness and delay action—that might outweigh any benefits those procedures have in improving decisionmaking.[27] Simply put, the argument is that the potential for

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24. *See, e.g.*, 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, 1–19 (2016); Peter Howard & Jason Schwartz, *Think Global: International Reciprocity as Justification for a Global Social Cost of Carbon*, 42 COLUM. J. ENVTL. L. 203, 203–95 (2017); Arden Rowell, *Foreign Impacts and Climate Change*, 39 HARV. ENVTL. L. REV. 371, 371–421 (2015).

25. *See* Ctr. for Biological Diversity v. NHTSA, 538 F.3d 1172, 1181–82 (9th Cir. 2008) (holding that the National Highway Traffic Safety Administration ("NHTSA") cannot value carbon-emission reductions at zero 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, 66,496 (Dec. 15, 2009) (codified at 40 C.F.R. ch. I) ("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. Recently, Aaron L. Nielson 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, 90–93 (2018). For other related literature, see Nina A. Mendelson, *Agency Burrowing: Entrenching Policies and Personnel Before a New President Arrives*, 78 N.Y.U. L. REV. 557, 616–60 (2003) (arguing that there are benefits to agency "entrenchment" or "burrowing" actions before a new administration, such as "midnight" rulemaking and late-term hiring); Stuart Shapiro, *Embracing Ossification*, 41 REG. 8, 10 (2018-2019) (arguing that views about the benefits of ossification depend on whether one's regulatory preferences align with the administration's preferences); William W. Buzbee, *The Tethered President: Consistency and Contingency in Administrative Law*, 98 B.U. L. REV. 1357, 1390–1412 (2018) (describing how various doctrines in administrative law promote regulatory stability).

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, 394–95 (2000);

CBA to constrain agency action is itself a *cost* of CBA. And that is undoubtedly true. But this potential to constrain is also a *benefit* of CBA. In fact, the benefits of CBA-based constraints are likely to outweigh their costs.

Unconstrained agency responsiveness could be beneficial, but it could also be hasty, unpredictable, or unstable. CBA does constrain some agency action and reduce 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. Further, the idea of net-beneficial action is a dynamic concept, and what supports such action evolves based on the available evidence. But a world in which agency decisionmaking is driven by CBA is necessarily a world in which potential shifts away from current regulatory policy are more limited, especially when the existing 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 stickiness—as opposed to stickiness around arbitrary or unpredictable policies—is likely to be more desirable than unconstrained agency action. Although an agency that is untethered by CBA can be more responsive, its actions are less likely to be efficient, generating significant costs of over- and underregulation. 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 implementing the policies and converting those effects into dollar values.[28] Agencies increasingly rely on CBA to support rulemakings, propelled by their obligations under the Administrative Procedure Act

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Thomas O. McGarity, *The Courts and the Ossification of Rulemaking: A Response to Professor Seidenfeld*, 75 TEX. L. REV. 525, 529–30 (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").

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).

("APA") to act rationally,[29] their statutory directives to analyze costs and benefits,[30] and applicable executive orders dating back to President Ronald Reagan that require 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 CBA plays when an agency changes course. Simply put, the original CBA wields significant influence. First, judicial review of agency CBA constrains the changes that are available to that agency. Although courts are generally deferential when first encountering a CBA, courts are likely to subject an *updated* CBA to more scrutiny—not because they are legally obligated to review a new CBA more thoroughly, but because the prior CBA acts as an important reference point from which the agency must explain any changes. The prior CBA, after all, provides a succinct summary of the underlying facts that the agency previously found compelling. Second, CBA norms constrain future changes. 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 that justifies the policy. Rules with CBAs that have become obsolete—whether due to different estimates of health, safety, or environmental risks and their value or due to different costs associated with mitigating those risks—are ripe for CBA-based updating. But more recent CBA-based rules are more difficult to alter in any dramatic, and still cost-benefit-justified, way because the available evidence is unlikely to have changed significantly. This effect

29. *See* 5 U.S.C. § 706(2)(A) (2012).

30. *See, e.g.*, Section 1412 of the Safe Drinking Water Act, 42 U.S.C. § 300g–1(b)(3)(C)(i) (2012) (requiring EPA to calculate the "incremental costs and benefits associated with each alternative maximum contaminant level considered" and consider these costs and benefits when establishing a maximum contaminant level); Section 112(n)(1)(A) of the Clean Air Act, 42 U.S.C. § 7412(n)(1)(A) (2012) (requiring a comparison of costs and benefits according to the Supreme Court's interpretation, *see* Michigan v. EPA, 135 S. Ct. 2699, 2707 (2015)).

31. *See, e.g.*, Exec. Order No. 13,563, 76 Fed. Reg. 3821 (Jan. 21, 2011); Exec. Order No. 12,866, 58 Fed. Reg. 51,735 (Oct. 4, 1993); Exec. Order No. 12,291, 46 Fed. Reg. 13,193 (Feb. 19, 1981).

constrains the timing of policy swings, making it less likely that regulations 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. These critiques include concerns that CBA constraints exacerbate agency bias toward rulemaking, limit agency flexibility, make elections meaningless, reduce accountability, and promote deregulation by other means. Most importantly, this Article addresses whether, in light of CBA-based constraints, an agency might pursue its goals—regulatory *or* deregulatory—by avoiding CBA-based justifications altogether. That is, instead of arguing that its new policy reflects better standards or decisionmaking, an agency might shift to arguing about statutory authority—namely, that the arguably "better" policy, as viewed from a CBA perspective, is not authorized by Congress. 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 exceeds 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 for interpretive instability. Moreover, CBA can play a role in *mitigating* such instability. Courts give deference to agencies' interpretations of their own authority, but it is not clear that such deference should extend to agency interpretations that limit their ability to promulgate welfare-enhancing policies that would be allowable under other statutory interpretations. Overall, this Article argues that CBA's stabilizing role withstands these criticisms and, further, that it is likely to reduce concerns about agency bias and enhance accountability through transparency.

32. *See* Approval and Promulgation of Air Quality Implementation Plans; Virginia; Amendment to Ambient Air Quality Standard for Ozone, 82 Fed. Reg. 48,035, 48,036 (Oct. 16, 2017) (to be codified at 40 C.F.R. pt. 52).

33. *See, e.g.*, Definition of "Waters of the United States"—Recodification of Pre-Existing Rules, 82 Fed. Reg. 34,899 (July 27, 2017) (to be codified at 33 C.F.R. pt. 328 and scattered parts of 40 C.F.R.).

I. AGENCY COST-BENEFIT ANALYSIS

A. Practice

Since 1981, when President Reagan issued Executive Order 12,291,[34] all federal executive agencies have conducted CBA, making it a staple of important U.S. regulatory policy developments. Pursuant to Reagan's Order, all "major" rules—that is, all regulations likely to have an annual effect on the economy of $100 million or more—must be accompanied by a CBA.[35] CBA is a decisionmaking procedure that has its origins in welfare economics. Economic theory identifies the socially desirable level of environmental quality as the level that maximizes the 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) into a monetary scale.[36] In fact, Reagan's Order required agencies 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 support President Reagan's deregulatory agenda by preventing the issuance of regulations, most of which were thought to be net costly.[38]

Not surprisingly, given the administration's motivations, Reagan's CBA requirement was met with considerable criticism and skepticism from scholars and proregulatory groups.[39] In particular, because many health and environmental regulations affect nonmarket 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

34. Exec. Order No. 12,291, 46 Fed. Reg. 13,193 (Feb. 19, 1981).

35. *Id.* § 1(b). The currently applicable order, Executive Order 12,866, applies CBA to "[s]ignificant regulatory action[s]," 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. Exec. Order No. 12,866, 58 Fed. Reg. 51,735 (Oct. 4, 1993).

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, 58 Fed. Reg. 51,735 (Oct. 4, 1993).

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

39. *See* Granetz, *supra* note 17; Hoffman, *supra* note 17.

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

prevent agencies from issuing regulations that would actually be beneficial. The early CBAs, which left large categories of benefits unquantified, appeared to confirm some of these fears.[41] But it is unclear how much agencies actually relied on these CBAs and whether it would have been sensible for them to do so. And, in at least a few cases, early well-supported CBAs actually convinced regulators to issue more stringent regulations.[42] Moreover, CBA made the regulatory process more transparent.

Perhaps that is why President Bill Clinton did not abandon the CBA requirement. He did, however, replace Reagan's Order with his own—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] Clinton's Order also placed more emphasis on accountability, providing several additional ways that transparency would be preserved during the White House review process.[45] Further, it explicitly recognized "that some costs and benefits are difficult to quantify."[46]

President Clinton's version of White House review of CBA requirements has had staying power. Presidents George 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

41. *See generally* Robert W. Hahn & Patrick M. Dudley, *How Well Does the U.S. Government Do Benefit-Cost Analysis?*, 1 REV. ENVTL. ECON. & POL'Y 192 (2007) (examining "how benefit-cost analysis is actually performed by U.S. government agencies" by assessing CBAs of EPA regulations from the Reagan, Bush, and Clinton administrations).

42. One example is the Reagan administration's imposition of a stricter standard for phasing out lead in gasoline based on the results of CBA. *See Statement of Christopher DeMuth*, *in* AMERICAN ECONOMIC POLICY IN THE 1980S 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 that CBA and the resulting standard, see Albert L. Nichols, *Lead in Gasoline*, *in* ECONOMIC ANALYSES AT EPA: ASSESSING REGULATORY IMPACT 49–86 (Richard D. Morgenstern ed., 1997).

43. Exec. Order No. 12,866, 58 Fed. Reg. 51,735 (Oct. 4, 1993).

44. *Id.* § 1.

45. *Id.* § 6(b).

46. *Id.* § 1(b)(6).

47. Exec. Order No. 13,563, 76 Fed. Reg. 3,821 (Jan. 21, 2011); Exec. Order No. 13,422, 72 Fed. Reg. 2,763 (Jan. 23, 2007), revoked by Exec. Order No. 13,497, 74 Fed. Reg. 6,113 (Feb. 4, 2009).

48. *See* Exec. Order No. 13,777, 82 Fed. Reg. 12,285 (Mar. 1, 2017). That said, President Trump has directed agencies to fulfill additional requirements, such as repealing at least two existing regulations before issuing a new regulation and imposing a regulatory budget that caps

of a few decades, CBA has, in large part, shed its antiregulatory association. It has instead emerged as one of several tools for presidential oversight of agencies—in particular, one that promotes transparency and rational agency decisionmaking.

Although there is no counterfactual against which to measure CBA's effect, 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, significantly improving the quality of benefit estimates overall and especially in the environmental context.[49] In recent years, CBA has been effectively used to justify many stringent environmental regulations, including those aimed at mitigating climate change; this development has led 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 Obama administration, these agencies issued significant rules in which monetized benefits *greatly* exceeded monetized 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, a 2017 bill considered by Congress would have, among other things, codified 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

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total incremental regulatory costs. These additional requirements are unlikely to improve welfare and might hinder some of the goals of CBA. *See generally* Caroline Cecot & Michael A. Livermore, *The One In, Two Out Executive Order Is a Zero*, 166 U. PA. L. REV. ONLINE 1 (2017) (evaluating the effectiveness of the one-in, two-out policy in helping agencies be fiscally efficient).

49. *See* Richard L. Revesz, *Quantifying Regulatory Benefits*, 102 CALIF. L. REV. 1423, 1436–50 (2014) (noting improvements in the ability of CBA to quantify previously unquantifiable benefits).

50. *See generally* REVESZ & LIVERMORE, *supra* note 38 (describing how several environmental groups have embraced CBA).

51. For details, see reports to Congress issued by the Obama administration. OIRA Reports to Congress, OFFICE OF MGMT. AND BUDGET, https://www.whitehouse.gov/omb/information-regulatory-affairs/reports/#ORC [https://perma.cc/9XSS-S5BA]. Still, a large percentage of Obama-era rules had missing cost or benefit 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, 8:30 AM), https://www.bloomberg.com/opinion/articles/2017-06-22/a-regulatory-reform-bill-that-everyone-should-like [https://perma.cc/K3AD-APK3]. Other

the Administrator of the Office of Information and Regulatory Affairs ("OIRA"), senators no longer questioned the legitimacy of White House–mandated CBA review. In fact, during the June 2017 confirmation hearing of Administrator Neomi Rao, the hardest-hitting questions from Senator Heidi 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 appreciate the review process for oversight purposes. But part of CBA's appeal for regulators is that it provides a clear methodology for achieving various statutory directives in light of difficult tradeoffs, especially when the underlying statutes require agencies to consider these tradeoffs in some way. In particular, when a statute gives an agency authority to manage a certain risk, the key decision for regulators is often 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] Often, however, legislation leaves these risk-management details to the agency, relying on the agency to decide what regulatory stringency is "requisite," "appropriate," or "necessary" to fulfilling Congress's

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*. *Assessing the Regulatory Accountability Act*, REG. REV. (May 30, 2017), https://www.theregreview.org/2017/05/30/assessing-regulatory-accountability-act [https://perma.cc/B5UA-R9HK].

54. *Heitkamp Questions to Rao*, C-SPAN (June 7, 2017), https://www.c-span.org/video/?c4672872/heitkamp-questions-neomi-rao [https://perma.cc/XGG2-KTQ8].

55. *E.g.*, "Delaney Clause," Food Additives Amendment of 1958, Pub. L. No. 85-929, § 409(c)(3)(A), 72 Stat. 1784, 1786 (codified at 21 U.S.C. § 348(c)(3)(A) (2012) and scattered sections of 21 U.S.C.).

56. *E.g.*, 29 U.S.C. § 655(b)(5) (2012) (requiring the Occupational Safety and Health Administration 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) (2012) (allowing the Administrator to set a contaminant level that maximizes health-risk-reduction benefits at a cost that is justified by the benefits).

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] CBA has many desirable features, including forcing the agency to make relevant tradeoffs transparent, pointing to a particular level of regulatory stringency, and providing a succinct summary of the basis for the agency's decision.[60] In fact, courts increasingly view conducting some form of CBA as engaging in the basic rational decisionmaking that is required by the APA.[61] For these reasons, agencies routinely conduct CBA and rely on its insights when their statutory mandates permit them to do so.[62]

CBA requires agencies to explicitly list, quantify, and monetize the effects—positive and negative—of a 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. An agency would proceed with a rule that requires a certain level of stringency when the additional benefits of the rule justify the additional costs of moving away from the status quo.

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58. *See, e.g.*, 42 U.S.C. § 7409(b) (2012) (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) (holding that "the phrase 'appropriate and necessary' requires at least some attention to cost").

60. *See, e.g.*, Weyerhaeuser Co. v. Costle, 590 F.2d 1011, 1047 (D.C. Cir. 1978) (discussing an early EPA CBA of standards issued under the Clean Water Act, which made transparent the agency's weighing of benefits in the form of lower biochemical oxygen demand levels in water against compliance costs estimated to close eight mills and leading to 1,800 people laid off). Of course, it is possible that while the agency's stated motivation is based on the CBA, its true motivation is not. If so, it might be argued that CBA makes the agency's true reasoning less transparent. But if the agency asserts reliance on the CBA, then the soundness of the CBA is what is ultimately relevant. This is because a reviewing court may uphold an agency's action only on the grounds upon which the agency purportedly relied when it acted. SEC v. Chenery Corp., 318 U.S. 80, 95 (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. *See* Cass R. Sunstein, *Cost-Benefit Analysis and Arbitrariness Review*, 41 HARV. ENVTL. L. REV. 1, 1 (2017) (noting that where CBA is authorized but not required, agencies typically must now provide nonarbitrary reasons for failing to consider CBA). *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) (noting a gap between the kind of CBA the Supreme Court has endorsed and the mode of CBA identified and advocated by Cass R. Sunstein).

62. Executive Order 12,866's CBA requirements 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.

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 monetary value on reductions in mortality risk.[65] VSL is calculated using information about workers' wage-risk tradeoffs in the labor market.[66] 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.[67] 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.[68]

The costs, in turn, would ideally be measured as the losses implied by the increased prices that the regulation causes. Typically, however, agencies estimate direct compliance costs and some indirect costs as proxies for these losses. In this context, too, there is uncertainty. Direct compliance costs can be difficult to estimate. When a regulation embraces flexible compliance methods, it has been particularly difficult for agencies to measure compliance costs, and they often overestimate such costs.[69]

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

64. *Id.*

65. *See, e.g.*, W. Kip Viscusi, *The Value of Life: Estimates with Risks by Occupation and Industry*, 42 ECON. INQUIRY 29 (2004).

66. *Id.*

67. *See generally* Sherwin Rosen, *Hedonic Prices and Implicit Markets: Product Differentiation in Pure Competition*, 82 J. POL. ECON. 34 (1974) (discussing how prices change in relation to spatial and environmental variation).

68. *See generally* ROBERT CAMERON MITCHELL & RICHARD T. CARSON, USING SURVEYS TO VALUE PUBLIC GOODS: THE CONTINGENT VALUATION METHOD (Resources for the Future, 1989) (assessing survey methods for valuing risk scenarios).

69. *See, e.g.*, Hart Hodges, *Falling Prices: Cost of Complying with Environmental Regulations Almost Always Less Than Advertised*, Econ. Pol'y Inst. Briefing Paper (1997) (finding that the cost of compliance is often lower than estimated).

A complete CBA quantifies and monetizes all important costs and benefits. Of course, qualitative assessment is a valid and important aspect of CBA, as it recognizes that monetization is not always possible, given the state of research.[70] Clinton's Executive Order 12,866 explicitly recognizes the role of unquantified costs and benefits in high-quality CBA.[71] But for CBA to be most useful, agencies should quantify and monetize effects to the extent possible.[72] For this reason, CBA has been most controversial when it is applied to effects that are difficult to quantify or monetize.

Over time, 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 developments in underlying studies, and the agency now routinely monetizes a wide variety of costs and benefits, even those that were once thought unquantifiable.[73]

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

70. *See* discussion *infra* Part I.C.

71. *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.").

72. *Id.*

73. *See* Richard L. Revesz, *Quantifying Regulatory Benefits*, 102 CALIF. L. REV. 1423, 1436 (2014) ("The evolution of regulatory cost-benefit analysis over the past several decades shows that agencies have eventually come to quantify important categories of benefits that they once considered nonquantifiable.").

74. *See* Cecot & Viscusi, *supra* note 23, at 590–603 (finding that courts pay attention to these features when reviewing agency CBA).

75. *Id.*; *see, e.g.*, Corrosion Proof Fittings v. EPA, 947 F.2d 1201, 1229–30 (5th Cir. 1991) (rejecting the agency's CBA for not considering relevant regulatory alternatives and impacts).

emerges, CBAs that were previously considered high quality when originally conducted might need to be reevaluated.[76]

The choice of the "best available" evidence and reasonable assumptions in the course of estimating costs and benefits can be fraught with controversy. Consider, for example, the value of reducing carbon emissions, which is referred to as the "social cost of carbon."[77] Economists have developed integrated assessment models that link greenhouse gas emissions, temperature changes, and monetary damages, but there is still considerable uncertainty surrounding the accuracy of the models' estimates.[78] Notwithstanding their flaws, estimates from these models are likely the best available, and the use of other methodology would require significant explanation.[79] In addition, valuing greenhouse gas reductions raises controversial normative questions that include the appropriate discount rate,[80] the treatment of catastrophic risk,[81] and the use of global damages.[82] In these debates, there are reasonable arguments in support of different perspectives, and multiple moves are likely supportable. But even in

76. *See generally* Jonathan B. Wiener & Daniel L. Ribeiro, *Environmental Regulation Going Retro: Learning Foresight from Hindsight*, 32 J. LAND USE & ENVTL. L. 1 (2016) (suggesting that forward-looking analyses can be improved by considering the shortcomings of past projections of the future).

77. 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 generally* INTERAGENCY WORKING GROUP ON SOCIAL COST OF CARBON, SOCIAL COST OF CARBON FOR REGULATORY IMPACT ANALYSIS UNDER EXECUTIVE ORDER 12,866 (2010) (describing the interagency process of developing estimates of the social cost of carbon).

78. *See, e.g.*, Robert S. Pindyck, *Climate Change Policy: What Do the Models Tell Us?*, 51 J. ECON. LIT. 860, 860–62 (2013) (describing disagreements in interpreting models that account for the social cost of carbon).

79. *See* Richard Revesz et al., *Best Cost Estimate of Greenhouse Gases*, 357 SCIENCE 655 (2017) ("[G]overnment and private sector analysts should continue using IWG's central estimate of $50 per ton of carbon dioxide with confidence that it is still the best estimate of the social cost of greenhouse gases.").

80. *E.g.*, Christian Gollier & Martin L. Weitzman, *How Should the Distant Future Be Discounted When Discount Rates Are Uncertain?*, 107 ECON. LETTERS 350, 351–52 (2010).

81. *E.g.*, Martin L. Weitzman, *Fat-Tailed Uncertainty in the Economics of Catastrophic Climate Change*, 5 REV. ENVTL. ECON. & POL'Y 275, 275, 276 (2011) (discussing the difficulty of measuring the catastrophic risk of climate change due to "[d]eep structural uncertainty [of] unknown unknowns" and "essentially unlimited downside liability on possible planetary damages").

82. *E.g.*, Gayer & Viscusi, *supra* note 24; Peter Howard & Jason Schwartz, *Think Global: International Reciprocity as Justification for a Global Social Cost of Carbon*, 42 COL. J. ENVTL. L. 203 (2017); Arden Rowell, *Foreign Impacts and Climate Change*, 39 HARV. ENVTL. L. REV. 371 (2015).

this value-laden area, CBA still serves a salutary role of making any policy choices transparent.

In light of these methodological and other challenges, some critics have argued that CBA can be manipulated to justify any goal or regulation.[83] But this is simply not true. Although there is considerable leeway in estimating the costs and benefits of regulation, given limitations in scientific studies and different normative considerations, CBA inputs are not without bounds.[84] 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.[85] Studies of agency action support 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."[86] If the analysis in CBAs is "rhetoric," it is constrained rhetoric. Of course, that is not to say that CBA is completely deterministic and static. Facts on the ground change, new scientific studies are published, and not all decisions can be made purely based on the scientific evidence.

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83. *E.g.*, Karl Coplan, *Pruitt's Arbitrary Cost Accounting is Built into the Concept of Cost Benefit Analysis*, GREEN L. (Oct. 10, 2017), https://greenlaw.blogs.pace.edu/2017/10/10/pruitts-arbitrary-cost-accounting-is-built-into-the-concept-of-cost-benefit-analysis [https://perma.cc/7UP3-8MNR] ("[T]he 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.").

84. *See* Posner, *supra* note 18, at 1197–98 (arguing that "it is not usually easy to manipulate cost-benefit data," though acknowledging that some variables are hard to measure).

85. *See* Ctr. for Biological Diversity v. NHTSA, 538 F.3d 1172, 1200 (9th Cir. 2008) (holding that NHTSA cannot value 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.").

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

C. Benefits of CBA

Generally speaking, agencies conduct CBA to determine whether to regulate and how stringently to do so. CBA, by its nature, is difficult, time intensive, and expensive. Agencies make countless decisions when conducting CBA—from deciding which impacts to measure to choosing the underlying studies that inform the estimation of impacts. For complicated rulemakings, the CBA itself can cost millions of dollars.[87]

But the procedure has many virtues. In the first instance, it helps agencies adopt more efficient policies by encouraging real consideration of policy impacts, thus promoting transparency in agency science and policy decisions.[88] The procedure also 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 determine outcomes and these preferences are more—not less—obscured because they hide behind science-based arguments.[89] This criticism relies on two assumptions. First, it assumes that if agencies did not conduct CBA, policy preferences would either not play a role in the process or be easier to discern. Second, it relies on CBA being able to justify any predetermined and underlying policy outcome. Neither assumption is reasonable.

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87. As an example, an environmental impact statement, a type of specialized cost-benefit analysis required under the National Environmental Policy Act, can take between one and six years to prepare. The analysis can 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).

88. These features of CBA are enforced by courts under the APA's "arbitrary or capricious" standard of review of agency decisionmaking. *See* Cecot & Viscusi, *supra* note 23.

89. *See, e.g.*, Duncan Kennedy, *Cost-Benefit Analysis of Entitlement Problems: A Critique*, 33 STAN. L. REV. 387, 443 (1981) ("[CBA] is arbitrary . . . . The focus on particular problems legitimates arbitrary assumptions and masks their political content."); Amy Sinden, *Cass Sunstein's Cost-Benefit Lite: Economics for Liberals*, 29 COLUM. J. ENVTL. L. 191, 194 (2011) (book review) ("The danger of CBA . . . lies in its false promise of determinacy, its pretense of objectivity and scientific accuracy . . . [which] renders CBA . . . vulnerable to manipulation . . . .").

Because agency decisionmaking almost always involves making difficult tradeoffs between costs and benefits, the *actual* alternative to conducting CBA is not science-only decisionmaking or transparency about policy preferences. Instead, the alternative to CBA is making these policy-laden decisions while largely uninformed about costs and benefits, usually by pointing vaguely to some statutory directive or by citing agency expertise. This alternative would not be more meaningfully transparent than CBA. This alternative would, however, be more likely to result in decisions that are profoundly misguided. For example, consider a context in which an agency is not allowed to rely on CBA: EPA setting air-quality standards for criteria pollutants under the Clean Air Act.[90] EPA cannot openly consider costs, so it engages in surreptitious and uninformed cost guesswork when deciding what is sufficient to protect health.[91] This guesswork results in a standard that is less protective than one that CBA would justify.[92]

Perhaps, then, the concern is that CBA-based decisions do not actually reflect more informed decisionmaking but receive more respect than do decisions not based on CBA. In particular, if CBA could be perfectly manipulated to justify any predetermined policy outcome, then using CBA to guide decisionmaking is, substantively at least, no better than acting on policy preferences without any analysis. But the decisions might falsely *seem* more informed.

CBA, however, is not prone to that level of manipulation.[93] CBA methodology, assumptions, and inputs generally have not varied significantly across administrations.[94] This Article, in fact, identifies several CBA norms and argues that courts will review CBAs for compliance with those norms, constraining some policy changes.

Admittedly, though, concerns about manipulation are high when large categories of costs or benefits are not quantified. On one hand, 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. On the other hand, large gaps in the estimation of costs or benefits could provide a misleading picture of the overall effects—and generate

90. *See* 42 U.S.C. § 7409(b) (2012); Whitman v. Am. Trucking Ass'ns, 531 U.S. 457, 486 (2001).

91. Michael A. Livermore & Richard L. Revesz, *Rethinking Health-Based Environmental Standards*, 89 N.Y.U. L. REV. 1184, 1232–33 (2014).

92. *Id.*

93. *See* discussion *supra* Part I.B.

94. *See* Fraas & Morgenstern, *supra* note 86.

significant room to act based on policy preferences. In fact, scholars have found evidence consistent with the view that unquantified impacts could be used to influence outcomes. In a review of major regulations from 2010 to 2013, Jonathan S. Masur and Eric A. Posner find that agencies failed to monetize the costs and benefits of regulations when in most cases they could have monetized or partially monetized those costs and benefits.[95] They also conclude that these failures were "almost certainly masking errors of overregulation and underregulation."[96]

But unquantified impacts occur when CBA is *not* strictly followed. The alternative to CBA would leave *all* impacts unquantified and, a fortiori, be more prone to manipulation. Nonetheless, even assuming that unquantified effects within the context of CBA are prone to a more concerning brand of manipulation, they still would not leave CBA outcomes unconstrained. Courts limit reliance on unquantified effects by proscribing such uses as an attempt at wielding a "trump card."[97] This limit on the use of unquantified effects cabins their influence even if those effects are justifiably thought to be substantial.[98] This means that agencies generally cannot justify predetermined outcomes by manipulating the "value" of unquantified effects to make up any shortfall in the estimated effects.[99]

Increased CBA reliance, then, reduces opportunities for manipulation as compared to likely alternative approaches, and it promotes better policies by encouraging sound quantification whenever possible. It opens the black box of agency decisionmaking, increasing transparency and allowing for meaningful accountability and judicial review. Even assuming that decisionmaking is actually

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

96. *Id.*

97. *See* Corrosion Proof Fittings v. EPA, 947 F.2d 1201, 1225 (5th Cir. 1991).

98. Jonathan S. Masur and Eric A. Posner provide a framework to help agencies quantify and monetize effects within CBA when data is incomplete. *See* Masur & Posner, *supra* note 95, at 92–94. Richard L. Revesz argues for agencies to use breakeven analysis. *See* Revesz, *supra* note 49 at 1425. Robert W. Hahn argues that unquantified effects should carry zero weight so that additional quantification is incentivized. *See* Robert W. Hahn, *The Economic Analysis of Regulation: A Response to the Critics*, 71 U. CHI. L. REV. 1021, 1037–38 (2004).

99. 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: GUIDEPOSTS FOR A SAFER SOCIETY 1–6 (2018).

driven by some political or policy preferences, an explicit reliance on CBA commits an agency to attempt to justify these preferences using science and economics.[100] This is because *SEC v. Chenery Corp.* requires a reviewing court to uphold an agency's action only on the grounds upon which the agency relied when it acted.[101] Therefore, when an agency purports to rely on CBA, regardless of its true underlying motivation, the agency's action will be judged based on the soundness of its CBA. And a sound CBA imposes constraints on the available regulatory policies, allowing only 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 where CBA cannot force agency officials to reveal their true motivations.[102] Instead of obscuring decisionmaking behind science, CBA provides the best chance for elevating agency decisionmaking above policy preferences and making it about science.

2. *Better Policies*. CBA is a flexible constraint available to agencies that, in some circumstances, promotes the staying power of agency regulation.[103] That is, CBA procedures give agencies the opportunity to issue rules that are more likely to stick. Because of the benefits of increased staying power that come from tying a policy to a CBA, agencies are incentivized to maximize reliance on best-available estimates of costs and benefits and to minimize reliance on unquantified effects. And if data is currently incomplete or unavailable, agencies are incentivized to promote the necessary research.[104] Although it is sometimes impossible to fully quantify and

100. In addition, as discussed in the next Part, there are real economic and judicial constraints to policy changes grounded in CBA.

101. SEC v. Chenery Corp., 318 U.S. 80, 88 (1943).

102. *See* Stack, *supra* note 60, at 993–98 (discussing how the *Chenery* principle generally promotes transparency and accountability, though not in the context of CBA).

103. In this account, CBA could be considered a tool that helps agencies maximize the staying power of the regulations they issue. Typically, scholars characterize CBA as a constraint on agency action within a principal-agency context, wherein CBA helps the president control agency decisionmaking. *See* Kagan, *supra* note 18 at 2277; Sidney A. Shapiro, *Political Oversight and the Deterioration of Regulatory Policy*, 46 ADMIN. L. REV. 1, 5 (1994). *See generally* Posner, *supra* note 18;

104. These predictions rely on continued access to and support for underlying scientific research. Without ongoing research, regulations will be based on increasingly outdated studies. However, research is diffused and funded by multiple sources, so it would be difficult for any one group to eliminate it.

monetize some effects, incentivizing quantification and monetization to the extent possible is a good thing. Once these effects are monetized, they establish a floor on the value in the analysis. As a result, regulatory policy becomes more efficient.

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 in turn leads to better policies. 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 the scope of CBA. An agency could and should still deviate from a CBA-based policy for the sake of considerations of equity or dignity, but in light of the CBA, the agency would have to transparently state and defend its decision to do so.[105] This, too, is desirable from the perspective of accountability. It actually ensures that fairness- and dignity-based 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 to modify, update, or repeal them if they are not. In fact, every president since Jimmy Carter has sought to identify and address existing regulations that are inefficient through a process of retrospective review of regulatory costs and benefits.[106] More 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."[107] Even President Trump has embraced this idea to the extent that his Executive Order 13,771 encourages agencies to look

105. *See, e.g.*, Sunstein, *supra* note 61, at 18. For a discussion of how the executive branch can deal effectively with the distributional consequences of regulation, see Richard L. Revesz, *Regulation and Distribution*, 93 N.Y.U. L. REV. 1489 (2018).

106. Curtis W. Copeland, *The Role of the Office of Information and Regulatory Affairs in Federal Rulemaking*, 33 FORDHAM URB. L.J. 1257, 1264–66 (2006).

107. Exec. Order No. 13,563, 76 Fed. Reg. 3,821 (Jan. 21, 2011); *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 aimed at reducing "unjustified regulatory burdens").

closely at their existing stock of regulations to identify regulations to repeal or adjust.[108]

It is difficult, however, to actually get agencies to look back at existing regulations and evaluate their effectiveness. According to Susan E. Dudley, past retrospective-review initiatives failed largely because agencies have no incentives to look back at regulations that they have already issued.[109] She is optimistic that a regulatory-budget concept, like the one in President Trump's Executive Order 13,771, might create those missing internal incentives.[110] 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.[111] 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.[112]

An ongoing and judicially encouraged commitment to CBA, however, could create 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. By examining the actual effects of regulatory policies, an agency could set the groundwork for policy change and obtain useful information that could make its predictions about effects more accurate going forward.[113] And that is 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 has retrospective review failed to take off? Sporadic CBA, the results of which can be discarded or

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108. Exec. Order No. 13,771, 82 Fed. Reg. 9,339 (Feb. 3, 2017); *see* Cass Sunstein, *Sludge and Ordeals*, 68 DUKE L.J 1843 (2019) (identifying categories of rules that are ripe for repeal).

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

110. *Id.* at 268.

111. Cecot & Livermore, *supra* note 48, at 9–10.

112. *Id.*

113. The "greatest virtue" of retrospective review is its potential to generate information that could improve agency estimation and analysis going forward. Adam J. White, *Retrospective Review, for Tomorrow's Sake*, 36 YALE J. ON REG.: NOTICE & COMMENT (2016), http://yalejreg.com/nc/retrospective-review-for-tomorrows-sake [https://perma.cc/TQ85-BYNW]. *See generally* Wiener & Ribeiro, *supra* note 76.

ignored when expedient, is not enough. What is needed is a commitment to the practice across administrations and an understanding of CBA's 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*[114] and in D.C. Circuit decisions promoting rigorous CBA of financial regulations.[115] The next Part describes the particular role 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—propelled by the APA's requirement that agency actions not be "arbitrary" or "capricious"—has created a system of rules to ensure that any changes in course are rational and predictable.[116] These requirements ensure that regulatory programs are not created and destroyed solely because of changing political tides. One of these administrative law checks is CBA, which serves as a powerful summary of the agency's factual findings on the costs and benefits of regulations. CBA ensures that changes to policy are based on some evenhanded analysis of costs and benefits.

If done well, a regulation'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 that depart from existing CBAs, requiring reasoned explanations for those changes. In particular, courts require agencies to explain why a new CBA is different from the old one. This makes it more difficult in some cases for an agency to change policy to perfectly align with a new

114. 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. 2699, 2707 (2015), 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*.'").

115. *See, e.g.*, Bus. Roundtable v. SEC, 647 F.3d 1144, 1149–51 (D.C. Cir. 2011).

116. 5 U.S.C. § 706 (2012).

administration's priorities or preferences. Second, accepted CBA procedure further constrains changes. The status quo for any proposed changes now involves the old rule, and this regulatory baseline alters the costs and benefits of moving to a new policy. Ultimately, CBA reliance prevents huge welfare-reducing swings while allowing reasonable and transparent policy- or science-based modifications.

A. Judicial Review

Judicial review of agency CBAs 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.[117] When the prior policy relied on a CBA, a change from that policy must confront the prior CBA—both its underlying facts and its conclusions. This means that although 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. *A 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 (1) whether the *scope* of the CBA is appropriate in light of the agency's statutory mandate, (2) whether the agency preserved *transparency* by providing sufficient information in its CBA for notice-and-comment rulemaking and judicial review, and (3) whether the assumptions or *methodology* underlying the CBA were sound.[118] Generally speaking, courts have been deferential when evaluating CBAs.[119]

A CBA's *scope* refers to the categories of costs and benefits 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 costs and benefits of each regulatory alternative. That way, regulators can make decisions based on complete information, minimizing the likelihood of unintended consequences. But deciding *which* costs and benefits to consider and *how thoroughly* to quantify

117. *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 v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983).

118. *See* Cecot & Viscusi, *supra* note 23.

119. *Id.* at 590.

and monetize each category often depends on the availability of information and agency resources.

From the perspective of CBA, readily available impacts should be included.[120] The argument for omitting impacts is typically an argument about statutory authority. Congress defines the agency's task, and Congress can limit the agency's consideration of some impacts when implementing the task. Courts generally defer to agency judgments on questions of scope unless the agency ignores a factor that Congress required it to consider[121] or the agency does not treat costs and benefits similarly.[122] At least one court has sanctioned an agency's broad analysis of impacts when the statutory text did not restrict the agency's consideration of impacts.[123] In fact, any time the overall statute is committed to improving social welfare, courts should hesitate to interpret it as restricting an agency's ability to account for important welfare changes. Courts have already encouraged this type of broad analysis in the context of costs, recognizing the unreasonableness of ignoring the indirect costs of regulatory intervention on net welfare.[124] It remains to be seen, however, if courts will extend this reasoning to indirect benefits and essentially *require* the agency to broadly consider all reasonable direct and indirect impacts when the statute is silent on the scope of analysis.[125]

In addition, courts have promoted *transparency* in CBA.[126] As discussed in the previous Part, one of the advantages of CBA in agency

120. *See* discussion *infra* Part II.B.

121. *See* Cecot & Viscusi, *supra* note 23, at 593–95.

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

123. *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 that is clearly foreclosed by the statute's text or purpose.

124. *See, e.g.*, Michigan v. EPA, 135 S. Ct. 2699, 2707 (2015) (explaining that the advantages and disadvantages of regulation include not just direct compliance costs, but also 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 substitutes for car brakes when banning asbestos-based brakes under the Toxic Substances Control Act ("TSCA")).

125. 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 Regulations*, SLATE (June 13, 2018, 12:38 PM), https://slate.com/technology/2018/06/scott-pruitt-is-trying-to-undermine-environmental-regulation-in-a-creative-way.html [https://perma.cc/65AJ-3H4J].

126. *See* Cecot & Viscusi, *supra* note 23, at 602–03.

decisionmaking is its transparency. CBA 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.[127]

Courts generally do not weigh in on the substance of an agency's *methodology*, nor do they frequently second-guess agency assumptions, choice of model, or other technical issues.[128] In part, this reluctance is due to a recognition that many of these decisions cannot be made solely on the basis of science but rather, 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 methodological challenges, courts have sometimes undertaken a more thorough review when the relevant statute appears to require one,[129] demonstrating that they are capable of doing so.

2. *A Hard Look on Policy Changes*. Historically, there are many examples of agencies changing course, and courts have closely evaluated those agencies' 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.[130] The resulting litigation defined the contours of review under the "arbitrary and capricious" standard.[131] In *Motor Vehicle Manufacturers Ass'n of the*

127. *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).

128. *See* Cecot & Viscusi, *supra* note 23, at 598–601.

129. *Id.*

130. Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 34 (1983).

131. *Id.* at 42–44.

United States v. State Farm Mutual Automobile Insurance Co., the Supreme Court scrutinized whether the agency

> 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.[132]

The majority held that NHTSA had failed to adequately explain why it had rescinded the passive-restraint requirement.[133] 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."[134] Further, 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."[135] Although 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."[136]

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.*[137] 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.[138] But the agency must display awareness that it is changing its position and provide "good reasons" for the new policy.[139] In particular, "a reasoned explanation is needed for disregarding *facts* and circumstances *that underlay or were engendered by the prior policy*" because "[i]t would be arbitrary or

132. *Id.* at 43.

133. *Id.* at 34.

134. *Id.* at 42 (emphasis omitted).

135. *Id.*

136. *Id.*

137. FCC v. Fox Television Stations, Inc., 556 U.S. 502 (2009). The Court previously hinted at these issues in other cases, such as *INS v. Yang*, 519 U.S. 26, 32 (1996).

138. *Fox*, 556 U.S. at 514.

139. *See id.* at 515.

capricious to ignore such matters."[140] In other words, it is not that the judicial review of policy changes is more stringent; rather, 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.[141] It also suggested that the agency would have to consider the serious reliance interests created by the initial policy.[142]

Most recently, in *Encino Motorcars, LLC v. Navarro*,[143] 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."[144] 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."[145] This language is striking; it suggests that defects in agency decisionmaking reflected in CBA could doom an agency's regulation—even when the agency enjoys significant discretion. As in previous cases, the Court in *Encino Motorcars* was concerned about the "reliance interests" at stake, and the agency was thus required to give more than a "conclusory" explanation of the policy change.[146]

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. That new CBA would have to explain the key differences and confront the fact that significant investments might have been incurred in reliance on the prior policy. This transforms the judicial review from a soft look that assesses technical inputs to a hard look that ensures that the agency provides reasoned explanations for any deviations. Judicial review of agency rationales has bite; inadequate explanation is one of

140. *Id.* (emphasis added).
141. *Id.*
142. *Id.*
143. Encino Motorcars, LLC v. Navarro, 136 S. Ct. 2117 (2016).
144. *Id.* at 2120 (quoting *Fox*, 556 U.S. at 515–516).
145. *Id.*
146. *Id.*

the most common grounds for judicial reversal and remand.[147] Kevin M. Stack explains how in *State Farm*, the agency's initial reasons acted as a commitment device as well as "a basis for evaluating its own future actions implicating those grounds."[148] In the same way, by relying on CBA initially, an agency commits itself to a technical welfare-based rationale and ties its future self to at least explaining any deviations from that sort of reasoning.[149] 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 original terms, courts will require the agency to explain why.

Admittedly, courts are not experts in what makes for a well-reasoned CBA. In this regard, too, a court's 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 judicial review, highlighting which seemingly technical inputs in underlying risk assessments might be ultimately important in driving the agency's policy. Further, 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

An agency must follow certain "rules" to update regulations in a reasonable, CBA-justified way. These rules are based on economic and accounting principles that support the practice of CBA, and they are described in guidelines on CBA from the Office of Management and

147. *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 (1990) (showing that about 20 percent of remands in 1985 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).

148. Stack, *supra* note 60, at 997–98 (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").

149. *See* Buzbee, *supra* note 26, at 1401 (describing more generally how courts have "require[d] substantial engagement" with "contingencies" created by underlying facts and circumstances).

Budget or from agencies themselves.[150] 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 available.[151] The application of these rules is particularly important in the context of deregulation, where decisions on the baseline, input estimates, and scope carry significant weight.

Under a welfare economics framework, a CBA should contain all effects of the proposed policy on social welfare. This ensures that regulators base their risk-management decisions on an accurate picture of the actual effects of regulatory action. In practice, however, 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, 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 allocate limited resources to multiple rulemakings, which might explain the deference courts have given agencies on issues of CBA scope.[152]

When a prior CBA exists in the administrative record, there is a reference point on the achievable scope of CBA. Any changes to the scope of benefits or costs in an updated CBA 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 new CBA, by all accounts, is improved and provides a clearer picture of the actual impacts on social welfare. But it is difficult to find any economically grounded reason for reducing 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 requires a CBA that calculates costs and benefits from the baseline of that existing policy. In that way, a deregulatory CBA is not the inverse

150. *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).

151. *See, e.g.*, Office of Mgmt. & Budget, *supra* note 150, at 26; EPA, *supra* note 150, at 11-2.

152. Cecot & Viscusi, *supra* note 23.

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 new CBA has to compare *the benefits of cost savings*—that is, of reducing stringency or eliminating a technology-based requirement—against *the costs of foregone benefits*—reductions in air quality or other prior health- and welfare-related benefits of the prior, implemented policy.

Even assuming that some regulations were not CBA justified when issued, the costs and benefits of continuing an existing, implemented regulation are different than those of implementing a new regulation. On the cost side, firms may have already made expensive capital investments in pollution-control technology, and any changes to the rule might impose additional costs on the firms. This dynamic was recently highlighted when a letter from the electric-power industry urged EPA to keep the mercury and air toxics standards ("MATS") in place.[153] The industry had been fighting the MATS rule since it was issued, but at this point, it has spent more than $18 billion to comply with it.[154] Now, "[g]iven the scale of investment, the industry groups said that regulatory certainty is 'critical.'"[155] Given that onetime investments have already been made, the benefits of rescinding the MATS rule would be very small. It would be difficult for the Trump administration to justify repealing the rule, even if EPA reevaluates the foregone benefits to society as being much smaller than the forecasted benefits of the MATS rule when it was originally implemented.[156] Alternatively, the use of the MATS pollution-control technology might have become the market standard—or, perhaps, required by states—and adjusting to alternative, even if cheaper, technology might require significant adjustment costs.[157] In all these

153. *See Utility Industry Urges EPA to Keep Mercury Emissions Rule in Place and Speed Reviews*, ENERGIZE WEEKLY (July 18, 2018), https://www.euci.com/utility-industry-urges-epa-to-keep-mercury-emissions-rule-in-place-and-speed-reviews/ [https://perma.cc/G9GY-DCEQ] [hereinafter *Utility Industry Urges EPA*]; *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), https://www.nytimes.com/2018/09/07/climate/epa-mercury-life-cost-benefit.html [https://perma.cc/6BTK-XDHF].

154. *Utility Industry Urges EPA*, *supra* note 153.

155. *Id.*

156. *See* Davenport & Friedman, *supra* note 153 (discussing how the Trump administration might exclude consideration of important categories of benefits of the MATS rule).

157. In ongoing research, 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. Kerry Krutilla, Presentation at Society for Benefit-Cost Analysis 10th Annual Conference & Meeting: A Taxonomy for Improved Regulatory Evaluations (Mar. 16, 2018)

cases, the benefits of reducing stringency—the cost savings from lifting the regulatory requirements—might approach zero.

This feature of CBA could be understood as a form of path dependence—and it is why CBA has been characterized "as a tool for defending the status quo."[158] By taking into account adjustment costs, CBA incorporates these realistic considerations that weigh against changing course—whether the change is the proposed implementation of the policy in the first instance or, once implemented, the proposed repeal of that policy. In particular, this effect makes it difficult to justify deregulatory actions unless the prior policy required high ongoing compliance costs; otherwise, the benefits of repealing the policy would be low, while the costs—adjustment or other costs—could be high. 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 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. These input values 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, nor can it use scientific evidence that does not yet exist, and this constrains 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.

This feature of CBA provides some protection against regulatory whiplash. But it does 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 pathbreaking for its time. For

(presentation materials on file with the *Duke Law Journal*). He has identified four critical characteristics that drive the level of costs and benefits from deregulatory actions: capital intensity, degree of voluntary market adoption, the scope of the regulation, and the nature of the 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.

158. LESTER B. LAVE, THE STRATEGY OF SOCIAL REGULATION: DECISION FRAMEWORKS FOR POLICY 24–25 (Brookings Institution 1981).

example, CBA led the Reagan administration to adopt a much stricter standard for phasing out leaded gasoline than either it or the previous administration initially thought warranted.[159] 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.[160] In this way, regulatory policy evolves over time as scientific understanding of the underlying regulatory problem advances.

III. DEREGULATORY CBA UNDER THE TRUMP ADMINISTRATION

As discussed in the previous parts, CBA increasingly informs agency decisionmaking. In this CBA world, policy changes are more difficult. Although CBA does accommodate 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 often become smaller, especially in the case of deregulatory actions after investments have already been made. In addition, Supreme Court precedent suggests that when evaluating the agency reasoning that underlies 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 has to confront the prior CBA and explain any deviations from that CBA's assumptions and methodology. Courts have also required that agencies treat costs and benefits equally, again demanding a reasoned explanation for any differential treatment. Taken together, these principles constrain agency policy changes. The degree of constraint depends 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 requires the agency to explain any deviations from that CBA,

159. *See* Statement of Christopher DeMuth, *supra* note 40.

160. *See, e.g.*, Joel Schwartz, *Societal Benefits of Reducing Lead Exposure*, 66 ENVTL. RESEARCH 105, 119 (1994) (estimating net benefits of $17.2 billion per year for each microgram of reduction in average blood-lead concentrations); Debra J. Brody et al., *Blood Lead Levels in the US Population*, 272 J. AMER. MED. ASSOC. 277, 281 (1994) (estimating a ten-microgram decline in average blood-lead levels in children due in large part to the lead phasedown).

unless the agency is prohibited from relying on CBA.[161] Sometimes the record includes 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—that is, 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."[162] 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 under the regulation.[163] Nonetheless, the agency refused to rely on this CBA to support its determination either in the rulemaking or in the subsequent litigation.[164] Instead, the agency's preferred justification for the rule relied on a less formal and more qualitative analysis that did not explicitly refer to costs, presumably in an effort to retain authority to set more stringent standards later.[165]

In these cases, the power of the prior CBA to constrain future policy deviations is low. But even then, the CBA might be relevant if it supports the prior policy and is persuasive; it could call into question the agency's reasoning for changing course, notwithstanding the agency's disavowal of the analysis.[166] For example, in *R.J. Reynolds*

161. Sometimes an agency's statutory mandate does not allow it to consider costs or, by extension, a CBA. For example, the Clean Air Act prohibits EPA from relying on costs when setting national air-quality standards for criteria pollutants. *See* 42 U.S.C. § 7409(b) (2012); Whitman v. Am. Trucking Ass'ns, 531 U.S. 457 (2001). In that case, the CBA—whether 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. Where that is the case, *deregulation* motivated by cost considerations such as cost savings for the industry may be impermissible as well.

162. 42 U.S.C. § 7412(n)(1)(A) (2012).

163. *See* EPA, REGULATORY IMPACT ANALYSIS FOR THE FINAL MERCURY AND AIR TOXICS STANDARDS AT ES-1 TO ES-2 (2011).

164. *See* Michigan v. EPA, 135 S. Ct. 2699, 2711 (2015).

165. The Supreme Court, in considering the Clean Air Act, 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." *Id.* at 2709.

166. More broadly, the prior CBA could highlight important factual issues that the agency would need to address under *State Farm* when it changes course.

Tobacco Co. v. FDA,[167] 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.[168] Although the case was about limits on commercial speech,[169] 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.[170] This case suggests that a prior CBA, if persuasive enough, could still have some constraining influence on agency policy even when the agency promulgating the initial rule did not rely on it. Any move to change such a policy should therefore confront that prior 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 has maximum constraining power. In such cases, an agency must not only acknowledge the CBA justification of its prior policy but also explain why it is departing from that justification. If the agency throws out a CBA-justified policy for no articulated reason, the agency's decision is vulnerable to attack as arbitrary and capricious under the APA and, likely, under the relevant statute.[171] When the prior CBA is incomplete, the agency can more easily make out good CBA-based 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 studies were not available, then the agency should be able to quantify and monetize these estimates once such studies become available. Similarly, when the prior CBA is low quality—making questionable assumptions or relying on outdated methodology or inputs—the agency does, and should, have an easier time explaining deviations from those decisions in its new CBA.

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167. R.J. Reynolds Tobacco Co. v. FDA, 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).

168. *Id.*

169. In 2014, the D.C. Circuit overruled the part of the *R.J. Reynolds Tobacco Co.* 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 a more exacting standard—intermediate scrutiny.

170. *R.J. Reynolds Tobacco Co.*, 696 F.3d at 1219–21.

171. An agency might put forth a non-CBA-based reason for such a departure. For example, the agency may argue that it no longer believes that it has authority to regulate. Part V.D.1 discusses this kind of slippage.

Thus, relying on a high-quality CBA to support its policy is one way an agency can 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 the economics framework and in light of 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. Although 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 determine 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 in 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; the deregulatory move, according to the court, was arbitrary and capricious.[172] 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 that the agency's "conclusion appears to be counter to the only empirical evidence EPA had before it."[173]

Requiring a reasoned explanation might be especially constraining when an agency attempts to alter the scope of a CBA. When reviewing the adequacy of a CBA, courts have demanded equal treatment of costs and benefits. A prior CBA provides a reference point for the achievable scope of a CBA. Any changes to the scope of costs or benefits 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

172. Sierra Club v. EPA, 884 F.3d 1185 (D.C. Cir. 2018).

173. *Id.* at 1198. In another example, EPA promulgated a maximum-contaminant-level goal of zero 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 (Dec. 16, 1998), despite earlier concluding that chloroform exhibits a "nonlinear mode of carcinogenic action," with exposures below some level posing no risk of cancer, National Primary Drinking Water Regulations: Disinfectants and Disinfection Byproducts Notice of Data Availability, 63 Fed. Reg. 15,674, 15,686/1 (Mar. 31, 1998). The D.C. Circuit agreed with industry petitioners that EPA could not backtrack from its previous conclusion without sufficient explanation.

Impact Statement ("EIS")—an analysis focused on environmental impacts that is otherwise similar to CBA—to cast 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.[174] Already, the Trump administration has suggested that it might seek to limit the consideration of indirect benefits in its regulatory and deregulatory CBAs.[175] 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 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 Waste Prevention 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.[176] But the DOI 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 originally estimated to generate $127 million in annual net benefits to society.[177]

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

174. High Country Conservation Advocates v. U.S. Forest Service, 52 F. Supp. 3d 1174, 1184, 1189 (D. Colo. 2014).

175. Increasing Consistency and Transparency in Considering Costs and Benefits in the Rulemaking Process, 83 Fed. Reg. 27524 (proposed June 13, 2018) (to be codified at 40 C.F.R ch. I).

176. Waste Prevention, Production Subject to Royalties, and Resource Conservation; Postponement of Certain Compliance Dates, 82 Fed. Reg. 27430 (June 15, 2017) (to be codified at 43 C.F.R. pt. 3170).

177. Waste Prevention, Production Subject to Royalties, and Resource Conservation, 81 Fed. Reg. 83008 (Nov. 18, 2016) (43 C.F.R. pts. 3100, 3160, 3170).

scope of CBA.[178] Though the statute might limit or expand the categories of costs or benefits that could be considered, almost every energy and environmental statute has a goal of achieving some benefit and tasks the agency with achieving that benefit under specific circumstances. Taking agency action without addressing these statutory benefits at all would miss an important aspect of the problem. 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."[179] Simply put, when an agency relied on a prior CBA to justify its rulemaking, it cannot change course without acknowledging the foregone benefits and considering them equally with the cost savings from repealing or modifying the rule.

Of course, the Trump administration has only pursued this strategy in stays of Obama-era rules.[180] It is unlikely that the administration would do so when actually proposing to repeal or modify a rule, and it has not done so to date. In proposed repeals, the Trump administration agencies have signaled that they might deemphasize certain categories of benefits by leaving them unquantified or unmonetized; expand the categories of monetized costs; and recalculate CBAs, modifying the estimates of costs or benefits to support their new policies. For example, when the Trump EPA proposed the repeal of the so-called Waters of the United States Rule, the accompanying CBA left unquantified several categories of benefits that the Obama EPA had previously calculated.[181] In

178. *See* discussion *supra* Part II.A.1.

179. Sierra Club v. Sigler, 695 F.2d 957, 979 (5th Cir. 1983).

180. An 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 the stay, but not on CBA grounds); Becerra v. DOI, 276 F. Supp. 3d 953 (N.D. Cal. 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). It makes sense for an agency to consider such costs and benefits before deciding to freeze the implementation of final regulations. But interestingly, my account of CBA-based constraints increases the importance of issuing stays in the early days of a new administration. If regulations are not stayed, then costly investments are more likely to have been incurred in reliance on the prior regulations. In such cases, it is more difficult to justify changing course.

181. *Compare* EPA, Economic Analysis for the Proposed Definition of "Waters of the United States" – Recodification of Pre-existing Rules 8–11 (2017) [hereinafter EPA, CBA for the WOTUS Repeal] (describing deviations from the prior analysis), *with* EPA, Economic Analysis

particular, although the Trump EPA admitted that the prior rule extended protection to more wetlands, it refused to provide an estimate of the value of the foregone benefits of removing this protection, determining that the prior CBA's estimates relied on studies that were too old to provide meaningful guidance as to the value of protecting such wetlands.[182] The original CBA supporting the Waters of the United States Rule had quantified and monetized these benefits, providing default benefit estimates that Trump's EPA *could have used* in its new analyses. Alternatively, agencies might seek to remove previously considered categories of benefits or to 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 the impacts of regulations on jobs.

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 new CBAs underlying its deregulatory actions. But even these decisions on details of CBA scope and on the reliability of studies underlying CBA estimates—decisions that are generally granted substantial deference by courts—may be vulnerable, depending on the agency's rationale for them. 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 wetland preservation were too old and could not be relied upon due to subsequent improvements in statistical and economic methods and possible changes in public attitudes toward nature protection.[183] 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; studies used to support the cost estimates were as old or older than the studies originally used to support the benefits.[184] The repeal is thus vulnerable

of the EPA-Army Clean Water Rule 44–52 (2015) (discussing, for example, the value of protecting wetlands as a result of the original WOTUS rule).

182. EPA, CBA for the WOTUS Repeal, *supra* note 181, at 8–9.

183. *Id.*

184. 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

to challenge, given the potential 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.[185] This is no less true for indirect benefits,[186] though courts have yet to explicitly adopt this reasoning. Thus, many of these arguments will center on whether underlying statutes preclude consideration of indirect benefits.[187] It seems reasonable that unless the statute clearly and explicitly precludes the consideration of indirect benefits, such benefits (just as with indirect costs) must be considered; such a requirement seems especially fitting in cases where resource concerns are not implicated because the agency has already calculated these benefits.[188]

When the original CBA fails 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,[189] focusing only on cost savings. There, the original rule also failed to quantify and monetize

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INTEGRITY REP. (2017). EPA has proposed a revised rule defining "Waters of the United States." *See* Revised Definition of "Waters of the United States," 84 Fed. Reg. 4,154 (Feb. 14, 2019).

185. *See* Michigan v. EPA, 135 S. Ct. 2699, 2707 (2015) (explaining that the advantages and disadvantages of regulation include 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 substitutes for car brakes when banning asbestos-based brakes under the TSCA).

186. *See* Revesz, *supra* note 124; *see also* Christopher C. DeMuth & Douglas H. Ginsburg, *Rationalism in Regulation*, 108 MICH. L. REV. 877, 888 (2010).

187. 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).

188. *See* Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983) (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.

189. *See* Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands; Rescission of a 2015 Rule, 82 Fed. Reg. 34,464 (July 25, 2017) (to be codified at 43 C.F.R. pt. 3160).

benefits.[190] Because the benefits had not been quantified, the initial judgment to proceed with the regulation was based on the agency's judgment of the value of the rule's requirements. Even if there has been no change in the underlying evidence, it is easier to explain an agency's reversal 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 costs and benefits 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.[191] This Order leaves agencies without specific guidance on incorporating the social cost of greenhouse gases. This move signaled 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 costs and benefits. These changes could be based on policy preferences, new studies, or new information about the actual costs and benefits of implemented rules. As long as agencies explain departures from the prior CBAs and treat costs and benefits equally, courts are likely to uphold such reassessments. That said, the explanations for departures 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 costs and benefits. Such a result would recognize 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. Ultimately, CBA-updating norms and judicial review provide basic constraints to ensure that reassessments still support rational agency decisionmaking.

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190. *See* Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands, 80 Fed. Reg. 16,128 (Mar. 26, 2015) (codified at 43 C.F.R. pt. 3160).

191. *See* Promoting Energy Independence and Economic Growth, Exec. Order No. 13,783 § 5(b), 82 Fed. Reg. 16,093 (Mar. 31, 2017).

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 thought of simply 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 presidential control through methodological norms and judicial review. Regulations that are grounded in analysis—even if that 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. Proregulatory Bias

Some critics of agency rulemaking argue that agencies have a bias toward issuing regulation or value the benefits of regulation more highly than society in general.[192] If this is true, then this Article's account of CBA-based constraints on changes could exacerbate this proregulatory bias when it limits deregulatory changes. In other words, if (1) agencies overregulate, then (2) CBA-based constraints that limit deregulation could further entrench overregulation.

First, there is no clear evidence that agencies have a bias toward overregulation 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 instead work in the opposite direction.[193] Further, it is clear

192. *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).

193. *See* Nicholas Bagley & Richard L. Revesz, *Centralized Oversight of the Regulatory State*, 106 COLUM. L. REV. 1260, 1282–1304 (2006) (critically evaluating various theories of agencies' tendencies to overregulate); Michael A. Livermore & Richard L. Revesz, *Regulatory Review,*

that in some cases agencies might need significant prodding to act. And there is some evidence that CBA constrains potential overregulation. As one extreme example, consider the aftermath of *Corrosion Proof Fittings v. EPA*.[194] 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").[195] The case sent the message that if EPA were to restrict a chemical again under TSCA, it would have to support that decision with a well-supported CBA. This requirement appeared to constrain EPA so much that it stopped using TSCA altogether to restrict chemicals. In 2016, in response to EPA's inaction, Congress passed the Frank R. Lautenberg Chemical Safety for the 21st Century Act, amending several key provisions of the TSCA. Time will tell whether this effort will successfully prod EPA into action. This tale demonstrates, however, that CBA requirements could counteract some agency overregulation—at least by ensuring that the agency does not issue net costly regulations.

Nonetheless, an agency might value the benefits of regulation more highly than society. In such a case, Yair Listokin argues that CBA will help the agency choose the right regulations but the agency will still regulate too much.[196] Theoretically, OIRA could monitor the agency's estimates to help correct for this kind of bias. And, to some extent, OIRA does this oversight work. But OIRA is limited in staff and time and, moreover, might be subject to the same kind of bias. Alternatively, courts could monitor agency CBA for this bias. But here, too, courts are unlikely to adequately correct for it. It is not evident that judges could identify society's true valuation of benefits, and in any event, judicial review of CBA is rarely as exhaustive as the Fifth Circuit's review in *Corrosion Proof Fittings*. In practice, barring clear errors, courts are likely to be deferential. To the extent that this kind of overvaluation bias exists, agency CBA would not adequately counteract it.[197]

Any bias, however, could be mitigated by *undervaluation* bias by another administration. In other words, imagine that one administration regulates too much and another one regulates too little

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.").

194. Corrosion Proof Fittings v. EPA, 947 F.2d 1201 (5th Cir. 1991).

195. *Id.* at 1225.

196. Listokin, *supra* note 192, at 370.

197. Listokin argues that a regulatory budget, like the one that currently exists, could help counteract this type of bias. *See id.*

for society's taste. But all administrations choose CBA-justified regulations from the range of possible regulatory actions. Further, CBA forces each to make all of the underlying valuations transparent so that society can elect administrations that employ its preferred valuations. CBA would still serve a valuable constraining, stabilizing, and informational function.

Nonetheless, under my account, there would remain a proregulatory asymmetry. The asymmetry does not come from CBA norms—CBA is symmetrical whether evaluating regulatory or deregulatory actions—but instead comes from my description of judicial review. This Article argues that courts are more deferential to the first CBA than the next CBA, which can be compared against the first. This judicial review asymmetry arguably works against deregulation because a deregulatory action is almost always a change from a prior regulatory status quo.

As an initial matter, this asymmetry does not necessarily mean that deregulatory actions are more constrained than regulatory actions; rather, it provides a sort of first-mover CBA advantage. A later, more stringent regulation supported by CBA would face the same heightened judicial review constraints. And if the deregulatory action is the first action *supported by CBA*, then courts would review that CBA deferentially, and later proregulatory moves might be more constrained.[198] It is also possible that a "deregulatory" agency could proactively regulate in statutorily prescribed contexts in ways supported by CBAs that employ its value judgments on costs and benefits, where such judgments are appropriate and applicable. In other words, after the first CBA, all other moves—regulatory and deregulatory—are subject to symmetrical judicial review. This greatly narrows the circumstances in which this asymmetry systematically hurts deregulatory policy.

It is also worth noting that judicial review of CBA might develop over time such that courts become equally competent in analyzing CBA with or without any prior CBA in the record. Even now, whether reviewing the first CBA on the issue or the latest iteration, judicial review is never fully deferential or fully critical.[199] Yehonatan Givati and Matthew C. Stephenson present a model that describes how an intermediate level of judicial review generally drives agencies to adopt

198. The prior deregulatory CBA could become part of the record in several ways, most prominently if interested parties bring it up and it becomes part of the agency's record.

199. *See* Cecot & Viscusi, *supra* note 23.

moderate policies.[200] If review were fully deferential or fully critical, each administration would impose its preferred policy. Any agency bias during proregulatory administrations would be fully reflected in policies, and the inevitable swings would create instability that would almost certainly reduce welfare. By imposing analytical constraints and triggering an intermediate level of judicial review, CBA could have its most dramatic consequences in constraining biased—proregulatory and deregulatory—agencies, as compared to any alternative decisionmaking framework. Such agencies would adopt their most preferred option *among reasonable CBA-justified options*. These policies would be moderated both by the fear of intermediate judicial review and by CBA norms. In return, policies supported by CBA would enjoy staying power. Overall, policies would 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 promoting flexibility. CBA-based constraints could limit an agency's ability to react to new facts and values. I call this phenomenon 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 that regulation—by assessing the quality and persuasiveness of the CBA.[201] As facts on the ground change, CBA does not constrain agency responsiveness. And CBA does not interfere with agency responsiveness during emergency

200. *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 to trigger an intermediate level of review. If agencies do not support their policies by CBA, then changes are easy to explain; in other words, judicial review becomes highly deferential.

201. Aaron L. 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. *See* Nielson, *supra* note 26.

situations that are governed by statutory or APA procedures. The APA, for example, allows agencies to cite "good cause" under limited circumstances to avoid rulemaking procedures.[202] Of course, such interim rules issued without regular procedures are also issued without CBA. Thus, CBA does not constrain when quick action is needed. Similarly, as soon as the emergency ends or another administration takes over, it should be easier to change course because courts will not be comparing CBAs. This is a good thing. Hasty policies should not be sticky; only well-reasoned policies should be.

C. Elections with Bounded Consequences

At worst, this Article's account of CBA might suggest that once Congress delegates administration of a statute to an agency, 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 this account ultimately depends on one's beliefs about how the president, Congress, and the public interact to influence agency action, as well as on one's theory of democratic accountability. First, CBA matters only when Congress authorizes CBA—or, at least, does not prohibit its use.[203] CBA then allows for changes supported by reasoned decisionmaking and transparent policy differences, affording regulated parties and society valuable predictability and stability. Nothing in this account of CBA suggests that elections should not or would not have consequences. Elections would still have consequences, but they would be moderated by congressional and societal precommitments to CBA. Even Justice Rehnquist, concerned about democratic accountability in his partial dissent in *State Farm*, argued that "[a] change in administration brought about by the people casting their votes is a perfectly

202. *See* 5 U.S.C. § 553 (2012). Whether that system is optimal is not the focus of this Article.

203. And, I would argue that statutory silence regarding CBA is increasingly likely to be interpreted as allowing CBA. *See, e.g.*, Michigan v. EPA, 135 S. Ct. 2699 (2015) (demonstrating broad support, in both the majority and dissenting opinions, for agency accounting of the welfare impacts of regulation); Entergy Corp. v. Riverkeeper, Inc., 556 U.S. 208, 223–26 (2009) (interpreting congressional silence regarding the permissibility of considering costs to allow such consideration); *see also* Cass R. Sunstein, *Cost-Benefit Analysis and Arbitrariness Review*, 41 HARV. ENVTL. L. REV. 1, 1 (2017) (noting that where CBA is authorized but not required agencies typically must now provide nonarbitrary reasons for failing to consider CBA); John D. Graham & Paul R. Noe, *A Paradigm Shift in the Cost-Benefit State*, REG. REV. (Apr. 26, 2016) (arguing that the Supreme Court's decision in *Riverkeeper* created a default assumption in favor of CBA).

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*."[204] CBA-based constraints are not inconsistent with Justice Rehnquist's view of the proper role of presidential influence on agency action. They can be considered the economic and accounting rules for "reapprais[ing] . . . costs and benefits" that keep the agency within the bounds established by Congress under the relevant statute and the APA.[205] CBA constrains the swings, but it is still possible to move the meter a lot.[206] And to the extent that CBA limits the president's power to implement his or her preferred policies, it might make the president more likely to work with Congress to change the relevant underlying laws. This effect would certainly promote more democratic decisionmaking.

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

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? This Section addresses two possibilities in the context of deregulation.[207] First, agencies might

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204. Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 59 (1983) (Rehnquist, J., concurring in part and dissenting in part) (emphasis added).

205. There is always a possibility that Congress could specify a different—non CBA-based—decisionmaking rule for agencies in specific circumstances.

206. Although not necessary to this argument, in my view, society should commit to constraining regulatory swings.

207. This Section starts from the premise that there exists a regulation that a later administration would like to modify. This Article, therefore, does 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. *See, e.g.*, Am. Mining Cong. v. Mine Safety & Health Admin., 995 F.2d 1106, 1109 (D.C. Cir. 1993).

justify deregulation based on legal arguments, such as narrower readings of statutory authority, that get *Chevron* deference. Second, agencies might instead achieve deregulation through nonenforcement of federal law. 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. Whatever one thinks of the Trump EPA's CBA, the Trump administration is not relying on 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 statutory provision underlying the CPP:

> EPA proposes a change in the legal interpretation as applied to section 111(d) of the Clean Air Act (CAA), on which the CPP was based, to an interpretation that the Agency proposes is consistent with the Act's text, context, structure, purpose, and legislative history, as well as with Agency's historical understanding and exercise of its statutory authority.[208]

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, courts apply the *Chevron* doctrine to evaluate the agency's action. Under the *Chevron* doctrine, if the statutory provision is ambiguous (Step One), then the court defers to any reasonable agency interpretation (Step Two).[209] There are two ways that the *Chevron* doctrine can be implicated and applied in this context. The first possibility is that a narrower interpretation of statutory authority is a *Chevron* Step One

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208. Approval and Promulgation of Air Quality Implementation Plans; Virginia; Amendment to Ambient Air Quality Standards for Ozone, 82 Fed. Reg. 48,035, 48,036 (Oct. 16, 2017) (to be codified at 40 C.F.R. pt. 52).

209. In *Chevron*, the Court explained:

> 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 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.

Chevron U.S.A. Inc. v. Nat. Res. Def. Council, Inc., 467 U.S. 837, 842–43 (1984).

question, available to the agency only if Congress had clearly intended such an interpretation.[210] I do not focus on this possibility because, if true, the original rulemaking, CBA justified or not, would be unauthorized by law.[211] The second possibility is that Congress did not address this issue concerning the breadth of the agency's statutory authority. In this case, the agency can implement its own interpretation of its authority as long as that interpretation is permissible, which the court would analyze under *Chevron*'s Step Two. Presumably. it would not 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 potential for deference to welfare-reducing policy changes is problematic. Put simply, it would generate a large difference in the level of review—*Chevron* deference versus *State Farm*'s hard look—depending on the agency's description of what it is doing. That differential could result in an agency painting its policy change in terms of legal interpretations instead of in terms of its view of the policy's effects on 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.

One way to reduce this distortive difference in level of review is to apply the *State Farm* analysis under *Chevron*'s Step Two. In other words, courts could refuse to give *Chevron* deference to an

210. This possibility is explored more fully by William W. Buzbee. *See* William W. Buzbee, *Agency Statutory Abnegation in the Deregulatory Playbook*, 68 DUKE L.J. 1509 (2019).

211. That said, I would caution the court against finding this level of "clarity" in many of these contexts. It is difficult to defend the view that in the vast majority of cases, 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. That sort of general intention, to the extent it is constitutionally permissible, is best implemented through CBA. *See also* discussion *supra* note 203 (discussing how the Supreme Court has been more receptive to CBA-based reasoning in the face of statutory silence).

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 M. Levin first powerfully proposed merging *Chevron*'s Step Two with *State Farm*.[212] In his view, there is no distinct dividing line between agency interpretation and policymaking that warrants any different treatment.[213] Over the years, some prominent scholars have agreed with Levin's argument,[214] while others have been hesitant to fully embrace the simplification.[215] Recently, Catherine M. Sharkey has reinvigorated this proposal in light of recent Supreme Court decisions.[216] Sharkey points to cases such as *Judulang v. Holder*[217] and *Encino Motorcars*[218] as signaling a "subtle yet momentous shift" toward implementing *State Farm* analysis at *Chevron*'s Step Two.[219] 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*."[220]

If the Supreme Court embraces this limitation on *Chevron* deference, then it would close the potential loophole caused by different standards of review, and that, in turn, would increase

212. *See* Ronald M. Levin, *The Anatomy of* Chevron*: Step Two Reconsidered*, 72 CHI.-KENT L. REV. 1253, 1263 (1997).

213. *Id.*

214. *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?").

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

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

217. Judulang v. Holder, 565 U.S. 42 (2011).

218. Encino Motorcars v. Navarro, 136 S. Ct. 2117, 2120 (2016) (holding that an arbitrary and capricious regulation "receives no *Chevron* deference"); *see also* Michigan v. EPA, 135 S. Ct. 2699 (2015) (demonstrating broad support, in both the majority and dissenting opinions, for agency accounting of the welfare impacts of regulation).

219. Sharkey, *supra* note 216, at 2368.

220. *Id.* at 2388–89.

transparency of policy-based preferences. Applied to the CBA context, the new *Chevron* Step Two could be implemented as follows: a court would decide whether a *legal* interpretation about statutory authority is reasonable by looking at the agency's CBA, which evaluates the welfare effects of the interpretation. An interpretation based on faulty or questionable analysis should be deemed an unreasonable one. And, more controversially, an interpretation that admittedly results in net costs to society should be more likely to be deemed an unreasonable one in light of the overall welfare-enhancing purposes of most statutes.[221]

In practice, however, courts have generally deferred to agencies under a broad range of circumstances[222]—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.[223] Many scholars have noted the increasing disdain for the *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."[224] Applying *State Farm* analysis at *Chevron*'s Step Two is one way to limit the range of agency discretion by focusing on the welfare effects of the policy and on the reasonableness of the underlying factual findings, as 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.[225]

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221. Courts could even define "reasonable" interpretations as those that are net beneficial to society, as demonstrated by some informal CBA. Admittedly, this application of the *Chevron–State Farm* fix might go further than other scholars have suggested.

222. Reversals at Step Two are rare. *See, e.g.*, Kent Barnett & Christopher J. Walker, Chevron *in the Circuit Courts*, 116 MICH. L. REV. 1, 33–34 (2017).

223. For example, Catherine M. 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. *Id.* at 507–08.

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

225. This solution, however, might not be appealing to those who oppose *Chevron* deference as part of a wider attack on the administrative state due to its perceived threats to individual liberty and democratic accountability. *See generally* Lisa Heinzerling, *The Power Canons*, 58 WM. & MARY L. REV. 1933 (2017).

2. *Nonenforcement*. A related concern is that if agencies cannot easily modify regulatory stringency because of CBA-based constraints, they might seek to change the de facto regulatory stringency by altering 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 decides whether to comply with environmental regulations by comparing the expected cost of compliance with the expected cost of noncompliance—that is, the probability of detection multiplied by the amount of the penalty. If an agency wants to make regulations less stringent, it could reduce enforcement efforts, which might result in less regulatory compliance. And if an agency wants to make regulations more stringent, it could increase enforcement efforts, which might result in more regulatory compliance. Arguably, this is a less desirable approach to changing regulatory stringency because it is less visible.[226]

This concern has received much publicity in the context of environmental regulation. Historically, EPA enforcement has been sensitive to perceived preferences of the president and Congress.[227] More so than in the rulemaking context, presidents and federal agencies have enjoyed significant discretion when it comes 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 Trump administration could significantly curtail enforcement efforts without many legal obstacles. In fact, the administration has been open about its hands-off approach to federal environmental enforcement.[228]

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226. Matthew D. Zinn, *Policing Environmental Regulatory Enforcement: Cooperation, Capture, and Citizen Suits*, 21 STAN. ENVTL. L.J. 81, 128 (2002).

227. JOEL MINTZ, ENFORCEMENT AT THE EPA 185–202.

228. *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 [https://perma.cc/Y6DZ-UGZP] (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). A *New York Times* report analyzing data on EPA-led formal enforcement actions suggests that this hands-off approach has already been implemented. *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), https://www.nytimes.com/2017/12/10/us/politics/pollution-epa-regulations.html [https://perma.cc/JG56-U6DM].

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" and take control of implementation and enforcement of environmental regulations.[229] Other statutes, such as the Clean Air Act, require states to develop implementation plans that include enforcement programs.[230] Forty-seven states are authorized to enforce the Clean Water Act, and all states primarily enforce the Clean Air Act.[231] While EPA oversees state enforcement, conducts its own inspections, and brings enforcement actions in order to encourage consistent regulatory compliance across states, its efforts are dwarfed by state efforts. Under the Clean Water Act, for example, EPA has conducted about 4 percent of all inspections each year for the last eight years.[232] And under the Clean Air Act, states are responsible for about 99 percent of full compliance evaluations.[233] In other words, enforcement is primarily driven by states, not by EPA.

What might a change in federal enforcement mean for overall enforcement? It is difficult to say. On the one hand, given that the federal government's role in environmental enforcement has always been minimal,[234] a new, more hands-off approach might seem to have no effect; states might continue to enforce environmental law as they please, as they have all along. On the other hand, state enforcement responds to incentives.[235] Studies have demonstrated, for example, that states tend to skimp on enforcement against facilities when the benefits

229. *See, e.g.*, 33 U.S.C. § 1342 (2012).

230. *See, e.g.*, 42 U.S.C. § 7410 (2012).

231. 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.

232. *See* EPA Enforcement and Compliance History Online, Analyze Trends: State Water Dashboard, https://echo.epa.gov/trends/comparative-maps-dashboards/state-water-dashboard [https://perma.cc/5AS5-JGJJ].

233. *Id.*

234. *See, e.g.*, Daniel A. Farber, *Taking Slippage Seriously: Noncompliance and Creative Compliance in Environmental Law*, 23 HARV. ENVTL. L. REV. 297, 303–04 (1999); Victor B. Flatt, *A Dirty River Runs Through It (The Failure of Enforcement in the Clean Water Act)*, 25 B.C. ENVTL. AFF. L. REV. 1, 4–6 (1998).

235. *See, e.g.*, John Donahue, *Tiebout? Or Not Tiebout? The Market Metaphor and America's Devolution Debate*, 11 J. ECON. PERSP. 73–81 (1997); Eric Helland, *The Revealed Preferences of State EPAs: Stringency, Enforcement, and Substitution*, 35 J. ENVTL. ECON. & MGMT. 242, 258–60 (1998); Hilary Sigman, *Transboundary Spillovers and Decentralization of Environmental Policies*, 50 J. ENVTL. ECON. & MGMT. 82, 83–84 (2005).

of increased compliance accrue to other states.[236] To the extent that it gives states freedom to allocate their enforcement resources at their discretion, a hands-off federal enforcement policy could exacerbate these and other tendencies.[237] In other words, a policy of federal underenforcement might give states *more* freedom to enforce federal environmental law according to their preferences.[238] To those that generally prefer state control in this area, this might be a good thing. Instead of a focus on consistency, it might allow states to better tailor regulations 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 capture by powerful local interests more likely or exacerbate exposures to environmental harms faced by disadvantaged groups.

Presidential and agency enforcement discretion is unlikely to go away. To the extent that CBA-based constraints encourage more drastic uses of enforcement discretion, there are other relevant actors—such as the public, nongovernmental organizations, and insurers—that constrain the overall effectiveness of this strategy. That is, notwithstanding any overall effect of such a policy on *enforcement*, there might still not be much effect on *compliance*. These actors can influence compliance through citizen suits, which are authorized under many environmental statutes; other litigation 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.[239]

CONCLUSION

CBA was once considered a tool for implementing conservative regulatory policies, in part because benefits—which could justify

236. *See* Sigman, *supra* note 235.

237. *See generally* Caroline Cecot, *Filling the Federal Enforcement Gap*, 33 NAT. RESOURCES & ENV'T 36 (2019) (discussing how lower federal enforcement might affect state enforcement levels).

238. There might be some contexts in which states prefer to have a strong federal enforcement policy. As Cynthia Giles recently articulated, a credible federal enforcement threat might motivate companies to proactively work with states toward compliance because "if they don't resolve their enforcement problems at the state level, they may have to face the EPA instead." Cynthia Giles, *Why We Can't Just Leave Environmental Protection to the States*, GRIST (Apr. 26, 2017), https://grist.org/opinion/why-we-cant-just-leave-environmental-protection-to-the-states/ [https://perma.cc/BS7N-EQBS].

239. *See* Cecot, *supra* note 237, at 38–39.

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. Indeed, CBA might be the unlikely champion for many progressives seeking to derail the Trump administration's deregulatory agenda and to preserve at least some of the Obama administration's regulatory legacy. If any rules are vulnerable to modification, repeal, or replacement, it is rules that were not supported by thorough CBAs.

This Article argues that 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. Although broad delegations to agencies may reduce political accountability, society can also reap benefits from expertise and flexibility. CBA works well to ensure that we fully utilize agency expertise while still providing flexibility to respond to real changing conditions and values. And it does so while promoting accountability in this system by making presidential oversight and CBA-bounded control easier—especially when values play an important role in policymaking—and by forcing decisions to be transparent. Ultimately, by encouraging rational decisionmaking and reasonable updating, CBA and judicial review of CBA promotes predictability and plays a desirable role in stabilizing regulatory policy across presidential administrations.