

ARTICLES

A “Cost-Benefit State”? Reports of Its Birth Have Been Greatly Exaggerated

by Amy Sinden

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Summary

In a spate of recent cases (*Michigan v. EPA*, *EME Homer City v. EPA*, and *Entergy Corp. v. Riverkeeper*), the U.S. Supreme Court has been widely viewed as abruptly changing course in its treatment of cost-benefit analysis (CBA) in environmental decision making. In fact, these cases represent less of a change in course than is commonly believed. They did not so much eliminate the Court’s previously emerging anti-cost presumption as narrow and perhaps more clearly define it. The term “cost-benefit analysis” can refer to a broad range of decisionmaking techniques, and an even longer list of methods involve agencies “considering costs” in one way or another. These cases indicate that the Court’s anti-cost presumption no longer applies to informal CBA or feasibility analysis, but they do nothing to disturb the presumption as applied to other cost consideration tools. Indeed, *Riverkeeper* can be read to at least gesture in the direction of a continuing presumption against formal CBA. It is not entirely clear that *Michigan* articulated a pro-cost presumption at all, but to the extent it did, that presumption can be read to exclude or at least de-emphasize formal CBA.

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In *Michigan v. Environmental Protection Agency*,¹ the U.S. Supreme Court waded into the decades-long debate over the use of cost-benefit analysis (CBA) in environmental rulemaking.² The decision struck down the U.S. Environmental Protection Agency’s (EPA’s) limits on mercury emissions from power plants for the Agency’s failure to consider costs, and so appears, superficially at least, like a win for the pro-CBA camp. Prof. Cass Sunstein, President Barack Obama’s former “regulatory czar” and one of CBA’s most prominent cheerleaders, viewed it that way, heralding the opinion as a “rifle shot” ringing in the arrival of the “cost-benefit state.”³

Indeed, this is the third in a recent spate of Supreme Court opinions that seem to suggest—at first blush, anyway—that the Court may be reversing what had previously begun to look like a presumption *disfavoring* CBA.⁴ In *Environmental Protection Agency v. EME Homer City Generation*,⁵ the Court upheld EPA’s consideration of costs in setting limits on air pollution that crosses state lines, and in *Entergy Corp. v. Riverkeeper*,⁶ the Court upheld EPA’s use of CBA in setting standards for cooling water intake structures at power plants. But while the earlier rulings simply ratified agency decisions to consider costs, *Michigan*

- 135 S. Ct. 2699, 45 ELR 20124 (2015).
- Compare RICHARD L. REVEZ & MICHAEL A. LIVERMORE, RETAKING RATIONALITY: HOW COST-BENEFIT ANALYSIS CAN BETTER PROTECT THE ENVIRONMENT AND OUR HEALTH 13-16 (2008), and MATTHEW D. ADLER & ERIC A. POSNER, NEW FOUNDATIONS OF COST-BENEFIT ANALYSIS (2006), and CASS R. SUNSTEIN, THE COST-BENEFIT STATE: THE FUTURE OF REGULATORY PROTECTION 19-20 (2002) [hereinafter SUNSTEIN, COST-BENEFIT STATE], and John D. Graham, *Saving Lives Through Administrative Law and Economics*, 157 U. Pa. L. Rev. 395, 429, 432-38 (2008), and Edward J. Mishan, *Cost-Benefit Analysis* 390 (1976), and A.R. Prest & Ralph Turvey, *Cost-Benefit Analysis: A Survey*, 75 Econ. J. 683, 683-85 (1965), with DOUGLAS A. KY SAR, REGULATING FROM NOWHERE: ENVIRONMENTAL LAW AND THE SEARCH FOR OBJECTIVITY 104 (2010), and FRANK ACKERMAN & LISA HEINZERLING, PRICELESS: ON KNOWING THE PRICE OF EVERYTHING AND THE VALUE OF NOTHING (2004), and SIDNEY A. SHAPIRO & ROBERT L. GLICKSMAN, RISK REGULATION AT RISK: RESTORING A PRAGMATIC APPROACH (2003), and MARK SAGOFF, THE ECONOMY OF THE EARTH: PHILOSOPHY, LAW, AND THE ENVIRONMENT (1988), and Amy Sinden, *In Defense of Absolutes: Combating the Politics of Power in Environmental Law*, 90 IOWA L. REV. 1405, 1410, 1452-60 (2005), and Steven Kelman, *Cost-Benefit Analysis: An Ethical Critique*, REG. 33 (Jan./Feb. 1981), and ARTHUR SMITHIES, THE BUDGETARY PROCESS IN THE UNITED STATES 344-46 (1955).
- Cass R. Sunstein, *Thanks, Justice Scalia, for the Cost-Benefit State*, BLOOMBERG VIEW, July 7, 2015. See also Cass R. Sunstein, *Cost-Benefit Analysis and Arbitrariness Review* (draft, SSRN, 2016); John D. Graham & Paul R. Noe, *A Paradigm Shift in the Cost-Benefit State*, REG.BLOG, Apr. 26, 2016.
- See *Whitman v. American Trucking Ass’ns*, 531 U.S. 457, 470-71, 31 ELR 20512 (2001) (holding that in the absence of a “clear” “textual commitment,” provisions of the Clean Air Act (CAA) must be read as precluding consideration of costs); *American Textile Mfrs. Inst., Inc. v. Donovan*, 452 U.S. 490, 510, 11 ELR 20736 (1981) (“When Congress has intended that an agency engage in cost-benefit analysis, it has clearly indicated such intent on the face of the statute.”); *Union Electric v. Environmental Prot. Agency*, 427 U.S. 246, 257, n.5, 6 ELR 20570 (1976) (“Where Congress intended the Administrator to be concerned about economic and technological infeasibility, it expressly so provided.”).
- 134 S. Ct. 1584, 44 ELR 20094 (2014).
- 556 U.S. 208, 39 ELR 20067 (2009).

marks the first time the Supreme Court has actually forced cost considerations on an unwilling agency.

Nonetheless, we should not rush too quickly to ring in Professor Sunstein's cost-benefit state. Appearances can be deceiving. The term "cost-benefit analysis" can refer to a broad range of decisionmaking techniques, and an even longer list of methods involve agencies "considering costs" in one way or another. There remains a fairly wide gulf between the kinds of analysis the Court endorsed in these cases and the particular brand of CBA that Professor Sunstein advocates. There is, in fact, good reason to believe that the Court remains quite skeptical of Professor Sunstein's cost-benefit state.

Agencies have many ways of considering costs in regulatory decisionmaking that are entirely distinct from CBA.⁷ The U.S. Congress has frequently, for example, directed agencies to set environmental standards through the use of various forms of feasibility analysis.⁸ These kinds of analyses consider costs in order to identify the most stringent level of environmental protection that is economically and technologically feasible, but do not balance costs against benefits as CBA does. Cost-effectiveness analysis—another common tool used by agencies—considers costs but does not involve CBA either.⁹ It takes a single regulatory goal (like saving a human life) and compares the costs of reaching that goal under various regulatory alternatives. So, when the Supreme Court suggests a presumption in favor of *considering costs*, as it did in *Michigan*, that is a very different matter from the Court endorsing a presumption in favor of *cost-benefit analysis*, as Professor Sunstein claims.¹⁰

Even CBA itself comes in many forms—from an informal, intuitive balancing of qualitatively described pros and cons, to a formal, quantified method grounded in welfare economics.¹¹ Congress and the courts have generally favored the informal kind.¹² Yet, the CBA that Professor Sunstein envisions for the cost-benefit state is well toward the formal end of the spectrum.¹³

At its most formal, CBA requires quantifying and monetizing all of the social costs and benefits of a regulation and a host of incrementally varying alternatives, discounting to present net value, and finding the point of net benefits maximization where the marginal cost curve intersects the marginal benefits curve. This is the kind of CBA embodied in the CBA Executive Orders and promoted by the White House Office of Information and Regulatory Affairs

(OIRA).¹⁴ It is also the kind that has generated enormous controversy for decades because it requires putting a dollar value on intangibles, like good health and a clean environment, that are impossible to measure in monetary terms.

It was undoubtedly these kinds of concerns that led the Supreme Court to apply a presumption *against* CBA in a number of cases in the 1980s, 1990s, and early 2000s.¹⁵ Indeed, its 2009 decision in *Riverkeeper*, upholding EPA's cooling water rule for power plants, marked the first time the Court had ever upheld an environmental agency's use of CBA.¹⁶ This was a big deal. But it was not as big a deal as some have made it out to be.¹⁷ The Court did not employ its earlier anti-CBA presumption, but neither did it create a new pro-CBA presumption, as some have argued.¹⁸ Notably, the Court did not require Agency use of CBA at all. It merely gave EPA discretion to use an informal CBA if it chooses to, but also left it free to choose other forms of analysis entirely. Moreover, the Court was careful in *Riverkeeper* to confine its endorsement of CBA to the most informal varieties and actually went out of its way to express skepticism about more formal brands of CBA.¹⁹ In so doing, it left the door wide open for a continuing presumption against *formal* CBA.

Nor did the Court's subsequent decisions in *Homer City* and *Michigan* close the door to a presumption against formal CBA or create a new pro-CBA presumption. Indeed, *EME Homer City* did not actually involve CBA at all.²⁰ And in *Michigan*, all the Court said was that agencies should generally consider costs in regulatory decisionmaking, but that "[i]t will be up to the agency to decide . . . how to account for cost."²¹ Thus, while it's possible to read *Michigan* as gesturing toward a presumption in favor of *cost consideration*, that's a very different matter from the kind of presumption in favor of *formal* CBA that would herald the dawning of the cost-benefit state. Indeed, in *Michigan*, both the majority and the dissent took pains to make clear that they were not requiring agencies "to conduct a formal cost-benefit analysis in which each advantage and disadvantage is assigned a monetary value."²²

This Article proceeds in four parts. Part I defines terms, identifying the broad set of decisionmaking techniques that can be described as involving some "consideration of costs" and that include but are not limited to the various varieties of CBA, formal and informal. Drawing on ideas laid out more fully in my previous work,²³ this part also provides an analytic framework for conceptualizing the variety of methods that are usually lumped together under the umbrella term "cost-benefit analysis" and for arrang-

7. Amy Sinden, *Cost-Benefit Analysis*, in EDWARD ELGAR ENCYCLOPEDIA OF ENVIRONMENTAL LAW, VOL II, ENVIRONMENTAL DECISION MAKING (Glicksman & Paddock eds., forthcoming).

8. See generally David M. Driesen, *Distributing the Costs of Environmental, Health, and Safety Protection: The Feasibility Principle, Cost-Benefit Analysis, and Regulatory Reform*, 32 B.C. ENVTL. AFF. L. REV. 1 (2005).

9. See, e.g., EDWARD J. MISHAN & EUSTON QUAH, *COST-BENEFIT ANALYSIS* 8 (5th ed. 2007).

10. Sunstein, *Cost-Benefit Analysis and Arbitrariness Review*, *supra* note 3. See also Driesen, *supra* note 8, at 6 (noting that CBA is often erroneously equated with consideration of costs).

11. Amy Sinden, *Formality and Informality in Cost-Benefit Analysis*, 2015 UTAH L. REV. 93 (2015).

12. *Id.* at 129-47.

13. *Id.* at 164-65.

14. *Id.* at 147-52.

15. See *supra* note 4.

16. *Entergram Corp. v. Riverkeeper*, 556 U.S. 208, 226, 39 ELR 20067 (2009).

17. *Graham & Noe*, *supra* note 3.

18. *Id.*

19. *Riverkeeper*, 556 U.S. at 223.

20. See *infra* notes 189 to 191 and accompanying text.

21. *Michigan v. Environmental Prot. Agency*, 135 S. Ct. 2699, 2711, 45 ELR 20124 (2015).

22. *Id.* at 2711. See also *id.* at 2717 (Kagan, J., dissenting).

23. See Sinden, *Formality and Informality in Cost-Benefit Analysis*, *supra* note 11.

ing these along a formality-informality spectrum. With this framework in mind, Part II then describes Professor Sunstein's vision of the cost-benefit state,²⁴ including the cost-benefit default rules that he argues courts should (and do) apply to their review of agency decisionmaking.

Part III then reviews the eight cases, spanning five decades, in which the Supreme Court has addressed the propriety of CBA or cost considerations in connection with environmental decisionmaking.²⁵ Up until 2009, this line of cases seemed to be increasingly entrenching an anti-cost or anti-CBA presumption. With the *Riverkeeper* decision in 2009, however, this trend appeared to at least stall and perhaps reverse direction. The question is whether *Riverkeeper* in conjunction with *EME Homer City* and *Michigan* have created an opposite presumption or, indeed, ushered in the cost-benefit state. To really understand the implications of these cases, one must look more closely at the particular kind of CBA or cost considerations the Court was addressing in each one, which this part endeavors to do.

Part IV then summarizes and analyzes the results of this survey. This analysis reveals that while the Court has in its recent cases implicitly disclaimed aspects of its earlier anti-cost presumption, this backtracking has not encompassed formal CBA. Thus, on a plausible reading of the case law, a narrower presumption disfavoring *formal* CBA in particular survives the Supreme Court's recent decisions. And while *Michigan* appears to at least gesture toward a pro-cost presumption, because that presumption gives full rein to the agencies to "decide how to account for cost," it is entirely consistent with a narrow anti-cost presumption aimed only at formal CBA. Indeed, the survival of a continuing presumption against formal CBA is made even more credible by the repeated disclaimers against formal CBA offered by the Court in its recent cases. Thus, while Professor Sunstein and others continue their quest to steer us in that direction, on the view from the Supreme Court anyway, the cost-benefit state still appears a long way off.

I. Considering Costs: A Range of Regulatory Design Tools

When agencies craft environmental regulations, they have at their disposal a range of decisionmaking tools. The broad variety of such tools and the important distinctions between them are matters about which there has been considerable confusion on the Supreme Court in recent years. Accordingly, this section begins by cataloging and describing the most prominent of these regulatory design tools. As this part explains, CBA—a term that refers to a whole

family of different tools—represents one subset of these, but it is hardly the primary or most important set.

Indeed, in most of our federal environmental statutes, Congress has rejected CBA, directing agencies to use other design tools instead.²⁶ CBA also does not have a monopoly on cost consideration. A host of other design tools also require agencies to consider costs in some way.²⁷ The most prominent among these fall into the three categories discussed below: feasibility analysis, cost-effectiveness analysis, and open-ended balancing.

A. CBA

The term "cost-benefit analysis" is frequently used but rarely defined. I will define it here as any decisionmaking technique that involves weighing and comparing the costs and the benefits of a course of action—a definition that best captures the way the term is most often used in the literature.²⁸ Within these broad confines, there are many different varieties of CBA that fall on a spectrum from informal to formal.

On the informal end of that spectrum is what I have previously called "Ben Franklin CBA."²⁹ This is a reference to a famous quote in which Franklin said that he made big decisions by essentially drawing a line down the center of a page, listing pros and cons qualitatively described in each column, and then performing an ad hoc, intuitive comparison.³⁰ This informal style of CBA involves (1) a qualitative description of the costs and benefits, (2) of a single alternative, and (3) a rough, intuitive, apples-to-oranges balancing of the two.

On the other end of the spectrum is "economic CBA."³¹ This is a highly technical method that seeks to identify the point of economic efficiency, defined as costs equaling benefits at the margin.³² This is a reference to economic theory, which views CBA as a tool for identifying the optimal level of regulation—that is, the regulation that meets the test of Kaldor-Hicks efficiency.³³ It involves identifying the level of regulation that maximizes net social benefits, or, said another way, for which marginal social benefits are just equal to marginal social costs.³⁴ Identi-

24. SUNSTEIN, COST-BENEFIT STATE, *supra* note 2.

25. *Michigan*, 135 S. Ct. 2699; *Environmental Protection Agency v. EME Homer City Generation*, 134 S. Ct. 1584, 44 ELR 20094 (2014); *Entergy Corp. v. Riverkeeper*, 556 U.S. 208, 39 ELR 20067 (2009); *Whitman v. American Trucking Ass'ns*, 531 U.S. 457, 31 ELR 20512 (2001); *American Textile Mfrs. Inst., Inc. v. Donovan*, 452 U.S. 490, 11 ELR 20736 (1981); *Tennessee Valley Auth. v. Hill*, 437 U.S. 153, 8 ELR 20513 (1978); *Union Electric v. Environmental Prot. Agency*, 427 U.S. 246, 6 ELR 20570 (1976); *Citizens to Pres. Overton Park v. Volpe*, 401 U.S. 402, 1 ELR 20110 (1971).

26. *See infra* note 51.

27. Driesen, *supra* note 8, at 1 ("consideration of cost pervades the regulatory system and always has, even before the current push toward CBA").

28. *See* Sinden, *Formality and Informality in Cost-Benefit Analysis*, *supra* note 11, at 98.

29. *See id.* at 99, 107.

30. *See* Letter from Benjamin Franklin, to Joseph Priestly (Sept. 19, 1772), in BENJAMIN FRANKLIN, REPRESENTATIVE SELECTIONS, WITH INTRODUCTION, BIBLIOGRAPHY, AND NOTES 348-49 (Frank Luther Mott & Chester E. Jorgenson eds., 1936).

31. Sinden, *Formality and Informality in Cost-Benefit Analysis*, *supra* note 11, at 100-07.

32. TOM TIETENBERG, ENVIRONMENTAL AND NATURAL RESOURCE ECONOMICS 66 (1984).

33. ANTHONY E. BOARDMAN ET AL., COST-BENEFIT ANALYSIS: CONCEPTS AND PRACTICE 29-30 (P.J. Boardman ed., 2d ed. 2001); EDWARD J. MISHAN, COST-BENEFIT ANALYSIS 390 (1971).

34. *See* EDWARD M. GRAMLICH, A GUIDE TO BENEFIT-COST ANALYSIS 33-36 (2d ed. 1990); TIETENBERG, *supra* note 32, at 25, 66; Richard D. Morgenstern, *Conducting an Economic Analysis: Rationale, Issues, and Requirements*, in ECONOMIC ANALYSIS AT EPA: ASSESSING REGULATORY IMPACT 25, 40

fying that efficient level of regulation requires measuring the costs and benefits not just of a single regulation, but of every possible level of regulation at incrementally varying levels of stringency.

And since the goal is to find the point at which marginal costs and marginal benefits are just equal, it is not sufficient to measure costs and benefits in qualitative terms or to do a rough apples-to-oranges comparison. Rather, costs and benefits must be fully, or close to fully, quantified and then converted to a common metric (usually dollars) so that they can be precisely compared. Accordingly, this formal, economic CBA involves (1) quantification and monetization of all, or nearly all,³⁵ costs and benefits to society as a whole, (2) for a full range of incrementally varying alternatives, in order to (3) identify the point of net benefits maximization, where marginal costs are just equal to marginal benefits.³⁶

These two visions of CBA have very little in common other than the general approach of juxtaposing positive and negative impacts. Informal CBA relies on qualitative comparisons of pros and cons and gives no more than general guidance. Formal CBA, on the other hand, uses numbers and mathematics to produce purportedly precise answers. Notice also that informal and formal CBA play entirely different roles in the decisionmaking process.³⁷ Informal CBA simply provides a binary go-or-no-go answer to a single option and therefore provides no more than a secondary check on a decision that has been made by other means. Formal CBA, on the other hand, provides a standard-setting tool for identifying the optimal choice from among a whole range of regulatory alternatives. And only at its most formal does CBA actually purport to measure efficiency. In its less formal varieties, CBA is at best a blunt instrument for welfare maximization.³⁸

These two contrasting visions of CBA form two ends of a spectrum with more varieties in between.³⁹ One might, for example, be able to quantify and monetize only a portion of all costs and benefits. Or one might monetize all significant costs and benefits but only for a single alternative, and thus be able to say whether benefits outweigh costs for that alternative but not whether it is the efficient level of regulation (with costs equaling benefits at the margin). There are also a number of different balancing tests that fall somewhere on the spectrum between the most informal rough, intuitive apples-to-oranges comparison and the most formal pinpointing of the regulation level at which marginal costs just equal marginal benefits. A CBA that monetizes costs and benefits but involves only a single alternative might, for example, apply a balancing test that asks whether benefits “outweigh” costs. Or a slightly less formal version might ask whether benefits “justify” costs.⁴⁰ An even less formal balancing test asks simply whether costs are “grossly” or “wholly” disproportionate to benefits.

A “wholly disproportionate” standard has been used in a variety of contexts. EPA has used it, for example, in implementing various provisions of the Clean Water Act (CWA).⁴¹ It is typically associated with a less-formal CBA because it allows for a rougher comparison (and therefore less quantification of costs and benefits) than a test that asks, for example, whether benefits “outweigh” costs. One can tell from a distance whether two elements are wholly disproportionate, even if the picture is fuzzy. Discerning whether one element outweighs another, however, may require a sharper, more precise image.⁴²

Thus, the term CBA can be used to refer to a wide variety of decisionmaking techniques that range on a spectrum from formal to informal. But CBA is just one of a number of regulatory tools that involve the consideration of costs. The next three sections take up the most prominent of these other cost-consideration tools.⁴³

(Morgenstern et al., 1997); Kenneth J. Arrow et al., *Is There a Role for Benefit-Cost Analysis in Environmental, Health, and Safety Regulation?*, 272 *Sci.* 221 (1996); EDITH STOKEY & RICHARD ZECKHAUSER, *A PRIMER FOR POLICY ANALYSIS* 137 (1978).

35. Presumably, one could still undertake a meaningful analysis if unquantified benefits or costs were known to be de minimis.

36. Others have also distinguished between “strong and weak,” or “soft and hard” forms of CBA. See John C. Coates IV, *Cost-Benefit Analysis of Financial Regulation: Case Studies and Implications*, 124 *YALE L.J.* 882 (2015) (distinguishing between “quantified CBA,” “guesstimated CBA,” and “conceptual CBA”); DANIEL FARBER, *ECO-PRAGMATISM: MAKING SENSIBLE ENVIRONMENTAL DECISIONS IN AN UNCERTAIN WORLD* 39, 93 (1999) (distinguishing between CBA aimed at economic efficiency versus “soft” CBA, “which would compare costs and benefits without attempting to quantify every factor”); Jonathan Cannon, *The Sounds of Silence: Cost-Benefit Canons in Entergy Corp. v. Riverkeeper, Inc.*, 34 *HARV. ENVTL. L. REV.* 425, 428-29 (2010) (distinguishing between “strong” and “weak” forms of CBA); John D. Graham, *Saving Lives Through Administrative Law and Economics*, 157 *U. PA. L. REV.* 395, 432-38 (2008) (distinguishing between “hard” and “soft” forms of CBA); ADLER & POSNER, *supra* note 2, at 73, 78 (distinguishing between CBA “using a money scale” and “intuitive balancing”); see *id.* at 79 (noting that “[s]ometimes CBA is used more generically, to include any wide or multidimensional procedure, not just a monetizing one”); *id.* at 100 (acknowledging that intuitive balancing may be more accurate than formal CBA, but “its main problem is its lack of transparency”).

37. Sinden, *Formality and Informality in Cost-Benefit Analysis*, *supra* note 11, at 118.

38. *Id.* at 118-20. See also Amy Sinden, *The Problem of Unquantified Benefits* (2016) (unpublished manuscript) (on file with author) (empirical study indicating that in over three-quarters of its CBAs, EPA refrains from quantifying

whole categories of benefits the Agency itself describes as “important,” “significant,” or “substantial”).

39. For a more in-depth analysis of this idea, see Sinden, *Formality and Informality in Cost-Benefit Analysis*, *supra* note 11.

40. This is the formulation in the Clinton Executive Order, which still applies today and in 1993 replaced the earlier Reagan Executive Order, which had applied the more formal “outweigh” test. Exec. Order No. 12866, §1(b)(6), 3 *C.F.R.* 638, 639 (1994) (Clinton Order), *reprinted as amended in* 5 *U.S.C.* §601 app. at 88-92 (2012); Exec. Order No. 12291 §2(b), 3 *C.F.R.* 127, 128 (1982) (Reagan Order).

41. 33 *U.S.C.* §§1251-1387, *ELR STAT. FWPCA* §§101-607. See, e.g., *Association of Pac. Fisheries v. Environmental Prot. Agency*, 615 *F.2d* 794, 805, 10 *ELR* 20336 (9th Cir. 1980); *Weyerhaeuser Co. v. Costle*, 590 *F.2d* 1011, 1045, n.52, 9 *ELR* 20284 (D.C. Cir. 1978); *Entergy Corp. v. Riverkeeper*, 556 *U.S.* 208, 225, 39 *ELR* 20067 (2009); *Seacoast Anti-Pollution League v. Costle*, 597 *F.2d* 306, 311, 9 *ELR* 20320 (1st Cir. 1979).

42. EPA, at least, appears to treat the standard this way. See *ENVTL. PROT. AGENCY, DRAFT: NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM—PROPOSED REGULATIONS TO ESTABLISH REQUIREMENTS FOR COOLING WATER INTAKE STRUCTURES AT EXISTING FACILITIES AND AMEND REQUIREMENTS AT PHASE I FACILITIES* 292-93 (2011) (Docket ID No. EPA-HQ-OW-2008-0667-1407, DCN 10-6625B) (describing EPA’s stated justification for using a wholly disproportionate test in its proposed cooling water intake rule under the CWA: “important benefit effect categories will very likely not be able to be quantified and monetized”).

43. Professor Sunstein strangely seems unaware of these other well-established tools of regulatory design when he makes the assertion that “it is not possi-

B. Feasibility Analysis

Feasibility analysis sets standards at the most stringent level that is economically and technologically feasible.⁴⁴ Unlike CBA, which considers the overall social costs of a regulation and compares them to its overall social benefits, the feasibility principle compares the costs borne by the regulated industry to the financial capacities of that industry. In this way, feasibility analysis avoids the most problematic and controversial aspect of formal CBA—its requirement that regulatory benefits be valued in monetary terms.⁴⁵ There is substantial literature on the application and normative grounding of feasibility analysis, which is prevalent in American environmental law.⁴⁶

A number of scholars have identified the feasibility principle as one of the three primary approaches to environmental standard-setting.⁴⁷ The other two are health-based standards and CBA. Health-based standards choose the standard based solely on considerations of human and/or ecological health without consideration of costs. Examples include national ambient air quality standards (NAAQS), which the Clean Air Act (CAA) directs EPA to set at the level “requisite to protect the public health,”⁴⁸ and the Endangered Species Act (ESA), which requires federal agencies to “insure” that their actions do not “jeopardize the continued existence” of listed species.⁴⁹

CBA has received inordinate attention in the academic and policy literature, but it plays a relatively minor role in actual agency decisionmaking. While a series of Executive Orders dating back to the Ronald Reagan White House have for decades required agencies to prepare CBAs of “major” regulations (costing the economy \$100 million or more),⁵⁰ only a small handful of our federal environmental

laws actually make CBA the rule of decision. In most statutes, Congress has rejected CBA, directing agencies to use health-based or feasibility standards instead.⁵¹

I. Defining Feasibility

The precise formulation of feasibility standards varies considerably. The CWA, for example, requires the limits on discharges into waterways that “require application of the best available technology economically achievable” for particular categories of industrial polluters.⁵² The CAA requires standards for the emission of hazardous air pollutants to be no less stringent than the level of “the average emission limitation achieved by the best performing 12 percent of the existing sources” in a particular category.⁵³ The Occupational Safety and Health Act (OSH Act) requires standards for toxics that “most adequately assure[], to the extent feasible, . . . that no employee will suffer material impairment of health.”⁵⁴

The concept of feasibility is generally understood to have two components: (1) technological feasibility and (2) economic feasibility.⁵⁵ The problem, of course, lies in defining the precise level of stringency at which a regulation crosses the threshold from feasible to infeasible. The Supreme Court has defined feasibility, at least in the context of the OSH Act, as that which is “capable of being done.”⁵⁶ Yet, particularly with respect to economic feasibility, that definition begs the question, what level of cost is an industry “capable” of carrying? Except where Congress

ble to ‘consider’ costs without engaging in [weighing costs against benefits].” Sunstein, *Cost-Benefit Analysis and Arbitrariness Review*, *supra* note 3, draft at 11.

44. Driesen, *Distributing the Costs of Environmental, Health, and Safety Protection*, *supra* note 8.

45. See *infra* notes 228 to 234 and accompanying text.

46. See generally Jason R. Bent, *Health Theft*, 48 CONN. L. REV. 637 (2016); Dov Waisman, *Equity and Feasibility Regulation*, 50 U. RICH. L. REV. 1263 (2016); David M. Driesen, *Two Cheers for Feasible Regulation: A Modest Response to Masur and Posner*, 35 HARV. ENVTL. L. REV. 313 (2011); Jonathan S. Masur & Eric A. Posner, *Against Feasibility Analysis*, 77 U. CHI. L. REV. 657, 669 (2010); Driesen, *Distributing the Costs of Environmental, Health, and Safety Protection*, *supra* note 8; Sidney A. Shapiro & Thomas O. McGarity, *Not So Paradoxical: The Rationale for Technology-Based Regulation*, 1991 DUKE L.J. 729 (1991); Wendy E. Wagner, *The Triumph of Technology-Based Standards*, 2000 ILL. L. REV. 83 (2000).

47. See Michael A. Livermore & Richard L. Revesz, *Rethinking Health-Based Environmental Standards*, 89 N.Y.U. L. REV. 1184, 1190 (2014); Sinden, *Cost-Benefit Analysis*, *supra* note 7; Thomas O. McGarity, *Media-Quality, Technology, and Cost-Benefit Balancing Strategies for Health and Environmental Regulation*, 46 LAW & CONTEMP. PROBS. 159, 160 (1983).

48. 42 U.S.C. §§7401-7671q, §7409(b)(1), ELR STAT. CAA §§101,618.

49. 16 U.S.C. §§1531-1544, §1536(a)(2), ELR STAT. ESA §§301-330.

50. Soon after President Reagan came into office in 1981, he issued an Executive Order requiring all federal agencies to prepare CBAs of all major rules and to issue regulations only when the analysis showed that “the potential benefits to society outweigh the potential costs to society.” Exec. Order No. 12291 §2(b), 46 Fed. Reg. 13193 (Feb. 17, 1981). That order remained in effect until President William Clinton withdrew it in 1993. Yet, rather than eliminating the CBA mandate, as some urged him to do, President Clinton issued a new Executive Order that softened a few edges but left in place the

central requirement that regulations pass a cost-benefit test. Exec. Order No. 12866 §1(b)(6), 3 C.F.R. 638, 639 (1994), *reprinted as amended in* 5 U.S.C. §601 app. at 88-92 (2012). That order has remained in place through Republican and Democratic administrations. President Obama considered revoking it when he first came into office. See Memorandum: Regulatory Review, 74 Fed. Reg. 5977 (Jan. 30, 2009) (directing the Office of Management and Budget (OMB) to produce recommendations for a new Executive Order on regulatory review); OMB, Federal Regulatory Review, Request for Comments, 74 Fed. Reg. 8819 (Feb. 26, 2009) (OMB requesting public comment on those recommendations). Ultimately, President Obama left it in place and instead simply issued Exec. Order No. 13563, *Improving Regulation and Regulatory Review*, which “supplement[s] . . . and reaffirms” the Clinton Order. Exec. Order No. 13563 §1(b), 3 C.F.R. 215, 215 (2012), *reprinted in* 5 U.S.C. §601 app. at 102-03 (2012). For a historical account of the Reagan and Clinton Orders, see RICHARD L. REVEZ & MICHAEL A. LIVERMORE, *RETAKING RATIONALITY: HOW COST-BENEFIT ANALYSIS CAN BETTER PROTECT THE ENVIRONMENT AND OUR HEALTH* 21-45 (2008).

51. See Sidney A. Shapiro & Christopher H. Schroeder, *Beyond Cost-Benefit Analysis: A Pragmatic Reorientation*, 32 HARV. ENVTL. L. REV. 433 (2008); Amy Sinden, *The Economics of Endangered Species: Why Less Is More in the Economic Analysis of Critical Habitat Designations*, 28 HARV. ENVTL. L. REV. 129 (2004); McGarity, *Media-Quality, Technology, and Cost-Benefit Balancing Strategies*, *supra* note 47, at 160-61 (1983).

52. CWA, 33 U.S.C. §1311(b)(2)(A).

53. 42 U.S.C. §7412(d)(3)(A).

54. 29 U.S.C. §655(b)(5).

55. Bent, *supra* note 46, at 646; American Textile Mfrs. Inst., Inc. v. Donovan, 452 U.S. 490, 495, 11 ELR 20736 (1981) (commonly known as the *Cotton Dust* case); Driesen, *supra* note 8, at 9. One court of appeals has held that a standard is technologically feasible where “modern technology has at least conceived some industrial strategies or devices which are likely to be capable of meeting the [standard] and which the industries are generally capable of adopting.” American Fed’n of Labor-Cong. of Indus. Orgs. v. Occupational Safety & Health Admin., 965 F.2d 962, 980, 22 ELR 21229 (11th Cir. 1992).

56. *American Textile*, 452 U.S. at 508-09.

has simply defined an arbitrary threshold, as it did with the 12% rule for hazardous air pollutants, the concept leaves considerable wiggle room.

The Supreme Court has never definitively defined economic feasibility, though it came close to doing so in the *Cotton Dust* case in 1981. Declining to explicitly decide the issue, the Court nonetheless approved the agency's interpretation of economic feasibility as a standard that does not "threaten[] the long-term profitability and competitiveness of an industry," noting that this was "certainly consistent with the [statute's] plain meaning."⁵⁷ Prof. David Driesen has further refined this approach, arguing that the feasibility principle requires "stringent regulation" up to the point where it "cause[s] widespread plant shutdowns."⁵⁸

Others have suggested that the line should be drawn at the knee of the curve—that is, pollution reductions should be required "to the point at which the costs of controlling the 'next' unit begin to go asymptotic or increase exponentially."⁵⁹ Thus, a knee-of-the-curve test estimates the costs of incrementally increasing levels of environmental protection and sets the standard at the point just before costs begin to increase steeply. While this test is not widespread, it has been used by EPA in several contexts and is incorporated in several state-law regimes.⁶⁰ It, of course, depends on the cost curve taking a certain shape, which some maintain is not necessarily common, and it has been criticized on that basis.⁶¹

In actual practice, agencies have used various formulas to guide the economic feasibility inquiry. In several recent rulemakings, the Occupational Safety and Health Administration (OSHA) has applied a specific numeric threshold: "When the costs of compliance are less than one percent of revenues" or less than 10% of profits, then the agency considers a standard economically feasible.⁶² In CWA rulemakings, EPA has used a "compliance cost/revenue test," which expresses that relationship in percentage terms.⁶³ While it is not clear that the Agency has ever designated a precise threshold for this test, it may justify a finding of

feasibility where this ratio is on the order of 1% or less for most firms.⁶⁴

2. Combining Feasibility Standards With a Health-Based Trigger or Backstop

Feasibility standards are sometimes described as focusing primarily on costs rather than benefits. This allows for the analytically neat and satisfying characterization of the three primary standard-setting tools in terms of the three logical possibilities for considering costs and/or benefits (for health-based standards, benefits only; feasibility standards, costs only; and CBA, both costs and benefits). This characterization is somewhat misleading, however. While it is true that in isolation, feasibility standards focus just on costs, in practice, they are typically paired with a threshold finding or "regulatory trigger" that requires the agency to consider potential regulatory benefits in order to determine whether the harm is one worth regulating to begin with.⁶⁵

For example, the CAA directs EPA to set standards for air pollution emissions from new stationary sources (factories and other large industrial facilities) using a feasibility analysis. In the language of the statute, the standard must "reflect[] the degree of emission limitation achievable through the application of the best system of emission reduction which . . . has been adequately demonstrated."⁶⁶ But before EPA is authorized to set those standards, it must first make a threshold finding (the "trigger") that the particular category of sources at issue "causes or contributes significantly to air pollution which may reasonably be anticipated to endanger public health or welfare."⁶⁷ Similarly, the OSH Act, as noted above, sets standards for toxics exposure in the workplace via a feasibility standard. Before OSHA is authorized to set those standards for any particular toxin, though, it must make a threshold finding that the toxic substance in question causes "significant risks" in the workplace that "can be eliminated or lessened by a change in practices."⁶⁸

These thresholds or triggers essentially require the agency to make a preliminary finding of potential regulatory benefit. This does not typically require a comprehensive accounting of benefits, nor does it require monetization in order to make a direct comparison with costs. The point is simply to show that some potential benefit is present in order to obviate the possibility that a regulation might be issued that "impose[s] enormous costs [for] little, if any, discernible benefit."⁶⁹

Sometimes in addition to the initial threshold finding that precedes feasibility analysis, Congress calls for a more detailed benefits inquiry on the back end of the regulatory process. Thus, under the CAA's hazardous air

57. *Id.* at 530, n.55.

58. Driesen, *Distributing the Costs of Environmental, Health, and Safety Protection*, *supra* note 8, at 9.

59. MARK SAGOFF, PRICE, PRINCIPLE, AND THE ENVIRONMENT 123 (2004).

60. *See, e.g.*, U.S. EPA, Combined Sewer Overflow (CSO) Control Policy, 59 Fed. Reg. 18688 (Apr. 19, 1994) (directing national pollutant discharge elimination system permittees to use knee-of-the-curve analysis in selecting controls for reduction of CSOs); IND. CODE §13-11-2-113.5; Kurt Stephenson, *Taking Nature Into Account: Observations About the Changing Role of Analysis and Negotiation in Hydropower Re-Licensing*, 25 WM. & MARY L. & POL'Y REV. 473 (2000) (arguing that the Federal Energy Regulatory Commission's dam relicensing decisions employ knee-of-the-curve analysis); Chemical Mfrs. Ass'n v. Environmental Prot. Agency, 870 F.2d 177, 204-05, 19 ELR 20989 (5th Cir. 1989) (rejecting industry argument that EPA should have used knee-of-the-curve analysis in setting best practicable control technology standards under the CWA).

61. Livermore & Revesz, *Rethinking Health-Based Environmental Standards*, *supra* note 47, at 1192.

62. OSHA, Occupational Exposure to Hexavalent Chromium, 71 Fed. Reg. 10100, 10299 (Feb. 28, 2006). *See also* Bent, *supra* note 46, at 647-54 (describing OSHA's application of feasibility analysis in promulgating 13 worker health standards over past three decades).

63. National Pollutant Discharge Elimination System—Regulations Addressing Cooling Water Intake Structures for New Facilities, 65 Fed. Reg. 49060, 49095 (proposed Aug. 10, 2000).

64. *Id.*

65. *See* SHAPIRO & GLICKSMAN, *supra* note 2, at 33-35.

66. 42 U.S.C. §7411(a)(1).

67. *Id.* §7411(b)(1)(A).

68. *Industrial Union Dep't, Am. Fed'n of Labor-Cong. of Indus. Orgs. v. American Petroleum Inst.*, 448 U.S. 607, 642, 10 ELR 20489 (1980).

69. *Industrial Union Dep't*, 448 U.S. at 645.

pollutants program, regulation is initially triggered by a health-based finding that a particular pollutant and/or source “presents . . . a threat of adverse human health [or environmental] effects.”⁷⁰ EPA then initially sets discharge limits via feasibility analysis. Eight years later, however, the Agency reevaluates those standards under a health-based approach.⁷¹ Similarly, for the regulation of toxics in the workplace, the OSH Act first requires OSHA to make a threshold finding of significant risk. Following that, the Act requires the agency to calculate two standards—one feasibility-based and one health-based—and then to promulgate the least stringent of the two.⁷² Like CBA, this combined approach to standard-setting considers both the costs and the benefits of regulation. Unlike CBA, however, it does not require a direct comparison of the two, and thereby avoids the myriad difficulties that arise in attempting to express environmental benefits in monetary terms.⁷³

C. Cost-Effectiveness Analysis

Cost-effectiveness analysis takes a single regulatory goal or outcome and compares the costs of reaching that goal under various regulatory alternatives.⁷⁴ Typically, the outcome is quantified but not monetized so that alternatives that produce the chosen outcome to varying degrees can be directly compared in terms of their “cost-effectiveness ratio.” Thus, for example, regulatory alternatives of varying ambition and effectiveness might be compared in terms of their dollar cost “per life saved” or “per acre of wetlands preserved.”

Cost-effectiveness analysis is distinct from CBA because it does not involve a direct comparison of social costs to social benefits. Therefore, it does not purport to provide a measure of overall social welfare. Nor does it purport to comprehensively cover all aspects of regulatory benefit. Rather, it focuses on a single dimension of benefit, like lives saved or tons of some pollutant reduced. In this way, it avoids one of the most problematic and controversial aspects of formal CBA—the conversion of regulatory benefits into a monetary metric—but it also tends to leave out relevant aspects of regulatory benefit.

Note that the goal or outcome can be defined at various points along the causal chain from environmentally degrading activity to actual harm. When the outcome is itself some measure of actual avoided harm to humans (e.g., lives saved), it is more likely to exclude important aspects of regulatory benefit (e.g., other health benefits, ecological benefits). On the other hand, when the outcome

is some intermediate point on the causal chain several steps removed from actual effects to humans (like tons of pollution avoided), it may actually represent a more comprehensive measure of regulatory benefit. That said, performing a cost-effectiveness analysis with an outcome like “tons of phosphorus pollution avoided” may be less meaningful to the extent that the analyst (or the public) lacks an understanding of how particular pollution levels translate into actual harms to people or ecosystems.

When cost-effectiveness analysis is used to generate and compare cost-effectiveness ratios for a whole range of alternatives, it acts as a standard-setting tool. In another form, however, cost-effectiveness analysis can act simply as a secondary check on a standard-setting decision that has been made by some other means. In this form, cost-effectiveness analysis takes some predetermined regulatory goal (reducing a state’s greenhouse gas emissions by a specified amount, for example), and compares various regulatory alternatives for reaching that single goal in order to identify the least costly option.⁷⁵

D. Open-Ended Balancing

In what Profs. Sidney Shapiro and Robert Glicksman have called “open-ended balancing,” Congress sometimes provides a laundry list of factors for an agency to consider in setting standards.⁷⁶ These lists often include elements that might fall within the general category of costs or benefits, but they differ from CBA in that they do not call for a direct binary comparison of costs against benefits and they do not specify what relative weight the agency should place on each factor.⁷⁷ They also differ from CBA in that they do not necessarily aspire to a comprehensive accounting of all social costs and all social benefits. The list may represent only a partial catalogue of all the social benefits and costs that could be associated with a given regulation and may be intentionally written so as to give more weight to some factors than others.

For example, the CWA requires discharge limits for various pollutants to be set on the basis of feasibility standards combined with open-ended balancing. One set of these limits is for toxic pollutants, which are to be set at the level “which shall require application of the best available technology economically achievable.”⁷⁸ But the statute also goes on to specify that

[f]actors relating to the assessment of best available technology shall take into account the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, the cost of achieving such effluent reduction, non-water quality environmental impact

70. 42 U.S.C. §7412(b)(2), (c)(3).

71. See *id.* §7412(d) & (f). The NAAQS/SIP process under the CAA also takes this form. EPA first sets NAAQS under a health-based standard (at the level requisite to protect the public health), see 42 U.S.C. §7409(b)(1), but states subsequently implement those standards through state implementation plans (SIPs) that set largely feasibility-based discharge limits. See 42 U.S.C. §§7411(a)(1), 7475(a)(4), 7503(a)(2).

72. See 29 U.S.C. §655(b)(5); *American Textile Mfrs. Inst., Inc. v. Donovan*, 452 U.S. 490, 509, 11 ELR 20736 (1981).

73. See *infra* notes 232 to 238 and accompanying text.

74. MISHAN & QUAH, *supra* note 9, at 8.

75. In this sense, this form of cost-effectiveness analysis shares some characteristics of informal CBA, in that it acts as a secondary check or filter rather than a standard-setting tool. See *supra* notes 37 to 38 and accompanying text.

76. See SHAPIRO & GLICKSMAN, *supra* note 2, at 32.

77. *Id.*

78. 33 U.S.C. §1311(b)(2)(A).

(including energy requirements), and such other factors as the Administrator deems appropriate.⁷⁹

In sum, “consideration of costs” can mean many things. Within the category of CBA, there are multiple varieties, falling on a broad spectrum from informal to formal. There are also a number of distinct analytical tools routinely recognized and used by agencies that involve consideration of costs but fall squarely outside the definition of CBA.⁸⁰

II. Professor Sunstein’s Formal “Cost-Benefit State”

Professor Sunstein has long advocated for what in his 2002 book he called the cost-benefit state—a government where CBA serves as a kind of ubiquitous background principle.⁸¹ Most importantly, in the cost-benefit state, agency regulations would all be required to pass a CBA test, and courts and agencies would apply a pro-CBA presumption to the interpretation of statutes. Like most authors, Professor Sunstein talks generically about “cost-benefit analysis,” but what he means by that term has shifted over time. In this part, I first describe his vision of CBA as it has evolved over the years. I then turn to the argument in favor of a pro-CBA presumption that he first made a decade and a half ago and has recently revived in the wake of the Supreme Court’s decision in *Michigan*.

A. An Increasingly Formal Brand of CBA

In his early writings, Professor Sunstein often emphasized the informality of his “modest” brand of CBA, insisting that agencies should not be “rigidly bound by the ‘bottom line’” or placed in an “arithmetic straitjacket.”⁸² In truth, his early vision of CBA probably fell somewhere toward the middle of the formality spectrum.⁸³ He acknowledged

that “[q]uantification will be difficult or even impossible in some cases,” and that such effects should be described in qualitative terms,⁸⁴ but he also urged that costs and benefits “should be translated into monetary equivalents” wherever possible.⁸⁵ He said that he would in most instances require a showing that the monetized benefits exceed the monetized costs, but would allow exceptions where the agency could “explain” that it is an “unusual” case involving, for example, risks to young children.⁸⁶ While he was not explicit regarding the number of alternatives to be analyzed, most of his examples seemed to assume evaluation of a single alternative.⁸⁷

When Professor Sunstein emerged from his term as President Obama’s “regulatory czar” in 2012, however, his vision of CBA appeared to have shifted toward the formal end of the spectrum.⁸⁸ Since then, he has spoken of “an unprecedented emphasis on the importance of quantification” in the Obama Administration⁸⁹ and boasted about the hard line that his OIRA took on CBA: “If the quantifiable benefits are lower than the quantifiable costs, agencies must explain why they seek to proceed In the Obama Administration, it has been very rare for a rule to have monetized costs in excess of monetized benefits.”⁹⁰ He has emphasized that where a regulation’s monetized benefits are less than monetized costs, it “will not be easy to establish” that the benefits justify the costs, and has hailed the Executive Orders’ emphasis on maximizing net benefits as “exceedingly important.”⁹¹ Thus, it appears that the CBA Professor Sunstein envisions for his cost-benefit state has evolved into something quite formal, in which the empha-

79. *Id.* §1314(b)(2)(B).

80. It is also worth noting that the definition of “costs” varies across this range of different tools. Thus, in a formal CBA, the “costs” considered are technically costs to society as a whole, including all ripple effects (like the decreased profits at the gas station down the street from the factory that laid off workers due to increased pollution control costs), although shortcuts and proxies are used in practice. In a feasibility analysis, on the other hand, costs are typically defined more narrowly as costs to the regulated industry only. Similarly, “the cost of achieving such effluent limitation” in the open-ended balancing test above is typically taken to mean just costs to the regulated industry.

81. SUNSTEIN, *COST-BENEFIT STATE*, *supra* note 2, at 19–20.

82. *Id.* at 22. This is consistent with a pronounced pattern in the academic debate in which opponents of CBA “portray it as highly formalized, rigid, and technical [while proponents] paint[] it . . . as a simple, common sense, rational weighing of pros and cons.” SINDEN, *Formality and Informality in Cost-Benefit Analysis*, *supra* note 11, at 97.

83. See SINDEN, *Formality and Informality in Cost-Benefit Analysis*, *supra* note 11, at 121–22. In 2002, he defended, among other things, EPA’s efforts to conduct a formal CBA of its rule regulating levels of arsenic in drinking water, which went to great lengths to quantify and monetize the costs and benefits of the rule, though, in the end, the estimates contained such enormous error margins that the analysis was indeterminate. See Cass R. Sunstein, *The Arithmetic of Arsenic*, 90 GEO. L.J. 2255 (2002); Thomas O. McGarity, *Cass Sunstein’s Fuzzy Math*, 90 GEO. L.J. 2341 (2002); Lisa Heinzerling, *Markets for Arsenic*, 90 GEO. L.J. 2311 (2001). See also Amy Sinden, *Cass Sunstein’s Cost-Benefit Lite: Economics for Liberals*, 29 COLUM. J. ENVTL. L. 191, 229 (2004).

84. SUNSTEIN, *COST-BENEFIT STATE*, *supra* note 2, at 21; see also CASS R. SUNSTEIN, *RISK AND REASON: SAFETY, LAW, AND THE ENVIRONMENT* 111 (2002) (“The quantitative description should supplement rather than displace a qualitative description of relevant effects.”).

85. SUNSTEIN, *COST-BENEFIT STATE*, *supra* note 2, at 20.

86. *Id.* Professor Sunstein also suggested that, at least when courts review whether a regulation meets a cost-benefit test, the balancing formula should be relatively imprecise and informal: “[C]osts [should] not be grossly disproportionate to benefits.” SUNSTEIN, *RISK AND REASON*, *supra* note 84, at 120.

87. See, e.g., SUNSTEIN, *COST-BENEFIT STATE*, *supra* note 2, at 21 (“If, for example, a regulation is expected to save 80 lives, each valued at \$6 million, and if it would cost \$200 million, it is fully justified.”).

88. SINDEN, *Formality and Informality in Cost-Benefit Analysis*, *supra* note 11, at 122, n.87.

89. Cass R. Sunstein, *The Real World of Cost-Benefit Analysis: Thirty-Six Questions (and Almost as Many Answers)*, 114 COLUM. L. REV. 167, 171 (2014) [hereinafter Sunstein, *Real World*]; see also Cass R. Sunstein, *The Limits of Quantification*, 102 CAL. L. REV. 1369, 1380 (2014) (stating that Exec. Order No. 13563’s requirement that agencies “quantify anticipated benefits and costs as accurately as possible” . . . attests to the importance of both quantification and monetization” (quoting Exec. Order No. 13563 §1(c), 3 C.F.R. 215, 216 (2012), reprinted in 5 U.S.C. §601 app. at 102–03 (2012))).

90. Cass R. Sunstein, *The Office of Information and Regulatory Affairs: Myths and Realities*, 126 HARV. L. REV. 1838, 1865–66 (2013); see also Sunstein, *Real World*, *supra* note 89, at 180–81 (noting that where a regulation’s monetized benefits are less than monetized costs, “the agency is unlikely to attempt to go forward with this regulation,” and if it does, it “will not be easy to establish” that the benefits justify the costs); *id.* at 188 (observing that if an agency were to express monetized benefits in wide ranges, “[a] great deal of work would be done to try to achieve greater precision and confidence in the numbers”).

91. Sunstein, *Real World*, *supra* note 89, at 180–81; Sunstein, *The Office of Information and Regulatory Affairs: Myths and Realities*, *supra* note 90, at 1864.

sis is placed on monetizing costs and benefits and net benefits maximization.

B. Enforcing CBA Through Judicial Review: “Default Rules” and Arbitrariness

When Professor Sunstein first laid out his vision of the cost-benefit state a decade and a half ago, he argued not only that it was a good idea, but that it was an idea that had already become enshrined in the case law of the federal courts, primarily the U.S. Court of Appeals for the District of Columbia (D.C.) Circuit.⁹² He argued that the courts had adopted a set of “cost-benefit default rules” under which they applied a pro-CBA presumption or canon to the interpretation of statutory directives to agencies.⁹³ More recently in a draft article posted on Social Science Research Network, he has revived this thesis, this time situating the pro-CBA presumption squarely in fundamental and broadly applicable doctrines of administrative law: the arbitrary and capricious standard and *Chevron* step two.⁹⁴

In making the argument that these pro-CBA presumptions or “default rules” exist, Professor Sunstein, like most academic commentators, has elided the important distinctions between formal and informal CBA. Even though he ultimately tries to defend the existence of presumptions favoring a decidedly formal version of CBA, a careful look at the cases he assembled as evidence for his “default rules” shows that, in fact, the vast majority of them involved some decision tool other than CBA, and those that did involve CBA endorsed informal rather than formal varieties.⁹⁵

Back in 2002, many of the “cost-benefit default rules” that Professor Sunstein found in various court opinions, by his own acknowledgment, fell “far short of calling for full-fledged cost-benefit analysis.”⁹⁶ Instead, they involved principles that Professor Sunstein viewed as related to CBA, or as somehow evidencing a sort of CBA sensibility. Thus, he pointed to cases authorizing agencies to make de minimis exceptions to regulatory requirements,⁹⁷ to cases requiring agencies to also consider potential countervailing adverse health impacts when considering the health benefits of

a rule,⁹⁸ and to cases allowing agencies to consider costs (without actually balancing them against benefits).⁹⁹ Only five of the cases he cited could be said to involve actual CBA—that is, some comparison of costs and benefits.

Of these, only two involved the court actually endorsing formal CBA, and those are best viewed as isolated exceptions.¹⁰⁰ Two others involved an informal Ben Franklin-style balancing of qualitative pros and cons.¹⁰¹ And one approved a CBA prepared by EPA that contained some indicia of formality (some monetization of costs and benefits for four different regulatory alternatives), but left significant benefits unquantified.¹⁰²

As described in more detail above, formal and informal brands of CBA are not simply fungible.¹⁰³ They differ from each other in important and fundamental ways. Given these differences, to assume that when a court endorses one it necessarily also endorses the other is simply untenable.

Ultimately, the biggest obstacle Professor Sunstein’s argument faced back in 2002, however, was the Supreme Court itself. Indeed, in *Whitman v. American Trucking Associations*, published just one year earlier, the Supreme Court

92. SUNSTEIN, *COST-BENEFIT STATE*, *supra* note 2, at 19-20.

93. *Id.* See also Cass R. Sunstein, *Cost-Benefit Default Principles*, 99 MICH. L. REV. 1651, 1694 (2001).

94. Sunstein, *Cost-Benefit Analysis and Arbitrariness Review*, *supra* note 3.

95. Sinden, *Cass Sunstein’s Cost-Benefit Lite*, *supra* note 83.

96. SUNSTEIN, *COST-BENEFIT STATE*, *supra* note 2, at 33.

97. *Id.* at 33-37. Here, he focused largely on the Supreme Court’s decision in *Industrial Union Dep’t, Am. Fed’n of Labor-Cong. of Indus. Orgs. v. American Petroleum Inst.*, 448 U.S. 607, 667, 10 ELR 20489 (1980) (the *Benzene* case), which interpreted language in the OSH Act to require OSHA to find a significant risk before regulating toxic chemicals in the workplace. Of course, even if the *Benzene* case evidenced an emerging cost-benefit sensibility on the Supreme Court, any such trend hit a brick wall the following term with the *Cotton Dust* case where, taking up the question explicitly left open in the *Benzene* case, the Supreme Court decided that the Act did *not* require the Agency to engage in CBA and articulated a broad anti-CBA presumption. *American Textile Mfrs. Inst., Inc. v. Donovan*, 452 U.S. 490, 11 ELR 20736 (1981). See *infra* notes 141 to 156 and accompanying text; Sinden, *Cass Sunstein’s Cost-Benefit Lite*, *supra* note 83, at 232-33.

98. SUNSTEIN, *COST-BENEFIT STATE*, *supra* note 2, at 37-40. One of the examples Professor Sunstein cited for this “rule” was the D.C. Circuit’s decision in *American Trucking* holding that in applying the CAA’s health-based standard for setting NAAQS, the Agency should consider the health benefits of ground-level ozone pollution (in protecting against skin cancer and cataracts) as well as the harms. The Supreme Court’s subsequent opinion in that same case, of course, famously held that because the Act did not contain a “clear” textual commitment to allow CBA in this context, it was forbidden. *Whitman v. American Trucking Ass’ns*, 531 U.S. 457, 468, 471, 31 ELR 20512 (2001). See *infra* notes 157 to 169 and accompanying text.

99. See, e.g., *Michigan v. Environmental Prot. Agency*, 213 F.3d 663, 30 ELR 20407 (D.C. Cir. 2000).

100. See Sinden, *Formality and Informality in Cost-Benefit Analysis*, *supra* note 11, at 141-45. One was dicta in the decision on OSHA’s lockout/tagout rule written by Judge Stephen Williams, who is well known for his advocacy of CBA on and off the bench. *International Union, United Auto Workers v. Occupational Safety & Health Admin.*, 938 F.2d 1310, 1319 (D.C. Cir. 1991); see Stephen F. Williams, *Cost-Benefit Analysis Colloquy: Squaring the Vicious Circle*, 53 ADMIN. L. REV. 257, 270 (2001). Ironically, on remand, OSHA explicitly rejected Judge Williams’ suggestion that it employ formal CBA, stating that the “problems associated with formal cost-benefit analysis militate against its use.” *Control of Hazardous Energy Sources (Lockout/Tagout)*, 58 Fed. Reg. 16612, 16622 (Mar. 30, 1993). The other case was the U.S. Court of Appeals for the Fifth Circuit’s *Corrosion Proof Fittings* decision, which remains the only case in which a court has actually invalidated an agency rule for its failure to use a more formal CBA. *Corrosion Proof Fittings v. Environmental Prot. Agency*, 947 F.2d 1201, 22 ELR 20037 (5th Cir. 1991).

101. See *Grand Canyon Air Tour Coalition v. Federal Aviation Admin.*, 154 F.3d 455, ELR 29 20075 (D.C. Cir. 1998) (upholding Federal Aviation Administration’s balancing of the qualitative costs to the air tourism industry against the qualitative benefits to the natural quiet of the Grand Canyon of regulations it issued limiting flights over the Grand Canyon pursuant to a statute setting a goal of “substantial restoration of the natural quiet and experience of the park”); *George E. Warren Corp. v. Environmental Prot. Agency*, 159 F.3d 616 (D.C. Cir. 1998) (upholding EPA’s balancing of qualitative considerations of economic cost against qualitative consideration of the clean air benefits to be achieved in issuing regulations implementing the reformulated gasoline provisions of the CAA).

102. Moreover, EPA had gone to some pains to insist that it had prepared the CBA pursuant to Exec. Order No. 12291, but had not necessarily based its decision on the CBA. *Natural Res. Def. Council v. Environmental Prot. Agency*, 937 F.2d 641, 646-47, 21 ELR 21231 (D.C. Cir. 1991) (Stephen Williams, Judge); U.S. EPA, *Requirements for Implementation Plans: Surface Coal Mines and Fugitive Emissions; Approval and Promulgation of Implementation Plans*, 54 Fed. Reg. 48870, 48873 (Nov. 28, 1989).

103. See *supra* notes 37 to 38 and accompanying text.

had declined to accept the argument that a pro-CBA presumption required EPA to use CBA in setting NAAQS.¹⁰⁴ As discussed in more detail below, not only had the Court rejected the pro-CBA presumption that Professor Sunstein and others were advocating, it had quite explicitly adopted an *anti*-CBA presumption instead. Under this anti-CBA presumption, not only was EPA *not required* to conduct CBA, it was actually prohibited from doing so.

With recent cases on the Court casting doubt on that earlier anti-CBA presumption, however, Professor Sunstein has renewed his claim that the courts have embraced a pro-CBA presumption. Relying primarily on *Michigan*,¹⁰⁵ Professor Sunstein locates this CBA norm in the prohibition on “arbitrary” decisionmaking by agencies, which he locates both in the Administrative Procedure Act’s arbitrary and capricious standard for review of agency factual findings and in step two of the *Chevron* framework for review of agency statutory interpretations.¹⁰⁶ In Professor Sunstein’s view, this presumption requires agencies to affirmatively

justify any failure to show *in quantitative terms* that a regulation’s monetary benefits exceed its monetary costs.¹⁰⁷

So, even if his argument for the cost-benefit state was weak in 2002, has Professor Sunstein finally been vindicated? Does the recent trilogy of Supreme Court cases suggest that the trend may finally be shifting in the direction he first advocated a decade and a half ago? The next section takes up that question.

III. Cost Considerations in the Supreme Court

There have now been eight cases spanning nearly five decades in which the Supreme Court has addressed the propriety of CBA or other kinds of cost considerations in environmental decisionmaking. On one hand, these cases tell a story of a Court that was remarkably consistent in rejecting cost considerations over the course of nearly four decades, rather abruptly reversing course in just the last several years. On the other hand, if we pay close attention to the variety of forms that cost considerations can take in environmental decisionmaking, the decisions of the last several years look much less like a dramatic departure from the Court’s earlier approach. One theme remains remarkably consistent on the Court: a reluctance to embrace formal CBA. That reluctance is particularly notable in the face of an increasing orientation toward such an approach in the White House and the agencies.¹⁰⁸

Logically, the courts can take one of three different approaches to agency cost consideration: (1) they can prohibit it altogether; (2) they can require it; or (3) they can leave it to agency discretion. Table 1 lays out the possible ways in which these approaches can combine with different initial agency postures on the issue.

Note that where a court affirms an agency, it generally has a choice to do so either via a deferential holding simply granting the agency discretion or via a stronger holding that goes further by mandating the agency’s position (either requiring or prohibiting cost consideration). Where a court reverses an agency, on the other hand, that posture defines the court’s stance toward cost consideration.

Where a court views the statute as ambiguous (or, at least, less than “clear”), it may also, explicitly or implicitly, apply a more generalized “presumption,” “canon,” or “default rule” either favoring or disfavoring agency cost considerations. Each of these presumptions can take a

104. *Whitman v. American Trucking Ass’ns*, 531 U.S. 457, 31 ELR 20512 (2001).

105. *Michigan v. Environmental Prot. Agency*, 135 S. Ct. 2699, 2706, 2707, 45 ELR 20124 (2015) (identifying basic tenets of administrative law with “rational” agency decisionmaking and suggesting that an agency’s failure to consider costs would not be “rational”). Professor Sunstein also relies on a 2011 D.C. Circuit case, *Business Roundtable v. Securities & Exch. Comm’n*, 647 F.3d 1144, 1149 (D.C. Cir. 2011), that has received enormous attention for bringing CBA into the realm of financial regulation. But, like the D.C. Circuit cases, Professor Sunstein cited in support of his “default rules” in 2002, this is not an opinion requiring formal CBA. While the court faulted the agency for failing to quantify certain costs of the rule, nowhere in the opinion did it suggest a need for comprehensive quantification of all costs and benefits. Indeed, the benefits of the rule were aimed at improving shareholder democracy—a social value that, like environmental quality and public health, is in some sense intangible. The court objected to the fact that in making the *qualitative* finding that the rule would “improve board performance and increase shareholder value,” the Securities and Exchange Commission (SEC) had “relied exclusively and heavily” on two particular studies that the court found “unpersuasive.” *Id.* at 1151. However, it did not fault the board for failing to quantify that description of benefits.

Moreover, since *Business Roundtable*, the D.C. Circuit has handed down two cases about financial regulation that have been quite explicit in their rejection of formal CBA. See *National Ass’n of Mfrs. v. Securities & Exch. Comm’n*, 748 F.3d 359, 369, 44 ELR 20087 (D.C. Cir. 2014) (rejecting industry claim that SEC performed an inadequate CBA in connection with its rule imposing disclosure requirements on companies using minerals obtained in and around the Democratic Republic of Congo where trade in such minerals helps to fuel armed conflict); *Investment Co. Inst. v. Commodity Futures Trading Comm’n*, 720 F.3d 370, 370-78 (D.C. Cir. 2013) (upholding against a CBA challenge a rule issued by the Commodity Futures Trading Commission narrowing an exception that had previously allowed certain kinds of derivatives to escape regulation under the Commodity Exchange Act). In the words of the court, “[a]n agency is not required ‘to measure the immeasurable,’ and need not conduct a ‘rigorous, quantitative economic analysis’ unless the statute explicitly directs it to do so.” *National Ass’n of Mfrs.*, 748 F.3d at 369 (quoting *Investment Co. Inst.*, 720 F.3d at 379).

106. Picking up on language in the *Michigan* opinion, Professor Sunstein has shifted his pro-CBA presumption from a canon of statutory construction to an aspect of arbitrariness. Note that if this move is successful, Professor Sunstein will have significantly broadened the reach of his pro-CBA presumption. As an interpretive canon, it would apply only to agency interpretations of statutes. If viewed instead as an aspect of arbitrariness, it would apply to virtually all judicial review of agency action, including both legal interpretations under the *Chevron* doctrine and factual findings under the Administrative Procedure Act’s “arbitrary and capricious” standard. As Professor Sunstein notes, this could give rise to a new set of challenges “to a dazzling assortment of regulations from diverse agencies.” Sunstein, *Cost-Benefit Analysis and Arbitrariness Review*, *supra* note 3, draft at 2.

107. *Id.* draft at 34 (In at least some cases, Professor Sunstein argues, “a non-arbitrary justification [for a regulation] requires numbers.”). Notice that Professor Sunstein’s proposed rule would act as a presumption on two levels—or, said another way, his presumption could be overcome by two different kinds of showings. First, as with an ordinary presumption or interpretive canon, it could be overcome by a showing that Congress has in fact spoken clearly to preclude CBA. Professor Sunstein’s presumption could also be overcome in a second way that turns on the methods and practice of CBA in combination with public policy arguments, rather than congressional intent: it can be overcome by the agency offering some legitimate justification for declining to conduct formal CBA.

108. Sinden, *Formality and Informality in Cost-Benefit Analysis*, *supra* note 11, at 147-62.

Table 1: The Relationship of Court Rulings to Agency Positions on Cost Consideration

		Court Ruling	
		Affirms	Reverses
Agency position	Considers costs	1(a) required	2 prohibited
		1(b) discretion	
	Declines to consider costs	3(a) prohibited	4 required
		3(b) discretion	

strong or weak form.¹⁰⁹ Thus, a strong anti-cost presumption would say that unless Congress has clearly required or permitted cost consideration, it is prohibited. A strong pro-cost canon would say that unless Congress has clearly required or permitted a cost-blind approach, cost consideration is required.

In their weak forms, each of these presumptions would say that their preferred approach is permitted but not required.¹¹⁰ While phrased in different terms, the two weak presumptions in effect merge into a single presumption favoring agency discretion to choose either approach.¹¹¹ Ultimately, the difference is largely rhetorical, with the weak pro-cost presumption emphasizing that cost-consideration is allowed even where the statute might vaguely appear to point toward a cost-blind approach, and the weak anti-cost presumption emphasizing that a cost-blind approach is allowed even where the statute might vaguely point toward cost consideration.

A strong anti-cost presumption would tend to go along with a holding in box 2 or 3(a) in Table 1. A strong pro-cost presumption could accompany a holding in box 1(a) or 4. The weak presumption might accompany a holding in box 1(b) or 3(b).

While the courts do not always offer a clear grounding for such presumptions, Prof. Jonathan Cannon has observed that both pro- and anti-cost (or CBA) presumptions can at least arguably be justified by reference to broader principles

109. See Jonathan Cannon, *The Sounds of Silence: Cost-Benefit Canons in Entergy Corp. v. Riverkeeper, Inc.*, 34 HARV. ENVTL. L. REV. 425, 433 (2010).

110. *Cf. id.* at 433.

111. Prof. Jonathan Cannon treats them as a single “moderate or permissive canon.” *Id.* at 433. The Supreme Court implicitly drew this conclusion in *Riverkeeper*, where the majority read *Cotton Dust* as creating a weak anti-CBA presumption but viewed that as consistent with its holding that the Agency was permitted to engage in CBA. See *Entergy Corp. v. Riverkeeper*, 556 U.S. 208, 223, 39 ELR 20067 (2009) (“But under *Chevron*, that an agency is not required to do so does not mean that an agency is not permitted to do so.”).

One might argue that this approach is no different from *Chevron* deference, since it simply allows agency discretion where the statute is ambiguous. Yet, these presumptions might also operate to expand the zone of agency discretion somewhat into the zone between “ambiguity” and “clarity.” Where, for example, a statute is not entirely ambiguous, but appears to call for cost consideration, a weak (or strong) anti-cost presumption might nonetheless allow (or require) a cost-blind approach as long as the statutory language does not rise to the level of being “clear.”

in existing law. An anti-cost presumption might be viewed as “an extension of existing doctrines such as interpreting remedial statutes broadly to achieve their ameliorative purposes.”¹¹² A pro-cost presumption might “be justified as an extension of established interpretive doctrines such as avoidance of irrational or absurd results.”¹¹³ Professor Sunstein has, as discussed above, picked up and elaborated on this second idea in arguing for cost-benefit “default rules.”

In the following sections, I examine each of the eight cases in which the Supreme Court has addressed the propriety of CBA or other kinds of cost considerations in environmental decisionmaking. I do so with the following three questions in mind: (1) what was the posture of the agency and the Court with respect to agency use of cost considerations (i.e., which box in the matrix in Table 1 did the opinion occupy); (2) what particular kind of cost consideration was at issue in the case; and (3) did the Court articulate a presumption of any kind?

A. Citizens to Preserve Overton Park v. Volpe

Citizens to Preserve Overton Park v. Volpe, decided by the Court in 1971, is famous in the lexicon of administrative law for putting teeth into the arbitrary and capricious standard.¹¹⁴ But it also marked the first time the Court considered the propriety of cost-benefit balancing in an environmental context. In two statutes, Congress had prohibited the Secretary of Transportation from approving a federal highway through a public park unless there was “no feasible and prudent alternative.”¹¹⁵ The secretary nonetheless approved construction of a highway that would cut through the center of Overton Park in Memphis, Tennessee. He argued that the statute, particularly the word “prudent,” required him to engage in CBA.

Writing for a unanimous Court, Justice Thurgood Marshall reversed the agency, rejecting this reading of the statutes.¹¹⁶ “[I]f Congress intended [the costs and benefits of preserving park land] to be on an equal footing,” Justice Marshall wrote, “there would have been no need for the statutes.”¹¹⁷ Instead, “protection of parkland was to be given paramount importance,” and “[t]he few green havens that are public parks were not to be lost unless there were truly unusual factors present in a particular case or the cost or community disruption resulting from alternative routes reached extraordinary magnitudes.”¹¹⁸ Thus, cost considerations were not entirely irrelevant. But rather than estimating and comparing the benefits and costs of park preservation, the secretary was supposed to preserve as much parkland as he possibly could, unless “unique prob-

112. Cannon, *The Sounds of Silence*, *supra* note 109, at 433.

113. *Id.* at 433.

114. 401 U.S. 402, 1 ELR 20110 (1971).

115. Section 4(f) of the Department of Transportation Act of 1966, 23 U.S.C. §138 (1964 ed. supp. V), and §18(a) of the Federal Aid Highway Act of 1968, 49 U.S.C. §1653(f) (1964 ed. supp. V).

116. Justice William Douglas took no part in the opinion and two Justices wrote separately, but only to clarify certain points not relevant to this discussion.

117. *Overton Park*, 401 U.S. at 412.

118. *Id.* at 413.

lems” or costs of “extraordinary magnitudes” made alternative routes impossible.¹¹⁹ This was essentially a feasibility standard—perhaps not a surprising outcome, since the word “feasible” appeared in the statute.

Nonetheless, the secretary had argued that the word “prudent” appearing alongside “feasible” required a more “wide-ranging” inquiry into costs and benefits. The Court disagreed and read the statutes to prohibit CBA. In Table 1 above, this then was a box 2 ruling. Notably, however, the Court did not prohibit cost considerations altogether or lump together all forms of analysis involving costs. By imposing a feasibility standard in place of the CBA for which the government had argued, the Court demonstrated a clear understanding of the distinction between these two methods of analysis. On the other hand, the opinion offers no indication that the Court recognized the variety of forms CBA can take, nor did it describe how formal a CBA the Court or the government had in mind here.¹²⁰ So, while the Court’s holding clearly excludes feasibility analysis from its prohibition, there is no indication as to which stretches of the CBA spectrum it intended to cover.

Justice Marshall seemed to base the holding solely on the language of the statute and did not (explicitly, at least) apply any kind of anti-CBA presumption. Although, reading between the lines, one could perhaps discern in Justice Marshall’s language a vague discomfort with the use of CBA in an environmental context—a concern that an ordinary weighing of costs and benefits is likely to give short shrift to environmental values and concerns, which are so unsusceptible to dollars-and-cents accountings. (“It is obvious that in most cases considerations of cost, directness of route, and community disruption will indicate that parkland should be used for highway construction whenever possible.”¹²¹) On this basis, one might argue that his reading of the statute was driven, if not by an actual presumption, then by a more generalized, inchoate concern that the ordinary CBA that agencies may do in other contexts is inappropriate for environmental problems.¹²²

B. Union Electric v. Environmental Protection Agency

Five years later, in *Union Electric v. Environmental Protection Agency*, the Court made its first foray into the role of cost considerations in the CAA.¹²³ Union Electric, an

electric utility with three coal-fired power plants in the St. Louis area, challenged EPA’s approval of Missouri’s state implementation plan (SIP) for the Agency’s failure to consider whether the plan was technologically and economically feasible.¹²⁴ (Union Electric contended that it was not.) Justice Marshall again wrote for a unanimous court, upholding EPA’s decision and rejecting the utility’s argument that EPA should have taken cost considerations into account in deciding whether to approve the SIP. Since it was affirming the Agency’s decision to ignore costs, the Court could have rested on a milder holding, simply upholding agency discretion on the matter (box 3(b) in Table 1). But the Court went out of its way to phrase its holding instead as a prohibition (box 3(a)): “Congress intended claims of economic and technological infeasibility to be wholly foreign to the Administrator’s consideration of state implementation plans.”¹²⁵

This time, although he did not name it as such, Justice Marshall did appear to rely on an anti-cost presumption, declaring in a footnote—in a kind of foreshadowing of the *Whitman* case—that “[w]here Congress intended the Administrator to be concerned about economic and technological infeasibility, it expressly so provided.”¹²⁶ He then pointed to the absence of any reference to cost among the listed SIP criteria and the mandatory command that the Administrator “shall approve” the plan if it met those criteria,¹²⁷ noting that this cost-blind approach was consistent with the technology-forcing objectives of the Act.¹²⁸

In general terms, then, this case, like *Overton Park*, took the pro-environmentalist position, rejecting an argument that would have introduced cost concerns in order to weaken a statute’s environmental protections. While *Overton Park* prohibited CBA but allowed cost considerations in the form of feasibility analysis, however, this case prohibited EPA from using feasibility analysis in particular (although the Court was careful to point out that states were still free to consider feasibility in developing their SIPs in the first place).¹²⁹ Also like *Overton Park*, this opinion reflects a sense that there is something special about environmental law, due perhaps in part to the fact that it seeks to protect values that cannot be measured along the same metric with cost concerns. Justice Marshall called the CAA “a drastic remedy to what was perceived as a seri-

119. *Id.*

120. The secretary had made no factual findings, and the “wide-ranging balancing of competing interests” that the secretary claimed authority to engage in could have taken many forms. *Id.* at 411.

121. *Id.* at 411-12.

122. On the other hand, one could also arguably read Justice Marshall’s comment that “there would have been no need for the statutes” had Congress intended costs and benefits to be weighed on “an equal footing” as obliquely suggesting the existence of a general presumption favoring CBA. *Id.* at 412. Perhaps, CBA is what we should expect agencies to do as a matter of course, so that if Congress intends CBA, there is no need for statutory guidance, but where Congress wishes for an agency to engage in a different form of analysis, it must say so, as it did in this instance.

123. 427 U.S. 246, 6 ELR 20570 (1976).

124. The CAA requires each state to prepare and submit to EPA for approval a SIP. 42 U.S.C. §7410(a)(1). The SIP must set forth the emissions limits and other strategies the state will implement in order to ensure compliance with NAAQS. *Id.* §7410(a)(2)(A). The Act directs EPA to set NAAQS as health-based standards without reference to cost (at the level “requisite to protect the public health”). *Id.* §7409(b)(1). But in implementing NAAQS through SIPs, the Act allows, and in fact encourages, the states to take costs into account by employing feasibility standards to set emissions limits on the sources within their borders. See *Union Electric*, 427 U.S. at 266.

125. *Union Electric*, 427 U.S. at 256.

126. *Id.* at 257, n.5.

127. *Id.* at 256-57.

128. *Id.*

129. *Id.* at 266. Union Electric did not make a claim that the costs of the plan outweighed the benefits, but it’s hard to imagine the Court would have viewed such a claim as any more relevant.

ous and otherwise uncheckable problem,”¹³⁰ and quoted a committee report calling “the health of people . . . more important than the question of whether the early achievement of ambient air quality standards protective of health is technically feasible.”¹³¹

C. Tennessee Valley Authority v. Hill

Two years later, the Court decided *Tennessee Valley Authority v. Hill*,¹³² perhaps the most famous environmental case of all time. This case is famous precisely because it so vividly and starkly presented the environmentalist challenge to cost-benefit logic. Indeed, the case is nearly always described in terms of the cost-benefit equation that the Court’s holding seems to flout: a seemingly worthless fish held up against a \$100 million investment in a nearly completed dam—the epitome of a losing cost-benefit calculus.

The Tennessee Valley Authority (TVA) sought to close the floodgates on its nearly completed Tellico Dam, despite a finding by the U.S. Fish and Wildlife Service that doing so would destroy the only remaining habitat of a small, obscure, but endangered fish called the snail darter. By completing the dam, the TVA would therefore violate its duty under the ESA to “insure” the protection of endangered species. The Court famously rejected what seemed like the obvious implication of the fish-versus-dam equation, refusing to allow the TVA to balance the benefit of saving a modest and homely endangered species against the enormous economic cost of leaving the Tellico Dam uncompleted. This was then, like *Overton Park*, a box 2 ruling (in Table 1 above).

Despite the strong sweeping language for which the opinion is so famous, however, the Court’s own attitude toward the propriety of weighing cost considerations against environmental values is a bit of an enigma. There is no indication that the Court based its holding on the kind of generalized anti-cost presumption Justice Marshall articulated in *Union Electric*. Chief Justice Warren Burger, writing for the majority, relied squarely on the language of the ESA, which, by its own lights, is quite strong, requiring federal agencies “to insure that actions . . . carried out by them do not jeopardize the continued existence” or “adversely modify” the critical habitat of an endangered species. As the Chief Justice observed, “[t]his language admits of no exception.”¹³³ Certainly, one can read some of the Court’s language to suggest an antipathy toward formal CBA—that the very enterprise of attempting to weigh dollars against the loss of an endangered species is an illogical and perhaps morally corrupt enterprise, since the value of the latter is simply “incalculable.”¹³⁴ On the other hand, as Professor Cannon has observed, while the Court clearly felt constrained by Congress’ language, it also at certain points seemed to “implicitly question[] the wisdom

of Congress’ [rejection of CBA in favor of an] unyielding preference for species protection.”¹³⁵

Justice Lewis Powell dissented. He made no explicit mention of the disproportionate cost-benefit equation—fish versus dam—that played such a prominent role in the majority opinion. Instead, he based his position on a narrow argument resting specifically on the absurd results doctrine and a reading of the word “actions” as prospective only.¹³⁶ Nonetheless, it is not unreasonable to see between the lines in his opinion a more generalized outrage over the disproportion between costs and benefits. Indeed, Professor Cannon has read Justice Powell’s opinion as actually embodying a “presumption” favoring informal CBA—“a weighing costs and benefits, at least as necessary to weed out cases in which costs are grossly disproportionate to benefits.”¹³⁷ This view is bolstered by the position Justice Powell espoused in the *Benzene* case just two years later, as the next section explains.

This was, thus, the third case to take the environmentalist position, squarely rejecting the introduction of cost considerations to water down environmental protections. Here, it was CBA that the Court prohibited (in favor of the ESA’s ecological-health-based standard). Still, the Court drew no distinction between formal and informal CBA. The CBA that the TVA had done here to justify its decision involved monetized estimates on both sides but, like most analyses from that era, was far from a formal economic CBA.¹³⁸ Rather than costs to society as a whole, it considered only the costs of constructing the dam and made no effort to quantify or monetize the value of the snail darter or other associated environmental values.¹³⁹ Indeed, any such attempt by a federal agency would have been surprising in the early 1970s. Moreover, any attempt to do so might have been viewed as flouting Congress’ assertion that the value of endangered species is “incalculable.”¹⁴⁰

130. *Id.* at 256.

131. *Id.* at 259.

132. 437 U.S. 153, 8 ELR 20513 (1978).

133. *Id.* at 173.

134. *Id.* at 187.

135. JONATHAN CANNON, ENVIRONMENT IN THE BALANCE: THE GREEN MOVEMENT AND THE SUPREME COURT 122-23 (2015).

136. *Tennessee Valley Auth.*, 437 U.S. at 205.

137. CANNON, ENVIRONMENT IN THE BALANCE, *supra* note 135, at 123. Justice Powell did not say this in so many words. Perhaps, the closest he got was in a footnote where he said, “I cannot believe that Congress would have gone this far to imperil every federal project, however important, on behalf of any living species however unimportant, without a clear declaration of intention.” *Tennessee Valley Auth.*, 437 U.S. at 207, n.16.

138. Tennessee Valley Authority, Tellico Project: Environmental Impact Statement, Vol. I, 1-49 (1972), available at <http://hdl.handle.net/2027/coo.31924004742973>. See ZYGMUNT J.B. PLATER, THE SNAIL DARTER AND THE DAM: HOW PORK BARREL POLITICS ENDANGERED A LITTLE FISH AND KILLED A RIVER 17-22 (2013).

139. *Id.* It also expressed the comparison in terms of a cost-benefit ratio. But this is improper as a matter of economic theory, which looks instead at an absolute measure of net benefits to society. See GRAMLICH, *supra* note 34, at 42; OMB, CIRCULAR A-4, at 10 (2003).

140. Perhaps, the Court’s reliance on the fact that species’ value is “incalculable” implies that it viewed CBA as requiring calculation, and therefore envisioned a relatively formal CBA with environmental values fully monetized. *Tennessee Valley Auth.*, 437 U.S. at 187.

D. The Cotton Dust Case

Just as President Reagan was settling into the White House in 1981, the Supreme Court decided a landmark case involving the regulation of cotton dust in textile mills, prolonged exposure to which causes byssinosis, or “brown lung disease.”¹⁴¹ In what is commonly known as the *Cotton Dust* case, the Court was faced with interpreting the language of §6 of the OSH Act, which directs the Secretary of Labor to set standards for toxics in the workplace that “most adequately assure[], to the extent feasible . . . that no employee will suffer material impairment of health.”¹⁴² The government read this language as a health-based standard with a feasibility safety valve. In a two-stage process, the secretary was to first determine the level necessary to ensure no material health impairment, then determine the most stringent level technologically and economically feasible, and then set the standard at the less stringent of the two levels. Industry, on the other hand, argued that the word “feasible” required a CBA.

This same issue had actually come before the Supreme Court just the previous year in a case involving workplace regulation of benzene, and while the Court had decided on other grounds instead, Justice Powell had argued in a concurrence that the word “feasible” required CBA.¹⁴³ The CBA he envisioned, however, was an informal one, which he described variously as requiring simply “a reasonable relationship” between costs and benefits, and as preventing “expenditures wholly disproportionate to the expected health and safety benefits.”¹⁴⁴ While he did not ground his interpretation on an explicit pro-CBA presumption, he did view it as necessary to avoid “attribut[ing] an irrational intention to [C]ongress.”¹⁴⁵

As it happened, Justice Powell did not participate in the *Cotton Dust* case, and the Court ruled 5-3 to uphold the government’s reading of the statute. The papers of Justice Marshall, released many years later, show that he originally wrote the majority opinion to say that the statute “precluded” CBA, but was subsequently persuaded by Justice John Paul Stevens (whose fifth vote he needed) to dial that back to “not required.”¹⁴⁶ (This represented, in other words, a shift from box 3(a) to 3(b) in Table 1.) Justice William Rehnquist, dissenting on non-delegation grounds, was careful to spell out the implications of that subtle word change: “I read the Court’s opinion . . . [to say that while] the Act does not require the Secretary to engage in a cost-benefit analysis, . . . the Act *permits* the Secretary to undertake such an analysis if

he so chooses.”¹⁴⁷ So, unlike *Union Electric*, which also affirmed an agency decision to exclude costs but took the stronger position that such considerations were prohibited, this case took the softer approach of leaving the issue to agency discretion.

Despite this change, Justice Marshall’s general antipathy toward CBA—and in particular the enterprise of translating environmental values to monetary terms that is the hallmark of formal CBA—is evident in other portions of the opinion. He quoted, for example, one of the OSH Act’s cosponsors in the U.S. Senate as saying, “[w]e are talking about people’s lives, not the indifference of some cost accountants.”¹⁴⁸ He also articulated in clear terms a sweeping anti-CBA presumption, applicable to all federal statutes: “When Congress has intended that an agency engage in cost-benefit analysis, it has clearly indicated such intent on the face of the statute.”¹⁴⁹

While aimed at CBA rather than feasibility, and broadly applicable to all statutes rather than just the CAA, this presumption was otherwise phrased in terms quite similar to the one Justice Marshall had articulated five years earlier in *Union Electric*.¹⁵⁰ In the earlier case, that presumption quite clearly took the strong form, prohibiting cost considerations unless Congress has stated clearly to the contrary, and the holding took the strong form as well (box 3(a) in Table 1). Similarly, the above-quoted language from *Cotton Dust* taken on its own appears to create the same strong presumption.¹⁵¹ The implication, at least, is that when Congress does not “clearly indicate[] [an] intent” for CBA, it is prohibited. On the other hand, Justice Marshall had been persuaded, as described above, to tone down the holding from *prohibiting* to simply *not requiring* cost considerations. Thus, to the extent the *Cotton Dust* presumption is read to take the strong form, it goes beyond the holding of the case and is therefore best construed as dicta. An alternative reading would interpret the language of the presumption as limited by the holding and therefore creating only a weak presumption.¹⁵²

Like *Overton Park*, also written by Justice Marshall, this was a case in which the Court held the statute to require feasibility analysis rather than CBA. Indeed, Justice Marshall was careful to draw a clear distinction between the

141. *American Textile Mfrs. Inst., Inc. v. Donovan*, 452 U.S. 490, 11 ELR 20736 (1981).

142. 29 U.S.C. §655(b)(5).

143. *Industrial Union Dep’t, Am. Fed’n of Labor-Cong. of Indus. Orgs. v. American Petroleum Inst.*, 448 U.S. 607, 667, 10 ELR 20489 (1980) (Powell, J., concurring).

144. *Id.*

145. *Id.* at 670.

146. Robert V. Percival, *Environmental Law in the Supreme Court: Highlights From the Marshall Papers*, 23 ELR 10606-10, 625 (Oct. 1993).

147. *American Textile Mfrs. Inst., Inc. v. Donovan*, 452 U.S. 490, 544, 11 ELR 20736 (1981).

148. *Id.* at 521 (quoting 116 CONG. REC. 37625, LEG. HIST. 510).

149. *Id.* at 510. Later, he reiterated the point: “Congress uses specific language when intending that an agency engage in cost-benefit analysis.” *Id.* at 510-11.

150. This time, however, he gave it a prominent place in the text of the opinion rather than tossing it off in a footnote. See *Union Electric v. Environmental Prot. Agency*, 427 U.S. 246, 257, n.5, 6 ELR 20570 (1976).

151. This may reflect the fact, noted above, that Justice Marshall originally wrote the opinion with the stronger holding that CBA was “prohibited” rather than simply “not required.”

152. The Supreme Court later implied this weaker reading of the *Cotton Dust* presumption in *Riverkeeper*, when it merely distinguished rather than overruled *Cotton Dust* in upholding EPA’s discretion to use CBA in the face of ambiguous language. See *Entergy Corp. v. Riverkeeper*, 556 U.S. 208, 223, 39 ELR 20067 (2009) (“But under *Chevron*, that an agency is not required to do so does not mean that an agency is not permitted to do so.”).

two, holding that “cost-benefit analysis by OSHA is *not required* by the statute because feasibility analysis is.”¹⁵³ This was a distinction that would subsequently get considerably muddled by the Court.

Justice Marshall also recognized the important distinctions between different varieties of CBA, something that no other Supreme Court justice has ever so clearly acknowledged. In a footnote, Justice Marshall noted that the industry petitioners characterized the kind of CBA they were promoting as simply showing a “reasonable relationship” between costs and benefits and that they explicitly disclaimed any need for OSHA to “engage in a rigidly formal cost-benefit calculation that places a dollar value on employee lives or health.”¹⁵⁴ The government, on the other hand, insisted that formal CBA would be required, contending that “there is no other way but through formal cost-benefit analysis to accomplish petitioners’ desired balancing,” including “placing a [dollar] value on human life and freedom from suffering.”¹⁵⁵ Justice Marshall did not purport to resolve this dispute, but simply noted “[w]hether petitioners’ or respondents’ characterization is correct, we will sometimes refer to petitioners’ proposed exercise as ‘cost-benefit analysis.’”¹⁵⁶

E. *Whitman v. American Trucking Associations*

A full two decades passed before the Supreme Court again took up the subject of agency cost considerations in *Whitman v. American Trucking Associations*.¹⁵⁷ At issue was the provision of the CAA directing EPA to set NAAQS at the level “requisite to protect the public health.”¹⁵⁸ The D.C. Circuit had for many years interpreted this provision to preclude EPA from considering costs.¹⁵⁹ In a case that was closely watched and drew numerous amicus briefs on both sides, industry urged the Supreme Court to overturn that precedent. In a unanimous decision, the Court declined to do so, ruling, in a sweeping opinion authored by Justice Antonin Scalia, that the CAA “unambiguously bars cost considerations from the NAAQS-setting process.”¹⁶⁰

In this case, then, Justice Scalia took the stronger position that Justice Marshall had wanted to take in the *Cotton Dust* case two decades earlier—not simply allowing the Agency to decline to consider costs if it chose to, but prohibiting cost considerations altogether (a type 3(a) holding on Table 1). This was despite the fact that he could have

reached the same outcome—upholding the Agency—with a weaker permissive holding. Also, as Justice Marshall had done in *Cotton Dust*, Justice Scalia reached his holding by means of an anti-CBA presumption. “We have . . . refused,” he said, “to find implicit in ambiguous sections of the CAA an authorization to consider costs.”¹⁶¹ Rather, such authorization requires a “textual commitment” that is “clear.”¹⁶²

Still, while Justice Marshall’s presumption had been wide-ranging, Justice Scalia limited his expressly to the CAA. Additionally, he reasoned that it applied with special force to the particular provisions at issue in this case, because they involved NAAQS, which he said are “the engine that drives nearly all of Title I of the CAA,” and because they explicitly call for consideration of the public health.¹⁶³ “Cost,” Justice Scalia said, “is both so indirectly related to public health *and* so full of potential for canceling the conclusions drawn from direct health effects that it would surely have been expressly mentioned in §§108 and 109 had Congress meant it to be considered.”¹⁶⁴ Thus, even in this strongly worded opinion, applauded by environmentalists at the time, Justice Scalia laid the groundwork that would allow the Court to distance itself from this presumption in future cases involving different statutes or even different sections of the CAA.

Justice Scalia repeatedly characterized the question before the Court as whether EPA could “consider the costs” in setting NAAQS, but the implication was clearly that this would involve some form of CBA, and all the parties to the case seemed to make this assumption. Since that section of the CAA explicitly calls for EPA to consider the public health, adding a consideration of costs would inevitably lead to a balancing of benefits against costs. Indeed, Justice Scalia made this assumption clear in the passage quoted above, in which he worried that costs were “so full of potential for cancelling” out health benefits. His opinion did not specify what level of formality such an analysis would have been expected to take. Nonetheless, while the implication is certainly far from clear, it is at least plausible to read the costs-canceling-benefits passage as evidencing a distrust of formal CBA, and its tendency to allow easily monetizable costs to swamp public health and environmental benefits that are not easily reduced to dollars. This is, in fact, a sentiment Justice Scalia had expressed years earlier in an academic lecture.¹⁶⁵

Justice Stephen Breyer wrote a concurring opinion in which he explicitly rejected the majority’s anti-CBA

153. *American Textile*, 452 U.S. at 509.

154. *Id.* at 506, n.26 (quoting petitioners’ brief).

155. *Id.* These conflicting claims about the formality of CBA among proponents and opponents of CBA is consistent with a widespread pattern in both litigation and the academic debate. See Amy Sinden, *Cost-Benefit Analysis, Ben Franklin, and the Supreme Court*, 4 U.C. IRVINE L. REV. 1175, 1184-88 (2014); Sinden, *Formality and Informality in Cost-Benefit Analysis*, *supra* note 11, at 120-28.

156. *American Textile*, 452 U.S. at 506, n.26.

157. 531 U.S. 457, 31 ELR 20512 (2001).

158. 42 U.S.C. §7409(b)(1).

159. See *Lead Industries Ass’n v. Environmental Prot. Agency*, 647 F.2d 1130, 1148, 10 ELR 20643 (D.C. Cir. 1980).

160. *Whitman*, 531 U.S. at 471.

161. *Id.* at 467.

162. *Id.* at 468. While Justice Scalia did not label this line of reasoning a “presumption” per se, Justice Breyer named it as such in a concurring opinion. *Id.* at 490.

163. *Id.* at 468.

164. *Id.* at 469.

165. Antonin Scalia, *Responsibilities of Regulatory Agencies Under Environmental Law*, 24 Hous. L. REV. 97, 101 (1987) (distinguishing between CBA in the “narrow sense” and a broader form and endorsing the broader form: “What I mean by cost-benefit analysis is simply a weighing of all the desirable effects of a proposed action against all the undesirable effects, whether or not they are susceptible of being expressed in economic terms.”).

presumption and argued for an opposite presumption, favoring CBA. His would not have been limited to the CAA, as Justice Scalia's was, but would have applied to all "regulatory statutes."¹⁶⁶ While Justice Breyer did not explicitly specify how formal a CBA he had in mind, his language—like Justice Powell's in the *Benzene* case—can be read to imply a relatively informal CBA that does not equate costs and benefits at the margin, but simply seeks to avoid a situation in which costs are seriously "disproportionate" to benefits¹⁶⁷:

In order better to achieve regulatory goals—for example to allocate resources so that they save more lives or produce a cleaner environment—regulators must often take account of all of a proposed regulation's adverse effects, at least where those adverse effects clearly threaten serious and disproportionate public harm. Hence, I believe that, other things being equal, we should read silences or ambiguities in the language of regulatory statutes as permitting, not forbidding, this type of rational regulation.¹⁶⁸

In this instance, Justice Breyer reasoned, "other things are not equal," because the legislative history of the CAA as well as its overall structure demonstrated Congress' intent that EPA should set NAAQS in a cost-blind manner.¹⁶⁹

F. Entergy Corp. v. Riverkeeper

Eight years after *Whitman*, the subject of CBA in agency rulemaking made it to the Supreme Court again in *Entergy Corp. v. Riverkeeper*.¹⁷⁰ This time, unlike all but two of the earlier cases (*Overton Park* and *TVA v. Hill*), the Court reviewed an agency decision to adopt CBA, rather than to reject it. The provision at issue—§316(b) of the CWA, which regulates the intake of cooling water by power plants and other large industrial facilities—appears to set out a standard feasibility test. It requires cooling water intake structures to "reflect the best technology available for minimizing adverse environmental impact."¹⁷¹ EPA had set the standard based on a CBA instead,¹⁷² and in a 6-3 opinion, the Court upheld the Agency. This then marked the first time the Court had ever ruled in favor of CBA, though notably, it chose the

more permissive holding (type 1(b) in Table 1) that CBA was permitted but not required.

Moreover, it was a ruling that seemed to fly in the face of the Court's emerging anti-cost presumption, at least if it was construed to take the strong form. Notably, it was Justice Scalia who authored the majority opinion, the same Justice who had articulated that strong anti-cost presumption in *Whitman*. Technically, of course, neither *Whitman* nor *Union Electric* applied, since the presumptions articulated in those cases had been confined to the CAA. Justice Scalia carefully distinguished *Whitman* nonetheless, but, strangely, neither the majority nor the dissent mentioned *Union Electric*.¹⁷³ That left *Cotton Dust*. Justice Scalia, writing for the majority, was careful to adopt a reading of that case that construed its presumption to take the weak form. As he aptly observed: "[U]nder *Chevron*, that an agency is not *required* to [conduct CBA] does not mean that an agency is not *permitted* to [conduct CBA]."¹⁷⁴

Still, while the Court stepped back from its earlier anti-cost presumption, Justice Scalia's majority opinion gave no hint of a pro-CBA presumption of any kind. Justice Breyer authored a separate opinion, concurring in part and dissenting in part. And unlike his concurring opinion in *Whitman*, this time, he did not explicitly argue for a pro-CBA presumption either. Arguably, however, he took a step in that direction by drawing the same kind of connection between CBA and rational regulation that in *Whitman* seemed to form the justification for his pro-CBA presumption:

Any . . . total prohibition [on cost-benefit comparisons] would be difficult to enforce, for every real choice requires a decisionmaker to weigh advantages against disadvantages, and disadvantages can be seen in terms of (often quantifiable) costs. Moreover, an absolute prohibition would bring about irrational results.¹⁷⁵

It is not at all clear that the Court's apparent new-found affinity for CBA applied to all varieties. Indeed, Justice Scalia actually went to some pains to make clear that the kind of CBA he was endorsing was far toward the *informal* end of the spectrum:

Other arguments may be available to preclude such a rigorous form of cost-benefit analysis as that which was prescribed under the statute's former BPT standard, which required weighing "the total cost of application of technology" against "the . . . benefits to be achieved." But that question is not before us.

In the Phase II requirements challenged here the EPA sought only to avoid extreme disparities between costs and benefits.¹⁷⁶

166. *Whitman*, 531 U.S. at 490.

167. In hindsight, we can see further evidence for this reading in Justice Breyer's concurring opinion eight years later in *Riverkeeper*, in which he issued an explicit warning about the dangers of formal CBA. See *infra* notes 180 to 181 and accompanying text.

168. *Whitman*, 531 U.S. at 490. This equation of CBA with rational regulation is a theme that shows up in Justice Breyer's earlier writings as well, including in his book about regulation: STEPHEN BREYER, *BREAKING THE VICIOUS CIRCLE: TOWARD EFFECTIVE RISK REGULATION* (1993). See also *United States v. Ottati & Goss*, 900 F.2d 429, 20 ELR 20856 (1st Cir. 1990); Lisa Heinzerling, *Justice Breyer's Hard Look*, 8 ADMIN. L.J. AM. U. 767 (1995) (finding in Justice Breyer's early writings a criterion for courts' scrutiny of agency decisionmaking based on its "consonance with a rough cost-benefit analysis").

169. *Whitman*, 531 U.S. at 490.

170. 556 U.S. 208, 39 ELR 20067 (2009).

171. 33 U.S.C. §1326(b).

172. This was at the behest of OIRA. See Sinden, *Cost-Benefit Analysis, Ben Franklin, and the Supreme Court*, *supra* note 155, at 1189-91.

173. *Riverkeeper*, 556 U.S. at 223.

174. *Id.* at 223.

175. *Id.* at 232 (Breyer, J., concurring).

176. *Id.* at 223-24 (emphasis added) (quoting 33 U.S.C. §1314(b)(1)(B)).

Thus, the majority opinion did not specify exactly what a permissible CBA looks like, but it offered enough clues to make clear that the CBA it was endorsing fell pretty far toward the informal end of the spectrum. First, the balancing test Justice Scalia credited EPA with using—one that “sought only to avoid extreme disparities between costs and benefits”—is fairly near the informal end of the spectrum in that it involves a relatively imprecise comparison and tolerates a low degree of quantification and monetization.¹⁷⁷ Second, Justice Scalia’s assertion that the form of CBA he was endorsing was less “rigorous” than that performed under the best practicable control technology (BPT) standard¹⁷⁸ suggests a very informal CBA since those performed under the BPT standard typically did not monetize benefits at all.¹⁷⁹

Justice Breyer gave even more emphasis to the distinction between formal and informal CBA, clearly endorsing the latter and highlighting the dangers of formal CBA:

The EPA’s reading of the statute would seem to permit it to describe environmental benefits in non-monetized terms and to evaluate both costs and benefits in accordance with its expert judgment and scientific knowledge. *The Agency can thereby avoid lengthy formal cost-benefit proceedings and futile attempts at comprehensive monetization*; take account of Congress’ technology-forcing objectives; and still prevent results that are absurd or unreasonable in light of extreme disparities between costs and benefits.¹⁸⁰

Thus, the CBA that Justice Breyer envisioned was, like Justice Scalia’s, clearly well toward the informal end of the spectrum.¹⁸¹

G. Environmental Protection Agency v. EME Homer City Generator, L.P.

The issue of cost considerations in environmental rule-making made its way back up to the Supreme Court just five years later, in *Environmental Protection Agency v. EME Homer City Generator, L.P.*¹⁸² This case arose out of a challenge brought by a coalition of states, localities, and industry and labor groups to the “Transport Rule,” EPA’s latest attempt to address the problem of interstate

air pollution under the CAA’s “Good Neighbor” provision. That provision requires states to prohibit sources within their boundaries “from emitting any air pollutant in amounts which will . . . contribute significantly” to downwind states’ “nonattainment . . . or interfere with maintenance” of NAAQS.¹⁸³ In a 6-2 ruling, with Justice Ruth Bader Ginsburg writing for the majority, the Court upheld the Transport Rule and, in so doing, rejected the petitioners’ argument that EPA had impermissibly considered costs in calculating the amounts of pollution in upwind states it deemed to be “contribut[ing] significantly” to downwind nonattainment.

In order to understand what EPA’s consideration of costs amounted to in this case, it is necessary to understand more about the details of the Transport Rule and how EPA arrived at its allocation of the pollution reduction burden among the states. The Transport Rule limited nitrogen oxides (NO_x) and sulfur dioxide emissions in 27 upwind states in order to achieve attainment of NAAQS for ozone and particulate matter in downwind states in the Midwest and Northeast.

Determining which upwind state emissions “contribute significantly” to downwind states’ nonattainment had been a “thorny” problem for EPA.¹⁸⁴ This time, the Agency made that determination via a two-step process. “[U]nder the Transport Rule, an upwind State ‘contribute[d] significantly’ to downwind non-attainment to the extent its exported pollution both (1) produced one percent or more of a NAAQS in at least one downwind State . . . and (2) could be eliminated cost-effectively, as determined by EPA.”¹⁸⁵ In order to carry out step two, EPA created an emissions “budget” for each upwind state. This budget represented the quantity of pollution that state would produce if all in-state sources implemented “cost-effective controls”—that is, controls that could be implemented without exceeding some EPA-designated per-ton cost threshold.¹⁸⁶ So, for example, a state’s budget might be the amount of NO_x the state would produce if all sources in the state employed every control measure available at a cost of \$500/ton or less.¹⁸⁷

The D.C. Circuit vacated the rule, holding that EPA impermissibly took costs into account in calculating each state’s “significant contribution.”¹⁸⁸ The Supreme Court reversed. Justice Ginsburg’s opinion for the Court found the statute ambiguous, deferred to EPA under *Chevron* step two, and held that EPA’s consideration of costs was permissible. The D.C. Circuit had viewed the Act as unambiguous, as clearly requiring EPA to allocate responsibility for reducing emissions in proportion to each state’s contribution to the problem. But, in Justice Ginsburg’s view, the matter of determining each state’s proportional

177. *Id.* at 224. As I have argued elsewhere, the CBA EPA actually used in this rulemaking was in fact far more formal than the Court recognized. See Sinden, *Cost-Benefit Analysis, Ben Franklin, and the Supreme Court*, *supra* note 155, at 1194-1201.

178. *Riverkeeper*, 556 U.S. at 223.

179. See Sinden, *Cost-Benefit Analysis, Ben Franklin, and the Supreme Court*, *supra* note 155, at 1189-90.

180. *Riverkeeper*, 556 U.S. at 235 (Breyer, J., concurring) (emphasis added) (citations omitted).

181. Justice Breyer’s reading conforms to early Agency interpretations of §316(b) of the CWA. See Best Technology Available for the Location, Design, Construction, and Capacity of Cooling Water Intake Structures, 41 Fed. Reg. 17387, 17388 (Apr. 26, 1976) (“No comparison of monetary costs with the social benefits of minimizing adverse environmental impacts, much less a formal, quantified ‘cost/benefit’ assessment is required by the terms of the Act.”). For a more detailed analysis of the Court’s opinion along these lines, see Sinden, *Cost-Benefit Analysis, Ben Franklin, and the Supreme Court*, *supra* note 155.

182. 134 S. Ct. 1584, 44 ELR 20094 (2014).

183. 42 U.S.C. §7410(a)(2)(D)(i).

184. *EME Homer City*, 134 S. Ct. at 1607.

185. *Id.* at 1597.

186. *Id.* at 1596-97.

187. *Id.*

188. *EME Homer City Generation v. Environmental Prot. Agency*, 696 F.3d 7 (D.C. Cir. 2014).

share was not so easy and admitted to no single mathematically correct solution. Accordingly, she concluded, “[l]acking a dispositive statutory instruction to guide it, EPA’s decision . . . is a ‘reasonable’ way of filling the ‘gap’ left open by Congress.”¹⁸⁹

This was, then, like *Riverkeeper*, a box 1(b) (in Table 1) decision in which the Court upheld the Agency’s choice to consider costs, but chose the weaker holding that attention to costs was permitted rather than required. Also like *Riverkeeper*, while it flew in the face of the Court’s earlier anti-cost presumption, this decision did not go so far as to create a presumption in the other direction. Indeed, Justice Ginsburg’s opinion for the Court is notably devoid of broad statements about the role that costs could or should play in agency rule-making in general. To the contrary, it paints a picture of a statutory provision that is unique in presenting an unusually complicated (“thorny”) puzzle with no obvious single solution. This suggests perhaps the opposite of a presumption—that the Court’s approval of the Agency’s cost consideration in this instance is not necessarily generalizable.

Perhaps the most important aspect of this case, which has to a large extent been overlooked, is the nature of the cost consideration involved. There was considerable confusion about this on the Court. The majority referred variously to EPA’s “consideration of costs,” its “cost-based methodology,” and its “cost-effective allocation.”¹⁹⁰ Justice Scalia, in dissent, referred repeatedly to what EPA did as “cost-benefit analysis.”¹⁹¹

But the analysis EPA engaged in here was decidedly *not* CBA of any sort. It did not estimate the costs of pollution control in each state in order to compare them to the environmental and health benefits. Nor was it a cost-effectiveness analysis, because it did not define a particular environmental goal and then compare the costs of accomplishing that goal under various regulatory alternatives. Rather, EPA used the cost of control to define what it considered to be a “significant” amount of pollution. That is, EPA set the goal (each state’s emissions budget) based on the cost of control and thereby determined the level of control that was economically achievable.

This was essentially a knee-of-the-curve feasibility analysis.¹⁹² EPA effectively estimated the cost per ton of incrementally more stringent levels of pollution control in each state, and then chose the cost per ton that seemed to deliver the most bang for the buck. This was, in other words, the point on the graph just before costs began to increase steeply per increment of pollution control—or, the knee of the curve. That cost per ton then became the cost threshold that defined “cost-effective controls” for each state. A state’s emissions budget was, in turn, based on the amount of pollution reduction that could be achieved if each source spent just up to the threshold cost per ton on pollution control.

Since this case is best understood as involving agency use of feasibility analysis, it is difficult, if not impossible, to square with *Union Electric’s* strong anti-cost presumption, which was itself aimed at the use of a feasibility standard in the CAA: “Where Congress intended the Administrator to be concerned about economic and technological infeasibility, it expressly so provided.”¹⁹³ There is little question that Congress did not “expressly provide” for feasibility analysis in the Good Neighbor provision. Indeed, the Court found the provision ambiguous, which under *Union Electric’s* presumption should have made feasibility analysis off-limits.

Oddly, *Union Electric* was barely mentioned in the Court’s opinion. The majority did not mention it, and Justice Scalia’s dissent mentioned it only in passing.¹⁹⁴ Instead, Justice Scalia focused on *Whitman*, which was certainly less on point, since it did not involve feasibility analysis. But, as noted above, Justice Scalia mislabeled EPA’s analysis in this case as “cost-benefit analysis.” Despite having seemed to back away from it in *Riverkeeper*, here he re-embraced *Whitman’s* strong anti-cost presumption with gusto and chastised the majority for violating it.¹⁹⁵ The embrace was short-lived, however, as the next section describes.

H. Michigan v. Environmental Protection Agency

After his enthusiastic embrace of it in *EME Homer City*, it was odd that just the following year, in the majority opinion in *Michigan v. Environmental Protection Agency*, Justice Scalia seemed to suffer amnesia with respect to his earlier anti-CBA presumption.¹⁹⁶ This case involved a challenge to EPA’s mercury and air toxics standards for power plants. Before issuing these standards, the CAA required EPA to make a threshold finding that regulation of hazardous air pollutants from power plants is “appropriate and necessary.”¹⁹⁷ Industry challenged the rule on the ground that EPA had improperly refused to consider costs in making this determination, and the Supreme Court, in an opinion authored by Justice Scalia, agreed: “[I]t was unreasonable for EPA to read §7412(n)(1)(A) to mean that cost is irrelevant to the initial decision to regulate power plants. The Agency must consider cost—including, most importantly, cost of compliance—before deciding whether regulation is appropriate and necessary.”¹⁹⁸

In one sense, then, this case took yet another step away from the anti-cost posture of the early cases. While *Riverkeeper* and *EME Homer City* had simply upheld agency cost considerations and held them *permissible*, this case marked the first time the Court had actually reversed an agency for failing to consider costs and held that cost consideration was actually *required*. This was, in other words, the first case to occupy box 4 of Table 1. Since the statutory phrase

189. *EME Homer City*, 134 S. Ct. at 1607 (quoting *Chevron v. Natural Res. Def. Council*, 467 U.S. 837, 866, 14 ELR 20507 (1984)).

190. *Id.* at 1593, 1596, 1597, 1607, 1608, 1609, 1610.

191. *Id.* at 1610, 1613, 1616.

192. See Daniel A. Farber, *Unpacking EME Homer: Cost, Proportionality, and Emissions Reductions*, 4 MICH. J. ENVTL. & ADMIN. L. 213, 215 (2015).

193. *Union Electric v. Environmental Prot. Agency*, 427 U.S. 246, 257, n.5, 6 ELR 20570 (1976).

194. *EME Homer City*, 134 S. Ct. at 1616 (Scalia, J., dissenting).

195. *Id.* at 1616.

196. 135 S. Ct. 2699, 45 ELR 20124 (2015).

197. 42 U.S.C. §7412(n)(1)(A).

198. *Michigan*, 135 S. Ct. at 2711.

at issue, “appropriate and necessary,” was by all accounts ambiguous, this holding was, on the surface at least, in direct conflict with whatever might be left of the Court’s earlier anti-cost presumption.

On the other hand, Justice Scalia did not, explicitly at least, articulate a pro-cost presumption either. (Remember that he was quite explicit in creating an *anti-cost* presumption in *Whitman*.) With some reading between the lines, however, one can arguably discern in his opinion at least the outlines of a pro-cost presumption. Indeed, some have read it that way.¹⁹⁹ The argument sees a presumption emerging from the links Justice Scalia drew between cost consideration, long-standing agency practice, and rationality.

He began by reiterating fundamental principles of administrative law requiring agencies to act “rationally” and “reasonably” under both the arbitrary and capricious standard and step two of the *Chevron* test.²⁰⁰ A page or so later, he made the link between cost consideration and “rationality”: “One would not say that it is even rational, never mind ‘appropriate,’ to impose billions of dollars in economic costs in return for a few dollars in health or environmental benefits.”²⁰¹ Then, he went on to associate cost consideration with established agency practice: “Agencies have long treated costs as [a] centrally relevant factor.”²⁰² The implication is that, as a general matter, an agency’s interpretation of an ambiguous statute must involve cost consideration in order to be deemed “rational,” “reasonable,” or worthy of deference by a court.

Justice Elena Kagan, however, was not so coy. Writing for four dissenting Justices, she gave a far more explicit embrace to a pro-cost presumption, even quoting Justice Powell’s concurrence in the *Benzene* case: “Cost is almost always a relevant—and usually, a highly important—factor in regulation. Unless Congress provides otherwise, an agency acts unreasonably in establishing ‘a standard-setting process that ignore[s] economic considerations.’”²⁰³ Thus, Justice Kagan’s dissent conceded that costs were relevant, but argued that EPA gave adequate consideration to costs here by considering them in subsequent stages of the rulemaking.

But what does “consideration of costs” entail? In this opinion, the Court appeared more confused than ever

before about the various forms of analysis that can be described as “considering costs.” At different points in the opinion, Justice Scalia described the problem as EPA’s failure to perform some form of CBA; though more often than not he seemed to have in mind a relatively informal variety that looks for gross disproportion between costs and benefits, rather than the point where costs equal benefits at the margin. He talked about “costs outweigh[ing] benefits,”²⁰⁴ about regulations “doing significantly more harm than good,”²⁰⁵ about the importance of ensuring that “costs are not disproportionate to benefits,”²⁰⁶ and about “prevent[ing] the imposition of costs far in excess of benefits.”²⁰⁷ But at several other points, he referred specifically to “cost-effectiveness,”²⁰⁸ and at many points throughout the opinion, he referred much more broadly and vaguely to “consider[ing] costs.”²⁰⁹

Most importantly, in formally stating the Court’s holding, Justice Scalia framed EPA’s error not in terms of the Agency’s failure to perform any particular type of cost analysis, but simply as the fact that “it deemed costs irrelevant.”²¹⁰ And he made clear that he was leaving the choice of precisely how to consider costs squarely within the Agency’s discretion: “It will be up to the agency to decide (as always, within the limits of reasonable interpretation) how to account for cost.”²¹¹ Indeed, in its supplemental finding, published 10 months later in response to the Supreme Court’s opinion, EPA relied primarily on feasibility analysis and open-ended balancing to conclude that the costs were reasonable and the regulation was therefore “appropriate and necessary.”²¹²

204. *Id.* at 2706.

205. *Id.* at 2707.

206. *Id.* at 2710.

207. *Id.* at 2711.

208. *Id.* at 2710, 2711.

209. *Id. passim.*

210. *Id.* at 2712.

211. *Id.* at 2711. Despite the fact that the Court’s holding clearly and explicitly refers only to cost consideration, it has been repeatedly cited as requiring agencies to engage in CBA. Graham & Noe, *supra* note 3. See Sunstein, *Cost-Benefit Analysis and Arbitrariness Review*, *supra* note 3, draft at 1 (describing *Michigan v. Environmental Prot. Agency* as an “important decision[] on the question of whether agencies are required to engage in some form of cost-benefit analysis”):

At a minimum, [*Michigan v. Environmental Prot. Agency*] implicitly requires agencies to weigh costs against benefits, at least in some sense; it is not possible to “consider” costs without engaging in such weighing. And with that implicit requirement, the Court may also have required agencies to make some effort to quantify costs, at least if it is feasible to do so. Is it possible to “consider” costs without knowing what they are? . . . [The] holding can easily be read to make trouble for any agency that fails to show that the benefits of a regulation justify the costs.

Id., draft at 11.

212. U.S. EPA, Supplemental Finding That It Is Appropriate and Necessary to Regulate Hazardous Air Pollutants From Coal- and Oil-Fired Electric Utility Steam Generating Units, 81 Fed. Reg. 24420 (Apr. 25, 2016). EPA used several different metrics to analyze feasibility, finding (1) that the projected annual costs of the rule would amount to 2.7 to 3.5% of annual revenues industrywide, (2) that the annual capital expenditures required to comply with the rule would amount to “3.0 percent of the power sector’s overall capital expenditures in recent years [which was] well within the range of annual variability between 2000 and 2011,” and (3) that “the projected impact of [the rule] on electricity rates of 0.3 cents/kWh or 3.1 percent [which is] well within the range of price fluctuations in recent years.” *Id.* at 24424. The Agency then performed an open-ended balancing analysis, in which it weighed the reasonableness of the rule’s cost (as evaluated by the foregoing

199. Lisa Heinzerling, *The Power Canons*, 58 WM. & MARY L. REV. draft at 18-21 (forthcoming) (arguing that Justice Scalia’s opinion did create a presumption or “interpretive canon”); Graham & Noe, *supra* note 3; Sunstein, *Cost-Benefit Analysis and Arbitrariness Review*, *supra* note 3, draft at 12 (“The dissenters clearly adopted a background principle that would require agencies to consider costs unless Congress prohibited them from doing so. There is every reason to think that the majority—which did, after all, invalidate the EPA’s regulation—would embrace that principle as well.”). To the extent the Court did create a pro-cost presumption in *Michigan*, it is, of course, only a presumption. Thus, Congress can draft around it if it wishes to. Indeed, Congress recently did exactly that in the new Toxic Substances Control Act reform legislation. Frank R. Lautenberg Chemical Safety for the 21st Century Act, §6(b)(1)(B)(i), Pub. L. No. 114-182, 130 Stat. 448 (specifying that EPA must designate chemicals as high or low priority for risk evaluations “without consideration of costs”).

200. *Michigan*, 135 S. Ct. at 2706-07.

201. *Id.* at 2707.

202. *Id.*

203. *Id.* at 2716-17 (Kagan, J., dissenting) (quoting *Industrial Union Dep’t, Am. Fed’n of Labor-Cong. of Indus. Orgs. v. American Petroleum Inst.*, 448 U.S. 607, 670, 10 ELR 20489 (1980) (Powell, J., concurring)).

It also presented the formal CBA the Agency had completed in compliance with the Executive Order, but only as “a second independent approach” in support of its finding. Feasibility and open-ended balancing remained the Agency’s “preferred approach.”²¹³

Thus, the Supreme Court’s opinion was quite clear in reversing the Agency specifically for its failure to *consider costs* rather than its failure to perform CBA. While explicitly leaving it up to the Agency to decide “how to account for cost,” the Court also went out of its way to include a specific disclaimer of formal CBA that seemed to echo Justice Breyer’s concurrence in *Riverkeeper*: “We need not and do not hold that the law unambiguously required the Agency, when making this preliminary estimate, to conduct a formal cost-benefit analysis in which each advantage and disadvantage is assigned a monetary value.”²¹⁴ This was one point on which all nine Justices clearly agreed. In her dissent, Justice Kagan made a point of reiterating this disclaimer of formal CBA as a kind of caveat to her pro-cost presumption: “As the Court notes, [the pro-cost presumption] does not require an agency to conduct a formal cost-benefit analysis of every administrative action.”²¹⁵

The dissent in *Michigan* is notable, however, not just for its articulation of a pro-cost presumption and for joining the majority in disclaiming formal CBA. Justice Kagan’s dissent is perhaps most notable for its conceptualization of what we might think of as a new alternative to CBA—“new,” at least, to the academic debate, if not to agency practice.

As noted above, the dissenters agreed with the principle that “[c]ost is almost always a relevant . . . factor in regulation.”²¹⁶ But, in their view, EPA *did* consider costs.²¹⁷ They viewed the “appropriate and necessary” finding as simply the first step (the “trigger”) of a lengthy rulemaking process in which EPA “carefully” and “exhaustive[ly] . . . took costs into account again and again.”²¹⁸ Justice Kagan described that process in considerable detail, explaining how after the initial appropriate and necessary finding, EPA applied the maximum achievable control technology (MACT) feasibility standard in order to determine how stringent a regulatory standard to set. Application of the MACT standard, Justice Kagan explained, involved consideration of costs: “After all, the best performing 12% of power plants must have considered costs in arriving at their emissions outputs; that is how profit-seeking enterprises make decisions. . . . else, they would have gone out

of business.”²¹⁹ She also went on to describe a series of subsequent steps in the regulatory process in which EPA also gave consideration to costs.

In laying out this level of detail about the actual process EPA pursued in setting the regulatory standard for emissions of toxics from power plants, Justice Kagan began to conceptualize a new alternative to CBA—what we might call a “sequential consideration of costs and benefits” or a “sequential CBA.” Distilled down to the basics, the regulatory process that EPA engaged in here and that Justice Kagan described involved the Agency first applying a health-based standard (considering regulatory benefits), and then subsequently applying a feasibility standard (considering regulatory costs).²²⁰

As discussed in Part II.B., this is actually a fairly common framework in U.S. environmental law. Feasibility standards are almost always preceded by some kind of threshold finding or trigger that takes the form of a health-based standard aimed at determining in a rough sense whether there is any benefit to be gained from regulation. Like CBA, this sequential CBA considers both costs and benefits, but unlike CBA, it does not directly compare them. In this way, it avoids the messy problem of converting regulatory benefits into a monetary metric—the source of most of the controversy surrounding formal CBA.²²¹

Justice Scalia did not outright reject Justice Kagan’s argument. Rather, citing “the foundational principle of administrative law that a court may uphold agency action only on the grounds that the agency invoked when it took the action,” he declined to consider it because EPA had not defended its decision in quite those terms.²²² EPA had defended its decision on the basis that cost was simply “irrelevant,” and Justice Scalia grounded his holding squarely in a rejection of that rationale. Accordingly, while he went on in dicta to criticize the dissent for “vastly overstat[ing] the influence of cost at later stages of the regulatory process,” the opinion leaves wide open the possibility that an agency could rely on the dissent’s theory in a subsequent case.²²³

In sum, the Court in *Michigan* reversed EPA for failing to consider costs in the face of an ambiguous statute (box 4 in Table 1), and in so doing, arguably created a broadly applicable pro-cost presumption. Nonetheless, the Court did not purport to dictate what form that cost consideration should take, leaving the question of “how to account for costs” squarely within the Agency’s discretion. Indeed, the only guidance the Court offered on this score was to make clear that formal CBA, “in which each advantage and disadvantage is assigned a monetary value,” was *not* required. Justice Kagan’s dissent echoed this disclaimer and began to conceptualize a new alternative to formal

feasibility analysis) “against a number of other factors,” including: (1) “the agency’s prior conclusions about the significant hazards to public health and the environment;” (2) “the volume of [hazardous air pollutants] that would be reduced by regulation;” (3) “Congress’ concern about the hazardous nature of these pollutants;” (4) “the wealth of public health and environmental effects research examined under the agency’s prior findings showing substantial risks from the emission of HAP;” and (5) “the fact that the power sector is the largest remaining anthropogenic source of many HAP in the U.S.” *Id.* at 24420-21, 24423.

213. *Id.*

214. *Michigan*, 135 S. Ct. at 2711.

215. *Id.* at 2717.

216. *Id.* at 2716-17.

217. *Id.* at 2714, 2716.

218. *Id.* at 2714.

219. *Id.* at 2719.

220. See Adam M. Finkel, *I Thought You’d Never Ask: Structuring Regulatory Decisions to Stimulate Demand for Better Science and Better Economics* 12-14 (unpublished manuscript on file with author) (calling this kind of analysis a “double bright line test”).

221. See *infra* notes 232 to 238 and accompanying text.

222. *Id.* at 2710.

223. *Id.* at 2711.

Table 2: Summary of Cases

Case name	Statutory language	Agency considered costs?	Court's ruling on cost consideration	Type of cost analysis at issue	Presumption?
<i>Overton Park</i> (1971)	"feasible and prudent"	yes (implicit)	prohibited (box 2 in Table 1)	CBA (unclear how formal) prohibited (feasibility required)	no
<i>Union Electric</i> (1976)	silent	no	prohibited (box 3(a))	feasibility	strong anti-cost presumption (specific to CAA)
<i>TVA v. Hill</i> (1978)	silent	yes (implicit)	prohibited (box 2)	CBA (unclear how formal)	no
<i>Benzene</i> (1980)—Justice Powell's concurrence	"feasible"	no (declined CBA)	required	informal CBA (wholly disproportionate test)	no
<i>Cotton Dust</i> (1981)	"feasible"	no (declined CBA)	agency discretion (box 3(b))	CBA (unclear how formal) not required (feasibility required)	anti-CBA presumption (unclear whether strong or weak)
<i>Whitman v. American Trucking</i> (2001)	silent	no	prohibited (box 3(a))	"cost consideration" (implicitly means CBA, but unclear how formal)	anti-cost presumption (specific to CAA)
<i>Whitman</i> (Justice Breyer's concurrence)	silent	no	prohibited (presumption inapplicable in this instance)	hints at informal CBA (disproportionate cost standard)	weak pro-cost presumption
<i>Entergy Corp. v. Riverkeeper</i> (2009)	silent	yes (CBA)	discretion (box 1(b))	informal CBA permitted	no
<i>Riverkeeper</i> (Justice Breyer's concurrence)	silent	yes (CBA)	discretion	informal CBA permitted	no
<i>EME Homer City</i> (2014)	silent	yes (feasibility)	discretion (box 1 (b))	feasibility permitted	no
<i>Michigan v. EPA</i> (2015)	silent	no	required (box 4)	consideration of cost (agency discretion re: what type)	pro-cost presumption

CBA in which regulatory costs and benefits are considered separately and sequentially rather than directly compared, thus obviating the need to delve into the messy business of monetizing regulatory benefits.

IV. Presumptions Pro and Con

The discussion above is summarized in Table 2. The table makes salient a few important points about the evolution of the Supreme Court's jurisprudence on agency consideration of cost in the environmental context, which I attempt to summarize and synthesize below.

A. The Pre-Riverkeeper Cases (1971-2001)

Up until the *Riverkeeper* case in 2009, the Court had rejected arguments that agencies should consider costs every time those issues came before it (five times). The Court had rejected calls for cost consideration both in cases where the agency itself had embraced it (*Overton Park* and *TVA v. Hill*) and in cases where the agency had rejected it (*Union Electric*, *Cotton Dust*, and *Whitman*)—that is, in cases occupying both box 2 and box 3 in Table 1. In addition, in all but one instance (*Cotton Dust*), the Court's

rejection of cost considerations took the strong form of a prohibition (box 2 or 3(a)) rather than the more deferential form of a grant of agency discretion (box 3(b)).²²⁴

In three of the five pre-*Riverkeeper* cases, the Court reached its result by means of an anti-cost presumption. In two instances (*Union Electric* and *Whitman*), the presumption took the strong form of a prohibition on cost consideration, but was narrow in scope—applicable only to the CAA. In the third case, *Cotton Dust*, the presumption was broad—applying to all federal statutes—but the strength of the presumption ended up a bit muddled, probably because of the last-minute change in Justice Marshall's opinion. Justice Marshall used strong language to articulate the presumption that seemed to indicate a prohibition on CBA in the absence of clear congressional intent to the contrary.²²⁵ But any such strong reading is at odds with the holding in the case, which—after negotiations with Justice Stevens—took the weaker form, stating simply that CBA was simply "not required" rather than outright prohibited. Thus, one might either read that passage as creating a

224. The papers of Justice Marshall show that, even in that one case, the Court came very close to crafting their ruling as a prohibition on CBA. See *supra* notes 146 to 147 and accompanying text.

225. *American Textile Mfrs. Inst., Inc. v. Donovan*, 452 U.S. 490, 510, 11 ELR 20736 (1981).

strong presumption in dicta, or as limited by the holding of the case, and therefore creating only a weak presumption.

In most of these cases, it was specifically CBA rather than other forms of cost analysis that the Court rejected, although it was never clear how formal a variety of CBA the Court had in mind. The main exception was *Union Electric*, where the Court was quite clear in specifying feasibility analysis (“technological and economic feasibility”) as the form of cost consideration that was off-limits to the Agency. *Whitman* also did not explicitly name CBA, talking instead of “cost consideration.” Still, everyone involved in the case seemed to assume (probably correctly) that cost consideration in this context meant CBA.

Although the Court generally failed to specify whether formal or informal CBA was at issue, *Cotton Dust* was striking (and remains so) for Justice Marshall’s explicit and detailed acknowledgement of these distinctions, albeit in a footnote. Yet, even there, the Court simply flagged the distinction. It did not try to parse which variety of CBA was actually at issue in the case or limit either its holding or its anti-CBA presumption to any particular kind of CBA.

On the other hand, the Court did seem, in those early years, more cognizant than it is today of the distinction between CBA generally and feasibility analysis. In both *Overton Park* and *Cotton Dust*, the Court specifically directed the agencies to use feasibility analysis in lieu of CBA—a holding that only makes sense if one recognizes the important distinctions between these two forms of analysis.

In sum, in the early cases, we saw a uniform rejection of cost considerations—usually in the form of CBA, though the particular variety of CBA was never specified. In one instance, it was specifically feasibility analysis that was rejected. On three occasions, the Court expressed this general antipathy toward cost considerations in the form of a presumption. In two instances, this presumption was strong (*prohibiting* cost considerations altogether unless Congress speaks clearly) but narrow (limited to the CAA). In the third case, *Cotton Dust*, the presumption was broad (applicable to all federal statutes) but arguably weak (giving the agency discretion to reject CBA), unless construed as dicta.

It is also worth noting that in those early cases, two concurring opinions (each by an individual justice) bucked the trend on the Court and argued in favor of CBA—Justice Powell in the *Benzene* case and Justice Breyer in the *Whitman* case. While Justice Powell focused on the particular statute at issue, Justice Breyer argued explicitly in favor of a generally applicable, weak, pro-cost presumption that would allow agencies to consider costs unless Congress spoke clearly to the contrary. Notably, however, in both instances, the CBA the justices appeared to envision was well toward the informal end of the spectrum. Thus, to the extent we might view those early concurring opinions as sowing the seeds for the turn the Court would later take, they support the idea that any embrace of CBA by the Court has been of the informal variety.

B. Riverkeeper and Beyond (2009-2015)

The Court’s 2009 decision in *Riverkeeper* marked the first time that it upheld an agency decision to conduct CBA in an environmental case; because the statutory language at issue could not possibly be read as “clearly” requiring CBA (it appeared instead to call for feasibility analysis), the decision was squarely inconsistent with the Court’s earlier anti-CBA presumption (at least in its strong form).²²⁶ Nonetheless, it was not as radical a departure from the earlier cases as it might seem at first blush.²²⁷

First, the *Riverkeeper* case involved a weak (box 1(b)) holding, deferring to agency discretion rather than *requiring* CBA. Thus, it gave the Agency discretion to choose CBA if it likes, but still left it free to choose other forms of analysis entirely. Second, while the case did not apply the Court’s earlier strong anti-CBA presumption, neither did it create a pro-CBA presumption, as some have argued.²²⁸ Indeed, the Court did not articulate a presumption at all, but rather grounded its holding entirely in the specific statutory language at issue. Third, the Court specified that it was endorsing agency use of *informal* CBA and suggested that more “rigorous form[s]” might be “preclude[d].”²²⁹ Thus, it is possible to read *Riverkeeper*’s disavowal of the Court’s earlier anti-cost presumption as limited to informal CBA, potentially leaving intact any preexisting presumption against formal CBA.

Five years later, in *EME Homer City*, the Court again upheld EPA’s discretion to consider costs in the face of an ambiguous statute (box 3(b) in Table 1), but this time the decisionmaking tool the Agency employed was not CBA. Although Justice Scalia, writing in dissent, mislabeled it as CBA, the cost consideration methodology that EPA used in the Transport Rule is best understood as a form of feasibility analysis—specifically a knee-of-the-curve analysis.

In broad strokes, this seems in accord with the Court’s earlier cases, several of which specifically embraced feasibility analysis as an alternative to CBA. But it is also true that in *Union Electric*, the Court articulated a strong CAA-specific presumption specifically aimed against feasibility analysis: “Where Congress intended the Administrator to be concerned about *economic and technological infeasibility*, it expressly so provided.”²³⁰ The early cases embracing feasibility analysis (*Overton Park* and *Cotton Dust*) were perfectly consistent with that presumption, since each involved a statute in which “Congress . . . expressly so provided.”²³¹ Here, in contrast, the statu-

226. The statute called for “the best technology available for minimizing adverse environmental impact.” 33 U.S.C. §1326(b).

227. Notably, the Court did not explicitly overrule any prior precedent. It simply distinguished *Whitman*, and read *Cotton Dust*, impliedly at least, as creating only a weak anti-cost presumption, which did not prevent the Court from “*permit[ing]*” the Agency to do CBA. *Entergy Corp. v. Riverkeeper*, 556 U.S. 208, 223, 39 ELR 20067 (2009).

228. See *supra* note 199.

229. *Riverkeeper*, 556 U.S. at 223-24.

230. *Union Electric v. Environmental Prot. Agency*, 427 U.S. 246, 257, n.5, 6 ELR 20570 (1976).

231. The statutes at issue in *Overton Park* prohibited approval of a federal highway through a public park unless there was “no *feasible* and prudent alterna-

tory language at issue contained no explicit reference to feasibility or technology or cost. The statutory standard instead asked simply what “amounts . . . contribute significantly” to downwind nonattainment.

Accordingly, it is difficult to square this result with *Union Electric’s* anti-feasibility presumption. Indeed, the majority did not even try, omitting any mention of the case. Thus, in this case, we see the Court continuing the trend that began with *Riverkeeper* of backing away from its earlier anti-cost presumption. But as in *Riverkeeper*, the Court’s disavowal of the anti-cost presumption did not encompass all forms of cost consideration. Here, it was limited to feasibility analysis.

The Court’s most recent case, *Michigan*, certainly represents a departure from its earlier cases in that it marks the first time that the Court has issued a box 4 (Table 1) ruling, reversing an agency decision for its *failure* to consider costs. To this extent, it went beyond *Riverkeeper* and *EME Homer City*, which only granted discretion to the Agency rather than actually *requiring* cost consideration. It also went further to the extent that it can arguably be read to create a pro-cost presumption.

On the other hand, because it framed its holding in terms of cost consideration generally (and the dissent’s proposed presumption was framed in those terms as well), it moved the Court much less in the direction of endorsing formal CBA than many have assumed. Notably, because it left the type of cost consideration to the Agency’s discretion, *Michigan* stopped far short of endorsing the presumption in favor of formal CBA that would be the hallmark of Professor Sunstein’s cost-benefit state. Indeed, far from endorsing formal CBA, in one of the few points on which there was unanimity, the Court went out of its way to offer a disclaimer of formal CBA.

In general, then, the Court appears to be backing away from its earlier anti-cost presumption and perhaps beginning to embrace a pro-cost presumption. Two important questions emerge: What, if anything, is left of the Court’s earlier anti-cost presumption? And if a new pro-cost presumption is emerging, what is its impact? (Is it ringing in the new cost-benefit state?) The following sections address these questions.

I. What’s Left of the Anti-Cost Presumption?

To begin, remember that “consideration of costs” covers a broad spectrum that encompasses the enormous variety of formal and informal tools within the category of CBA, as well as another whole set of tools that fall outside the

CBA rubric. In the early cases, the Court was usually quite vague about the existence of this spectrum and it did not always clearly specify which stretches of it the anti-cost presumption covered. On the other hand, sometimes by looking at what the agency actually did in the later cases, we can define more clearly the particular stretches of the spectrum with respect to which the Court has *disavowed* the anti-cost presumption. In both *Riverkeeper* and *EME Homer City*, the Court upheld the Agency’s use of specific cost-sensitive decision tools in the face of ambiguous statutes. In *Riverkeeper*, the tool was informal CBA, and in *EME Homer City*, it was feasibility analysis. Accordingly, these two cases can be read as disavowing the Court’s earlier anti-cost presumption to the extent that it applied to those two stretches of the spectrum—informal CBA and feasibility analysis.

The Court’s ruling in *Michigan*, however, took a different posture. It struck down agency action rather than upholding it. Accordingly, rather than defining a specific sphere of agency activity that was permissible under an ambiguous statute as *Riverkeeper* and *EME Homer City* had done, the Court defined only what was *impermissible* (ignoring costs). This left the Agency free to follow all paths other than the one foreclosed. In this instance, the entire cost-consideration spectrum is potentially available to EPA. This means that while a broad presumption disfavoring all forms of cost consideration is clearly off the table after *Michigan* (something we already knew from *Riverkeeper* and *EME Homer City*), a narrow presumption disfavoring one stretch of the spectrum is not. In particular, a narrow presumption disfavoring formal CBA remains viable after *Michigan*, because it would still leave the Agency free to pursue all the other tools on the cost-consideration spectrum.

So, one way to read the recent trio of cases is as narrowing rather than eviscerating the Court’s earlier anti-cost presumption. To the extent that the Court’s earlier presumption applied to the full sweep of the cost-consideration spectrum, it is no longer viable. Nor is it viable as applied specifically to informal CBA and/or feasibility analysis. But there is no reason to assume that the aspect of the anti-cost presumption aimed specifically at formal CBA has gone the same way as the rest. To the contrary, the Court’s disclaimers against formal CBA in *Riverkeeper* and *Michigan* suggest that this narrow aspect of the Court’s earlier anti-cost presumption may remain intact.

2. Is There a New Pro-Cost Presumption?

At the outset, it is worth reiterating that, although the dissent in *Michigan* was quite explicit in articulating a pro-cost presumption of the strong form, Justice Scalia’s majority opinion did not explicitly ground its rationale on a presumption of any kind. Moreover, to the extent a presumption is read to emerge from *Michigan*, it is one that broadly favors cost consideration in general. Because there are plenty of ways to consider costs other than formal

rive.” 23 U.S.C. §138 (1964 ed. supp. V); 49 U.S.C. §1653(f) (1964 ed. supp. V) (emphasis added). The OSH Act (at issue in *Cotton Dust*) requires OSHA to set standards for toxics in the workplace that “most adequately assure[], to the extent feasible . . . that no employee will suffer material impairment of health.” 29 U.S.C. §655(b)(5) (emphasis added). Indeed, even *Union Electric* itself embraced feasibility analysis at the same time it rejected it. The Court made clear that states were free to consider feasibility in evaluating SIPs (because in that context, the statute clearly provided for feasibility analysis); it was just off-limits to EPA. *Union Electric*, 427 U.S. at 266.

CBA, this broad, pro-cost presumption is entirely consistent with the survival of a narrow presumption disfavoring formal CBA. Indeed, the Court's explicit disclaimer of formal CBA (joined by the dissent) certainly serves to deemphasize formal CBA if not to remove it from the scope of the pro-cost presumption altogether.

There are plenty of good reasons to take formal CBA off the table. For one thing, formal CBA confronts a host of unresolved theoretical difficulties that have been catalogued in a vast and long-standing literature: it flattens the variety of human experience into a monetary metric,²³² undercounts the preferences of the poor vis-à-vis the rich,²³³ devalues the lives of our children and grandchildren,²³⁴ ignores distributional inequities,²³⁵ fails to account for low-probability catastrophic outcomes,²³⁶ and rests on a vision of human nature and behavior that has been shown to be fundamentally flawed and internally inconsistent.²³⁷ Even putting aside the myriad theoretical difficulties, it is simply unworkable given the current state of scientific knowledge. Most of the time, it leaves significant categories of benefits out of the equation entirely because we simply do not have the data and/or scientific understanding to quantify the consequences of environmental degradation to human and ecological health.²³⁸ Thus, with only partial information, formal CBA produces results that are misleading at best and hopelessly indeterminate at worst.

Additionally, to the extent *Michigan* creates a pro-cost presumption that excludes or even just disfavors formal CBA, it is important to understand the full range of other regulatory tools for considering costs that remain viable. Informal CBA and feasibility analysis are clearly on this list. But Justice Kagan's dissent also begins to define a third important alternative that I am calling sequential CBA. One might argue that this is just

a repackaging of feasibility analysis, which in practice virtually always includes some mechanism for considering regulatory benefits along with costs. Even if that is so, from a rhetorical standpoint, emphasizing that this mode of analysis also involves the consideration of both costs and benefits has the potential to blunt some of the CBA proponents' claims that formal CBA has a monopoly on rationality.²³⁹

In sum, it is not entirely clear that *Michigan* articulated a pro-cost presumption at all, but to the extent it did, it is broadly applicable to a whole range of tools outside of formal CBA, and can arguably be read to exclude or at least deemphasize formal CBA. This is a long way indeed from Professor Sunstein's cost-benefit state.

V. Conclusion

The trilogy of recent cases from the Supreme Court on cost considerations in environmental decisionmaking certainly marks a change in course from the Court's earlier cases in which the Justices had begun to develop an anti-cost presumption. But when we are careful to define terms and begin with a clear understanding of the many tools by which agencies consider costs in environmental decisionmaking and the broad variety of techniques that fall within the rubric of "cost-benefit analysis," it becomes clear that it is not nearly as dramatic a course change as many have assumed.

Riverkeeper and *EME Homer City* did not so much eliminate the Court's previously emerging anti-cost presumption as narrow and perhaps more clearly define it. Those cases indicate that the presumption no longer applies to cost consideration that takes the form of informal CBA or feasibility analysis. Yet, they do nothing to disturb the anti-cost presumption to the extent it may apply to other cost-consideration tools. Indeed, the *Riverkeeper* majority's disclaimer against "more rigorous" forms of CBA, in conjunction with Justice Breyer's detailed critique of formal CBA in concurrence, can be read to at least gesture in the direction of a continuing presumption against *formal* CBA.

Michigan also ruled in favor of cost consideration, but, unlike *Riverkeeper* and *EME Homer City*, it did not single out any particular tool for approval. It left the selection of tools squarely within agency discretion. Similarly, to the extent the Court here began to construct a pro-cost presumption, it also grants that same wide discretion to agencies. To be sure, any presumption that begins to emerge from *Michigan* is of the "strong" variety in the sense that it *requires* rather than simply *allows* cost consideration. But while it is strong in its fundamental structure, its particular command—to "consider costs"—has built into it a broad permissiveness. At bottom, it is up to the agency "how to account for cost," and, as Part II above laid out, this leaves

232. ELIZABETH ANDERSON, VALUE IN ETHICS AND ECONOMICS 55-59 (1993); MARK SAGOFF, THE ECONOMY OF THE EARTH: PHILOSOPHY, LAW, AND THE ENVIRONMENT 1-7 (1988); Cass R. Sunstein, *Incommensurability and Valuation in Law*, 92 MICH. L. REV. 779, 841-42 (1994).

233. RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW 13 (5th ed. 1998); C. Edwin Baker, *The Ideology of the Economic Analysis of Law*, 5 PHIL. & PUB. AFF. 3, 6 (1975); Duncan Kennedy, *Cost-Benefit Analysis of Entitlement Problems: A Critique*, 33 STAN. L. REV. 387, 422-44 (1981); Arthur A. Leff, *Economic Analysis of Law: Some Realism About Nominalism*, 60 VA. L. REV. 451, 478-79 (1974).

234. Lisa Heinzerling, *Discounting Our Future*, 34 LAND & WATER L. REV. 39, 40-41 (1999); Douglas A. Kysar, *Discounting . . . on Stilts*, 74 U. CHI. L. REV. 119, 119-20 (2007); Richard L. Revesz, *Environmental Regulation, Cost-Benefit Analysis, and the Discounting of Human Lives*, 99 COLUM. L. REV. 941, 955-86 (1999).

235. Sinden, *Cost-Benefit Analysis*, *supra* note 7.

236. Daniel A. Farber, *Uncertainty*, 99 GEO. L.J. 901 (2011); Martin L. Weitzman, *On Modeling and Interpreting the Economics of Catastrophic Climate Change*, 91 REV. ECON. & STAT. 1 (2009).

237. DANIEL KAHNEMAN & AMOS TVERSKY, CHOICES, VALUES, AND FRAMES (2000); Amartya Sen, *The Possibility of Social Choice*, 89 AM. ECON. ASS'N 349 (1999); Tuba Tuncel & James K. Hammitt, *A New Meta-Analysis on the WTP/WTA Disparity*, 68 J. ENVTL. ECON. & MGMT. 175 (2014).

238. Amy Sinden, *The Problem of Unquantified Benefits* (2016) (unpublished manuscript) (on file with author) (empirical study indicating that in over three-quarters of its CBAs, EPA refrains from quantifying whole categories of benefits the Agency itself describes as "important," "significant," or "substantial"); McGarity, *Cass Sunstein's Fuzzy Math*, *supra* note 83.

239. See e.g., Revesz & Livermore, *supra* note 2, at 3, 12 (arguing that "the use of cost-benefit analysis is a requirement of basic rationality" and that the only alternative is to "abandon reasoned analysis" and descend into "gut-level decisionmaking").

the agency with a broad array of choices, only one of which is formal CBA. Indeed, Justice Kagan's dissent in *Michigan* arguably helped to crystallize yet another, possibly appealing, alternative to formal CBA that involves combining feasibility and health-based standards in what we might call a "sequential CBA."

There is nothing in *Michigan* that requires this pro-cost presumption to cover formal CBA. In fact, the Court's explicit disclaimer of formal CBA (joined by the dissent) arguably indicates that it does not. Accordingly,

any pro-cost presumption that emerges from *Michigan* is entirely consistent with the continuation of the Court's earlier presumption disfavoring *formal* CBA. In short, the Supreme Court is a long way from ringing in Professor Sunstein's cost-benefit state and the full-scale embrace of formal CBA that would entail. To the contrary, all signs indicate that the Justices on both sides of the ideological spectrum continue to harbor considerable skepticism toward formal CBA.