Journal of Benefit-Cost Analysis (2025), 16: S2, 225–247
doi:10.1017/bca.2025.16

CAMBRIDGE UNIVERSITY PRESS

ARTICLE

Ensuring Durability and Objectivity in Regulatory Analysis: Comments on OMB Circular A-4

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Keywords: benefit–cost analysis; regulation; regulatory impact analysis; discount rate; behavioral economics

JEL codes: D6; H4

Abstract

This article is based on feedback I submitted in response to the Office of Management and Budget's (OMB's) April 2023 request for comments on its draft revisions to Circular A-4, "Regulatory Analysis." Much has changed since I submitted my comments in June 2023. OMB issued a final circular in November 2023 and subsequently rescinded it in February 2025. This article includes my comments as submitted, along with an introductory "prologue" and an "epilogue" that reflects on the decision to abandon the 2023 revisions and return to the 2003 Circular. My comment addressed key elements of regulatory analysis, suggested areas where OMB could provide more guidance, and identified several aspects of the 2023 Circular that appeared to be internally inconsistent or contradictory. It concluded that some of the 2023 revisions were worthwhile, while others would have obfuscated for policymakers important information on the welfare effects of regulatory actions.

1. Prologue to Dudley Comment

My public comment on the Office of Management and Budget's (OMB's) April 2023 draft Circular A-4 addressed several key elements, including the need for regulation, geographic scope of analysis, assessment of benefits and costs, approaches to understanding distributional impacts, discounting future effects, and treatment of uncertainty. It also suggested two areas where OMB could provide more guidance: designing regulations for learning and ex-post evaluation, and accounting for incompatibilities between benefit–cost analysis and risk assessment inputs. My comment also identified several aspects of the Circular that appear to be internally inconsistent or contradictory.

My objective in filing the comment was to protect the Circular's durability and objectivity, and to ensure that regulatory decisions continue to be guided by widely accepted practices, principles, and evidence. President Clinton's Executive Order 12866 (Clinton, 1993), which requires regulatory impact analysis, remains in effect after 30 years with only minor amendments. That is unusual for an executive order, which presidents can rescind with the stroke of a

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https://doi.org/10.1017/bca.2025.16 Published online by Cambridge University Press

pen. The economic principles E.O. 12866 embodies, and the guidance for complying with them, have proven durable across administrations with very different policy preferences because they provide the basis for objective evidence regarding the efficiency of regulatory policies. Though regulatory decisions may ultimately hinge on other factors, understanding their economic effects remains invaluable for sound policymaking. Benefit–cost analysis provides "useful information for decision-makers and the public[…], even when economic efficiency is not the only or the overriding public policy objective" (OMB, 2003, 2).

Circular A-4 (which formalized guidelines issued in the Clinton, Bush 41, and Reagan administrations) was published almost 20 years ago, and the OMB's 2023 revisions contained some worthwhile updates. However, my comment made the case that important aspects of the 2023 draft were not well supported and appeared "designed to steer analytical results to support this administration's policy preferences, rather than present objective evidence and estimates to policymakers and the public." The final Circular published in November 2023 was largely unchanged from the draft and did not address the issues that I and others raised (see Blomquist in this issue). In February 2025, the OMB returned to the 2003 version of the Circular.

2. Comment as submitted

The George Washington University Regulatory Studies Center works to improve regulatory policy through research, education, and outreach. As part of its mission, the Center conducts applied research on regulatory practices, analytical tools, and policies to understand their effect on the public interest. I am the Director of the Center and a Distinguished Professor of Practice in GW's Trachtenberg School of Public Policy and Public Administration. Earlier in my career, I served as Administrator of the Office of Information and Regulatory Affairs, and on the career staff there, as well as at executive branch and independent regulatory agencies. I am a Senior Fellow with the Administrative Conference of the United States and served as President of the Society for Benefit–Cost Analysis.

I appreciate the opportunity to provide comments on the Office of Management and Budget's draft revisions to Circular A-4 and to offer my perspective as both an academic and practitioner who has long been involved in regulatory impact analysis. I have devoted my career to ensuring bipartisan support for good regulatory practices. To set the stage for these comments, I begin with a review of the durability and stability of regulatory impact analysis.

2.1. The remarkable durability and stability of regulatory impact analysis

OMB issued Circular A-4 in 2003, after incorporating both public comment and peer review. It was built on the Clinton administration's "Economic Analysis of Federal Regulations Under Executive Order 12866" (OMB, 1996), which in turn had its basis in the "Regulatory Impact Analysis Guidance" published in the Bush (OMB, 1992), and Reagan (OMB, 1988) administrations. It provides guidance to agencies for considering the impacts of alternative regulatory actions as required by Executive Order (E.O.) 12866 (Clinton, 1993).

E.O. 12866 expresses the philosophy that:

> Federal agencies should promulgate only such regulations as are required by law, are necessary to interpret the law, or are made necessary by compelling public need, such

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> as material failures of private markets to protect or improve the health and safety of the public, the environment, or the well-being of the American people. In deciding whether and how to regulate, agencies should assess all costs and benefits of available regulatory alternatives, including the alternative of not regulating. Costs and benefits shall be understood to include both quantifiable measures (to the fullest extent that these can be usefully estimated) and qualitative measures of costs and benefits that are difficult to quantify but are nevertheless essential to consider. Further, in choosing among alternative regulatory approaches, agencies should select those approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity), unless a statute requires another regulatory approach. (Clinton, 1993, Sec.1(a)).

The Executive Order and Circular A-4 have proven durable across different presidential administrations because they are based on objective principles (Katzen, 2018), and provide non-partisan information to policymakers on an important factor in policy decisions – the efficiency of different approaches to achieving policy goals. As President Obama's *Primer on Regulatory Impact Analysis* observes, "regulatory analysis also has an important democratic function; it promotes accountability and transparency and is a central part of open government" (OMB, 2011, 2).

It is appropriate to update the Circular to reflect new data and developments in the economic understanding of regulatory impacts over the last 20 years. However, to retain the Circular's acceptance and stability, the guidance should not stray from widely accepted principles and methods, and should insist on transparency about assumptions involved in estimating uncertain future impacts.

While the proposed revisions contain some worthwhile updates, some of the guidance deviates from the best available current economic science. To the extent that the Circular is perceived as not being neutral, or as embedding practices designed to bias results in a way that favors this administration's policy preferences, it risks the durability of not only the document but of regulatory analysis itself.

My objective in filing these comments is to ensure that the final revised Circular is based on widely accepted practices, principles, and evidence to safeguard its value and stability going forward.

The comment begins with a review of the role of regulatory impact analysis in rulemaking, and then addresses several key elements of the Draft 2023 Circular, including the need for regulation, geographic scope of analysis, assessment of benefits and costs, approaches to understanding distributional impacts, discounting future effects, and treatment of uncertainty. It then suggests two areas where the draft could provide more guidance: designing regulations for learning and ex-post evaluation, and accounting for incompatibilities in risk assessment inputs. The comment also identifies several aspects of the Circular that appear to be internally inconsistent or contradictory. It concludes with recommendations.

2.2. Role of regulatory impact analysis

Regulatory impact analysis *informs* policy decisions; it does not *determine* them (Katzen, 2006). It applies an economic lens to examine the welfare differences among alternative policies (Arrow *et al*., 1996), but policymakers must consider other factors when making

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regulatory decisions, including legal constraints, political viability, distributional impacts, practicality, etc.

As President Obama's Circular A-4 Primer states:

> Important goals of regulatory analysis are (*a*) to establish whether federal regulation is necessary and justified to achieve a social goal and (*b*) to clarify how to design regulations in the most efficient, least burdensome, and most cost-effective manner (OMB, 2011, 2).

Regulatory impact analyses (RIAs)[1] must be transparent so that policymakers and others understand the likely effects of alternative options and the assumptions and evidence supporting estimates. In many cases, the Draft Circular appropriately emphasizes this. For example,

> You should aim for transparency about the key methods, data, and other analytical choices you make in your analysis (OMB, 2023, 4).

> Whatever decisions you make regarding the inclusion and exclusion of effects in your analysis, the basis for those decisions should be transparent and clear, with a focus on capturing the significant effects of a regulation. Similarly, you should be transparent about any data limitations or other sources of uncertainty regarding who will experience regulatory impacts (OMB, 2023, 10).

Benefit–cost analysis (BCA or CBA) is an important component of the RIA. The *New Palgrave Encyclopedia of Economics* defines it as.

> a collection of methods and rules for assessing the social costs and benefits of alternative public policies. It promotes efficiency by identifying the set of feasible projects that would yield the largest positive net benefits to society (Weimer, 2018, 2383).

Economic efficiency refers to the optimal allocation of scarce resources such that overall welfare is maximized and waste is minimized. As noted, efficiency is not the only factor policymakers consider when issuing regulation, but it is important, as the 2003 Circular observes:

> Where all benefits and costs can be quantified and expressed in monetary units, benefit–cost analysis provides decision-makers with a clear indication of the most efficient alternative, that is, the alternative that generates the largest net benefits to society (ignoring distributional effects). *This is useful information for decision-makers and the public to receive, even when economic efficiency is not the only or the overriding public policy objective.* (OMB, 2003, 2).

As the italicized sentence in the above quotation indicates, policymakers may make ultimate decisions on other relevant factors, but that does not diminish the value of an RIA that presents in a neutral and objective manner the likely consequences, good and bad, of

[1] As in common parlance in the U.S., the acronym, RIA, in this comment refers to the noun, not a verb.

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alternative forms of government action. The 2003 Circular describes that "*the motivation [of regulatory impact analysis] is to (1) learn if the benefits of an action are likely to justify the costs or (2) discover which of the various possible alternatives would be the most cost-effective*" (OMB, 2003, 2).

In several places, the Draft Circular appears to deviate from this goal of presenting to decision-makers a transparent presentation of how efficient and effective different options are likely to be (including with respect to the need for regulation, behavioral biases, distributional effects, and treatment of uncertainty, as discussed below). Indeed, both italicized sentences above were removed from the 2023 Draft.

2.3. Need for regulation

E.O. 12866 states:

> Each agency shall identify the problem that it intends to address (including, where applicable, the failures of private markets or public institutions that warrant new agency action) as well as assess the significance of that problem (Clinton, 1993, Sec.1 (b)(1)).

The 2023 Draft, like preceding guidelines, begins with the importance of identifying "a compelling public need" (Clinton, 1993, Sec.1(a)) for regulation:

> Regardless of its nature, you should generally describe the need for a regulation qualitatively and (when applicable) quantitatively. It is important to analyze any potential need before determining that it is present and relevant in your particular regulatory context. Your analysis of the effects of the regulation should not presuppose that there is a need for the regulation, and your analysis of the need for the regulation should not presuppose the effectiveness of your regulation (OMB, 2023, 15).

This is important to remind agencies that they must first identify the core systemic problem their regulation is aimed at addressing (Nardinelli, 2018). According to an article authored by a diverse group of 19 regulatory analysis experts,

> Regulatory actions that do not explicitly point to a failure of private markets or public institutions underlying the need for action are likely to produce lower net benefits than those that correctly identify and seek to remedy the fundamental problem (Dudley *et al*., 2017, 192).

Being clear about the compelling public need that necessitates regulation is essential because regulations are susceptible to special-interest pressures (Stigler, 1971). Aware of this problem, the OECD states that regulatory analysis "must be conducted with the […] 'whole of society' view in mind, rather than paying undue attention to impacts on individual groups that may be lobbying for regulation" (2008, 6).

While retaining the requirement that agencies first identify a problem, the current draft reflects less respect for market forces, individual decisions, or state and local knowledge and preferences than prior guidance. The 2023 Draft is expansive enough not to provide a principled constraint on agency action. It lacks the humility implicit in E.O. 12866 by giving agencies much more latitude for intervening in private exchanges and decisions, as the

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examples below with respect to economic regulations, behavioral biases, and the roles of federal, state, and territorial sovereignty show.

2.3.1. Economic regulation

The presumption against economic regulation that appeared in both the 1996 and 2003 guidelines is replaced in this one with a "note" regarding "certain types of" economic regulation. As the tracked changes below highlight, gone is the recognition that "government actions can be unintentionally harmful, and even useful regulations can impede market efficiency" (OMB, 2003, 6), and added is a vague phrase about "well-functioning" competitive markets.

~~**The Presumption Against**~~ **A Note Regarding Certain Types of Economic Regulation.**

~~Government actions can be unintentionally harmful, and even useful regulations can impede market efficiency. For this reason, there is a presumption against certain types of regulatory action.~~ In light of both economic theory and actual experience, it is particularly difficult to demonstrate positive net benefits ~~a particularly demanding burden of proof is required to demonstrate the need~~ for any of the following types of regulations:

i. price controls in well-functioning competitive markets;
ii. production or sales quotas in well-functioning competitive markets;
iii. mandatory uniform quality standards for goods or services if the potential problem can be adequately dealt with through voluntary standards or by disclosing information of the hazard to buyers or users; or controls on entry into employment or production, except (*a*) where ~~indispensable~~ needed to protect health and safety (e.g. FAA tests for commercial pilots) or (*b*) to manage the use of common property resources (e.g. fisheries, airwaves, Federal lands, and offshore areas).

A vast theoretical and empirical literature supports a presumption against such forms of regulation. From classic works (some of which earned the authors Nobel prizes) (e.g. Buchanan & Tullock, 1965; Stigler, 1971; Green & Nader, 1973; Posner, 1974; Peltzman, 1976) to more recent reviews (e.g. Crandall, 2007; Dudley, 2021a; Ellig, 2021), the evidence finds that past efforts at controlling prices and other forms of economic regulation disrupted competition, encouraged rent-seeking, and produced outcomes that benefited organized interests at the expense of less powerful and more diffuse interests. Besanko *et al.* (2019) show that, even when competitive markets are imperfect, "the upside from interventions and policies aimed at shaping competition for the market is likely to be limited," and that "pricing conduct restrictions can lead to substantial welfare losses" unless regulators have detailed knowledge of underlying conditions and execute their regulations "flawlessly" (Besanko *et al.*, 2019, 3358). The revised Circular language demands that competitive markets be "well-functioning" without making the same demand of government actions nor acknowledging the evidence that regulatory interventions have often been far from informed and flawless (Winston, 2023).

2.3.2. Behavioral biases

Advances in behavioral sciences since 2003 merit attention in the revised Circular; however, as a justification for intervening in market transactions, behavioral biases require greater skepticism than presented in the draft (OMB, 2023, 18–19). Before regulators override

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individuals' revealed preferences, they should "provide evidence that individuals behave irrationally (and do not learn) in the specific situation covered by the proposed regulation" (Dudley *et al*., 2017, 192). They should also acknowledge that government decision-makers may suffer from similar, if not more problematic, biases (Berggren, 2012; Dudley & Xie, 2020; Dudley & Xie, 2022).

Regulatory policies substitute the judgment of government regulators for those of individuals, which may be appropriate in the case of public goods or decisions that have external impacts. Yet, when RIAs calculate large net benefits without being able to identify a "material failure of private markets" (Clinton, 1993), but must depend instead on assumptions about "internalities" that prevent individuals from making decisions in their own self-interest, policy officials and the public should be skeptical (Gayer & Viscusi, 2013; Viscusi & Gayer, 2016; Mannix & Dudley, 2015a,b).

This is not to say that, when considering *alternatives* to address a compelling public need, regulators should not take behavioral insights into consideration (e.g. the section on informational approaches to regulation and nudges on pages 25–26 of the Draft Circular). There, carefully formed "nudges" may be the best alternative to help individuals overcome heuristics and biases to make choices that improve their well-being (Dudley *et al*., 2017).

2.3.3. Federal and state regulation

While the Draft Circular acknowledges that "it can be informative to consider other means of addressing the need for regulatory action you have identified in addition to, or instead of, Federal regulation," it reflects a greater willingness to override states if they do not do what federal officials think they should. For example, it says:

> Importantly, the fact that State, local, territorial, or Tribal authorities are empowered to address an issue does not mean that they are likely to do so effectively, universally, or at all. If State, local, territorial, or Tribal governments are failing to appropriately address a problem, analysis may indicate that Federal action is the best approach. Preventing a "race to the bottom" across jurisdictions should be considered when assessing the effects of a Federal regulation.

On both public policy and legal grounds, this open-ended invitation to override State, local, territorial, or Tribal decisions is problematic. Regulations that respect the diversity of preferences and circumstances across the country are likely to have more successful outcomes than top-down approaches (e.g. Ostrom, 2010). The draft should emphasize the learning value of deferring to States to address problems that do not create interstate commerce issues (ACUS 2017–6). Instead of allowing agencies to assert that other levels of government are "failing to appropriately address a problem," the draft should encourage the natural experiments that are essential to evaluating how well regulatory programs meet stated goals. A one-size national approach that does not allow for differences in treatment truncates opportunities to test different approaches and eschews the situational knowledge that smaller governmental units have.

The U.S. Constitution established a federal system of government, and courts are increasingly expecting federal agencies to demonstrate clear statutory authority before taking action. Recently, the Supreme Court affirmed that it "require[s] Congress to enact exceedingly clear language if it wishes to significantly alter the balance between federal and

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state power and the power of the Government over private property" (Sackett v. EPA, 2023, 23). The Draft Circular appears to encourage agencies to override state preferences, which may make resulting regulations more susceptible to legal challenge.

2.4. Geographic Scope

Similar to the guidance in the 2003 Circular, the Draft Circular states:

> In many circumstances, your primary analysis should focus on the effects of a regulation that are experienced by citizens and residents of the United States (which will often be the primary effects of the regulation).

It expands the earlier guidance by offering several "contexts [in which] it may be particularly appropriate to include effects experienced by non-citizens residing abroad in your primary analysis." These are generally reasonable (e.g. Dudley & Mannix, 2014, 17).

However, it goes on to say:

> When your primary analysis focuses on the global effects of the regulation, it is generally appropriate to produce a separate supplementary analysis of the effects experienced by U.S. citizens and residents, unless you determine that such effects cannot be separated in a practical and reasonably accurate manner, or that the separate presentation of such effects would likely be misleading or confusing in light of the factors detailed above. (emphasis added).

This open-ended reference to contexts in which agencies need not present to decision-makers and the public the domestic effects of regulatory actions is unjustified. It is not transparent and is inconsistent with the goal of understanding the distributional impacts. RIAs must present the domestic estimate of impacts of proposed actions for policymakers and the public to understand how those impacts will fall on disadvantaged, vulnerable, or marginalized communities in the U.S. (Fraas *et al*., 2023). Domestic regulatory agencies should not be inflicting net harms on the U.S. in order to benefit other countries while hiding that fact from the public.

2.5. Benefit–cost analysis

Section 9 of the Draft Circular offers valuable "general considerations" that emphasize the importance of presenting benefits, costs, and transfers clearly, and that the use of any resource represents an "opportunity costs" that reflects its next best use. However, a few areas deserve reconsideration, including the concept of "additional" benefits and costs, the appropriate baseline for analysis, and assumptions regarding partial compliance.

2.5.1. Additional benefits and costs

The draft encourages agencies to "look beyond the obvious benefits and costs of your regulation and consider any important additional benefits, costs, or transfers, when feasible," and to consider "additional benefits" that are "unrelated to the main purpose of the regulation." The Preamble notes the terminology change from "ancillary benefits and

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countervailing risks" to "additional benefits and costs," and argues that these benefits and costs are "not meaningfully different for analytical purposes" (OMB, 2023a, 7).

To a certain extent, that is true, and in principle, BCA should include all the significant consequences of a policy decision, whether they are direct or indirect, intended or unintended, beneficial or harmful (Dudley & Mannix, 2018). However, for practical purposes, agencies must draw boundaries around the scope of impacts covered in the RIA. Agencies' incentives are to identify additional (or ancillary) benefits that make their preferred option appear more cost-effective, while minimizing or disregarding additional costs or potential risks. RIAs often report additional benefits that greatly exceed primary benefits, while additional costs are ignored (Dudley & Mannix, 2018). The guidance should stress that any boundary drawing must be done in an objective and balanced manner, and RIAs should clearly distinguish additional benefits or costs from impacts related to the main purpose of the regulation.

This is also important on legal grounds, as the presence of benefits or costs "unrelated to the main purpose of the regulation" almost always signals that the agency is counting benefits and costs that arise outside of its enabling statutory authority (Dudley *et al*., 2017). For that reason, the assertion in the Preamble that these benefits and costs are "not meaningfully different for analytical purposes from categories of effects that are 'primary' or 'direct'" may not be helpful guidance. Courts are looking more carefully at whether regulations are based on clear and explicit statutory language (West Virginia v. EPA, 2022), so encouraging agencies to blur the lines between factors that are authorized and those that are "additional" could invite legal challenges.

2.5.2. *Pre-statutory baseline*

The Draft Circular departs from past practice by allowing agencies to include statutory requirements in the baseline of their analysis and measure the benefits and costs of going beyond those requirements. The Draft states a case that agencies make from time to time:

> However, in some cases, substantial portions of a regulation may simply restate statutory requirements that are self-implementing even in the absence of the regulatory action or over which an agency clearly has little (or no) regulatory discretion. In these cases, you may use a post-statutory baseline in your regulatory analysis, focusing on the discretionary elements of the action and potential alternatives. (OMB, 2023, 13).

The problem with this revised approach is two-fold. First, statutes are rarely so specific that they are self-implementing and leave the agency no discretion (Hickman, 2023). Agencies possess no regulatory authority that is not delegated from Congress, and the line between what is discretionary or not is not a bright one. Even in cases where agencies argue they have no discretion, the RIA framework and interagency peer review provide information and incentives to identify and consider other alternatives that are consistent with statutory mandates. Second, the audience for RIAs is broader than the agency; Congress, the courts, and the public benefit from a transparent examination of the benefits and costs of regulations, whether they stem from direct statutory directives or discretionary actions. Such information can lead Congress to make legislative changes.

Before changing its longstanding policy requiring analysis from a pre-statutory baseline, OMB should provide specific examples of regulations that "simply restate" "self-implementing"

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statutory requirements. Of course, agencies should be free to present impacts from a post-statutory, in addition to pre-statutory, baseline.

2.5.3. Partial compliance

The Draft includes a new section on "Accounting for Compliance and Take-up," which encourages agencies "to clearly present any key assumptions about compliance with a regulation." It goes on to say:

> Assuming full compliance may be inappropriate when available evidence suggests imperfect compliance is likely (OMB, 2023, 53).

This is problematic. If the RIA projects that entities will not comply with a regulatory requirement (due to cost, complexity, expectations regarding enforcement, etc.), that should be cause for reconsidering the proposed approach and whether an alternative approach could yield superior outcomes. Agency policymakers, Congress, and the public deserve information on the full expected costs and benefits of agency-made law. The Environmental Protection Agency frequently presents only partial compliance costs for its National Ambient Air Quality Standards (NAAQS) (e.g. EPA, 2023), which obfuscates the diminishing marginal returns of the rule (Dudley, 2023).

2.6. Distributional impacts

The Draft Circular includes a substantive section on assessing the distributional consequences of regulatory alternatives, and this is overdue. The Preamble provides a useful summary of the Kaldor-Hicks concept of efficiency that underlies modern welfare economics, which focuses on maximizing net benefits to society on the premise that winners *could* compensate losers (OMB, 2023a, 11). The argument behind this assumption is that "if [BCA] is consistently used to select policies offering the largest net benefits and there are no consistent losers, then it is likely that overall everyone will actually be made better off" (Weimer, 2018, 2384). Nevertheless, policymakers are often appropriately interested in understanding who is expected to receive the benefits and who will likely bear the costs.

The guidance provided in sections 10(a)–(d) of the Draft Circular is generally sound; it adds needed detail to the very brief discussion of distributional effects in the 2003 Circular. Disaggregating the effects on lower-income households may be particularly important for regulations that increase the costs of basic goods and services, like food or energy (Chambers *et al*., 2019; Cecot, 2023) or that disproportionately affect disadvantaged segments of society.

However, section 10(e) on distributional weights is not appropriate to include in the guidance (Beales, 2023; Morgenstern *et al*., 2023; Stavins, 2023; Sullivan, 2023). While it is intuitive that low-income individuals and households would value an additional ten dollars much more than their wealthy counterparts, there is no scientific basis for making such interpersonal utility comparisons (Lemieux, 2022), and perhaps more importantly, it does not follow that they would value an additional unit of a regulatory good (say an incremental change in air quality) more than the wealthy. For example, a clean environment is characterized as a normal good (willingness to pay or WTP increases with income) or a luxury good (where the wealthy have a disproportionately higher WTP) (Dupoux & Martinet, 2022);

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thus, it would be incorrect to suggest that the low-income family would pay more of their income than wealthy families for improvements in environmental quality. In fact, a struggling family would almost certainly prefer dollars that they could use to put food on the table, buy their children new shoes, or otherwise improve their current conditions and future prospects.

Furthermore, weights deviate from the RIA's fundamental role to provide information on the economic efficiency of different outcomes in a transparent way. Weights would embed non-transparent normative factors into the benefit and cost estimates. Implicit in using a distributional weighting scheme is a tradeoff between efficiency and distribution. Harberger showed more than 40 years ago that "when [...] the differences in weights get to be large, it is all too easy for considerations of distribution to swamp those of efficiency altogether, and for grossly inefficient policies, programs, and projects to be deemed acceptable" (Harberger, 1978, S113).

While the draft does direct agencies to present "traditionally-weighted" benefits and costs, as well, the weightings present to policymakers a false sense of analytic accuracy and confidence. Rather than encouraging agencies to bury assumptions in their quantitative BCAs to arrive at normative conclusions, A-4 should direct agencies to present information on distributional impacts as transparently and clearly as the evidence allows – as discussed in sections 10(a)–(d) of the Draft – and allow policymakers to make normative policy decisions.

2.7. Discount rate

The Draft's discussion of discounting begins with the following important guidance:

> As a first step, you should present the undiscounted annual time stream of benefits, costs, and transfers expected to result from a regulation, clearly identifying when they are expected to occur. A logical beginning point for your stream of estimates would be the year in which the regulation will begin to have effects, even if that is expected to be some time in the future. (OMB 2023, 74).

OMB really should insist that agencies do this. Even the most sophisticated agencies have issued RIAs for highly significant rules that simply present a snapshot of benefits and costs at a future date. EPA's fine particle NAAQS, for example, presents partial estimates of costs and benefits for the year 2032 and beyond. By 2032, capital costs will have been incurred, and projected health benefits will be at a high point (Dudley, 2023; EPA, 2023). This is neither transparent nor informative. The revised Circular should be clear that "the year in which the regulation will begin to have effects" includes *either* benefits or costs.

2.7.1. Social rate of time preference

The revised section on the social rate of time preference is at the same time overly complex and overly simplistic. The Draft Circular devotes seven pages to a discussion of sophisticated methods to account for uncertainty, risk, and the shadow price of capital. These have some theoretical support but little widespread use in practice. They are also too complex for all but the most experienced agencies to apply on their most economically significant regulations; commenters who support revising the discount rate encourage OMB to provide more guidance on how to account for these factors (Howard *et al.*, 2023).

Given the complexity in accurately accounting for time preferences, agencies will likely fall back on the Draft Circular's default rate of 1.7% for all effects from the present through

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30 years into the future. While the 1.7% figure applies the same method used in 2003, updated with more recent data (the most recent 30-year yields on 10-year Treasury notes), this may not be the best method for several reasons (e.g. Beales, 2023; Boskin, 2023; Morgenstern *et al.*, 2023), including that this recent period was subject to Federal Reserve policies that are unlikely to continue in the future. Experts who support the administration's approach recognize that other assumptions would lead to quite different rates (Sojourner *et al.*, 2023).

Given the complexity of the subject and the important effect discount rates have on estimates of benefits and costs, the Circular should not direct agencies to use a single number. OMB simply does not have enough confidence in the appropriate rate to rely on a single rate. Instead, the Circular should provide a range of rates and direct agencies to present estimates reflecting that range (Viscusi & Gayer, 2016).

If the final Circular retains the single default rate, critics would be justified in concluding that this is a normative choice, designed to achieve this administration's policy preferences by providing "agencies with more incentive to impose short-term costs to obtain long-term benefits such as environmental and health improvements" (Howard *et al.*, 2023).

2.7.2. Private discount rates

Separately, the Draft Circular appropriately acknowledges that the social rate of time preference may not be appropriate for certain streams of benefits and costs. In particular:

> Modeling private behaviors requires the use of appropriate private discount rates faced by the relevant populations. When estimating private discount rates, ideally, the appropriate distribution of rates faced by affected populations should be considered. (OMB, 2023, 75).

This is an improvement over existing practice. Estimating private consumer savings from reduced operating costs associated with purchasing a higher-priced home appliance, for example, should rely on real rates those consumers face (Viscusi & Gayer, 2016; NASEM, 2021). This is particularly relevant for understanding the distributional impact of regulations that yield private savings, as lower-income households face borrowing costs much higher than the default rates agencies use to estimate net present value benefits associated with higher up-front expenditures. At the same time, it is important to ensure that agencies do not treat private discount rates as somehow "irrational" or signs of a market failure. Public preferences are the standard by which rules should be measured, not the other way around (Viscusi & Gayer, 2016).

2.8. Treatment of uncertainty

The discussion of uncertainty in the Draft appropriately stresses the importance of being transparent about uncertainty in the data, inferences, assumptions, and models used. However, it could be improved in at least two areas.

2.8.1. Risk aversion

The Draft moves away from longstanding guidance that agencies should present expected values as their central estimate of benefits and costs, along with ranges that reflect

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uncertainty. It is true that individuals facing a small number of trials may exhibit risk aversion (or risk seeking) behavior, but regulatory policy, and the BCA that supports it, are concerned with treatments across large populations. There, the expected value, which reflects objective probabilities based on the average payoff over many trials, is more relevant and appropriate.

While behavioral research does suggest that misperceptions of objective probabilities affect human behavior in the face of risk, "whether it is possible to model this aspect of choice is an open question, because it would require a theory of systematic errors" (Munger, 2000, 309; see also Stavins, 2023). As noted below, a move away from the standard risk-neutral presumptions here appears to depart from the guidance elsewhere in the document to use regulation to *correct* behavioral biases.

2.8.2. Value of information and designing regulations for learning

Uncertainty analysis can identify what additional information would be most valuable for decision-making. As the 2003 Circular notes, when expected outcomes hinge on the value assumed for a particular uncertain variable, it can be appropriate to gather more information regarding that variable prior to taking action.

> When uncertainty has significant effects on the final conclusion about net benefits, your agency should consider additional research prior to rulemaking. The costs of being wrong may outweigh the benefits of a faster decision. This is especially true for cases with irreversible or large upfront investments. If your agency decides to proceed with rulemaking, you should explain why the costs of developing additional information – including any harm from delay in public protection—exceed the value of that information (OMB, 2003, 39).

The draft would benefit from a greater focus on a "value of information" (VoI) decision framework. VoI analysis recognizes that approaches that appear to maximize net benefits under one set of assumptions would be suboptimal if those assumptions proved to be inaccurate. It focuses on reducing uncertainty in parameters to which resulting benefits or costs are most sensitive, and evaluating whether – either through regulatory designs that facilitate natural experiments or encompass real options (Greenstone, 2009; ACUS, 2017–6; Lee, 2023), or expending additional resources on information gathering (ACUS, 2021–2) – reducing that uncertainty can improve ex-ante estimates and ex-post outcomes.

The Circular appropriately recognizes that agencies may not have situational knowledge (what Hayek, 1945 called "knowledge of the particular circumstances of time and place") and encourages consultation to gain information, especially early in the regulatory development process (OMB, 2023, 4). This could be extended to include consultation and natural experiments specifically designed to reduce key uncertainties (ACUS, 2021–3).

2.9. Missing from draft

The Draft Circular is almost twice as long as the 2003 version, but agencies would benefit from more guidance in a few areas, particularly related to designing regulations for learning (discussed above), planning for retrospective review, and making risk assessment more compatible with BCA.

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2.9.1. Retrospective review

In E.O. 13563, which E.O. 14094 reaffirmed, President Obama emphasized the importance of evaluating regulatory impacts once regulations are in place, and directed agencies to "consider how best to promote retrospective analysis of rules that may be outmoded, ineffective, insufficient, or excessively burdensome, and to modify, streamline, expand, or repeal them in accordance with what has been learned" (Obama, 2011, Sec. 6).

It is disappointing, therefore, that the Draft Circular does not provide guidance to agencies for formulating new regulations with ex-post evaluation in mind. The Administrative Conference of the United States (ACUS) endorsed the Obama initiatives and offered recommendations to agencies for implementing them, including when developing new regulations (ACUS, 2014–5). For example, it encouraged agencies, when developing new regulations, to "establish a framework for reassessing the regulation in the future and […] consider including portions of the framework in the rule's preamble" (ACUS, 2014–5, Rec. 2). It encouraged OIRA to "facilitate planning for subsequent retrospective review to the extent appropriate" (ACUS, 2014–5, Rec. 3).

The Conference also recommended that:

> Where legally permissible and appropriate, agencies should consider designing their regulations that allow alternative approaches, which could help the agency in a subsequent review of the rule to determine whether more effective methods to implementing its regulatory objective. For example, agencies could allow for experimentation, innovation, competition, and experiential learning (calling upon the insights of internal statistical offices, as well as policy and program evaluation offices, in order to design plans for reassessing regulations, to the extent they have such resources). As recommended by OMB Circular A-4, agencies should consider allowing states and localities greater flexibility to tailor regulatory programs to their specific needs and circumstances and, in so doing, to serve as a natural experiment to be evaluated by subsequent retrospective review (ACUS, 2014–5, Rec. 4).

More recently, ACUS provided additional specific guidance, noting that "consistent with the Evidence Act, agencies should incorporate periodic retrospective reviews in their Learning Agendas and Annual Evaluation Plans" (ACUS, 2021–2, Rec. 12).

Not only does the revised draft place less value on facilitating natural experiments at the state and local level (as discussed above), but it only discusses designing regulations for learning very briefly:

> If it is difficult to determine which of several policy options is the optimal choice, and if timing and other circumstances allow, you may consider analyzing the alternative of developing one or more pilot projects to test the measures under consideration. If there are significant uncertainties about benefits or costs, or if benefits or costs may change over time, you may consider assessing alternatives that include plans for data collection and that include retrospective review (OMB 2023, 23–24).

This is a missed opportunity to update the RIA guidelines to reflect a pivotal regulatory executive order (E.O. 13563) and bipartisan agreement on the importance of evaluating regulatory impacts once implemented (Katzen, 2006; Dudley & Katzen, 2019). For more concrete suggestions on how to design regulations for ex-post evaluation, see the ACUS reports noted above, Peacock *et al.* (2018), Dudley (2017), Aldy (2014), and Coglianese (2012).

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2.9.2. Risk assessment inputs

The draft would benefit from a discussion of the risk assessment inputs to BCA. The 2023 draft alludes to the importance of risk assessments only in a footnote:

> In many health and safety regulations, analysts rely on formal risk assessments that address a variety of risk management questions, such as the baseline risk for the affected population, the safe level of exposure, or the amount of risk that would be reduced by various interventions. Because the answers to some of these questions are directly used in benefits analyses, the risk assessment methodology must allow for the determination of expected benefits in order to be comparable to expected costs. This means that bounding exercises unaccompanied by central estimates are likely to result in benefit estimates that exceed the appropriate certainty-equivalent […] or expected value measure (OMB, 2023, footnote 124).

As others have noted,

> practices for developing chemical risk assessments generally are not compatible with BCA because they explicitly strive to err on the side of precaution by overstating risk.[2] Rather than presenting probabilities and a range of outcomes that reflect uncertainties, chemical risk assessments often generate precise-sounding predictions that hide not only considerable uncertainty about the actual risk but the reliance on deliberately biased inferences and assumptions for handling that uncertainty (Dudley & Mannix, 2018).

Risk assessment assumptions aim to be "public health protective" by overstating risk in the face of uncertainty (Gray & Cohen, 2012) can inflate estimates of certain risks relative to others. Because the degree of precaution differs across risks (Nichols & Zeckhauser, 1988; Hamilton & Viscusi, 1999), and because distortions in different parts of the risk analysis can interact and accumulate, risk assessment inputs can lead to unreliable benefit and cost estimates and welfare-reducing priorities (Hamilton & Viscusi, 1999; Fraas & Lutter, 2012). (See also, Dudley *et al*., 2017, Dudley & Peacock, 2017; Bipartisan Policy Center, 2009.)

The incompatibility between risk assessment methods and BCA could be compounded with the Draft Circular's proposal to abandon the assumption of risk neutrality, leading to precautionary policies that generate net social harms (Sunstein, 2005).

2.10. Inconsistencies and contradictions

The Draft contains several inconsistencies or contradictions, which reinforce the impression that it is designed to support the normative policy preferences of this administration rather than present an objective accounting of expected impacts to serve as an input to decision-making.

[2] For example, EPA's "Risk Assessment Principles and Practices" document states: "[s]ince EPA is a health and environmental protective agency, EPA's policy is that risk assessments should not knowingly underestimate or grossly overestimate risks. This policy position prompts risk assessments to take a more 'protective' stance given the underlying uncertainty with the risk estimates generated" (EPA, 2004, 13).

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2.10.1. Behavioral biases and risk aversion

The Draft identifies behavioral biases as a problem that regulations can be designed to correct (OMB, 2023, 18–19). In discussing the valuation of benefits and costs, it warns that "a high observed WTP or WTA may reflect a truly high valuation for the underlying good or service or it may reflect a smaller WTP or WTA coupled with a bias that increases consumers' observed WTP or WTA" (OMB, 2023, 30). It directs agencies to "endeavor to separate these two components, the true valuation and the bias, to accurately measure benefits and costs in your regulatory analysis" (OMB, 2023, 30).

Yet, it modifies long-standing BCA reliance on the assumption of risk neutrality and directs agencies to assume that people are risk averse and value outcomes accordingly. Risk aversion is a behavioral heuristic that may be ingrained in humans (for good evolutionary reasons), but it leads to irrational choices in the modern context (Blunck, n.d.). Yet, with this particular behavioral bias, rather than directing agencies to understand "the true valuation" based on an assumption of risk neutrality, it requires them to justify any analysis that adopts a risk-neutral assumption (OMB, 2023, 72).

Requiring agencies to measure individual welfare changes based on assumptions other than risk neutrality is complicated as an analytical matter (as noted briefly above), and it seems entirely inconsistent with directions elsewhere in the Draft Circular to override individual valuations of welfare when they may be influenced by behavioral biases.

2.10.2. Reduced caution about economic regulation, which has been shown to harm disadvantaged groups

As noted above, the Draft removes the presumption against economic regulation, despite theory and evidence that such forms of regulation tend to be captured by organized interests at the expense of diffuse, less well-represented interests. Even if originally designed to protect disadvantaged groups against monopoly power, economic regulation in airlines, energy, and telecommunications were largely unsuccessful at achieving purported allocative goals (Ellig, 2021, 206–207). In contrast, the competition unleashed by the bipartisan economic deregulation of the 1970s and 1980s increased allocative and dynamic efficiency and often benefited those without the resources to influence government policy. For example, transportation deregulation reduced racial inequities in employment and wages (Peoples & Saunders, 1993). More recent empirical literature confirms that economic "regulation tends to benefit incumbents by limiting entry of economic participants, be it firms or workers, and exacerbates income inequality" (Chambers & O'Reilly, 2022).

Given the experience with economic regulation and deregulation in the United States, neglecting to require a demanding burden of proof before imposing such regulations is inconsistent with efforts to ensure that regulations do not harm disadvantaged groups (Winston, 2023).

2.10.3. Distributional consequences are important, except when considering global impacts

Permitting agencies to present only global benefits for certain regulatory actions is inconsistent with the strong emphasis on understanding distributional impacts. Policymakers and the public cannot begin to understand how costs and benefits are distributed among various

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U.S. demographic groups if the RIA only presents global estimates (Fraas *et al*., 2023). This may be particularly important with respect to climate change, where increased energy costs will be felt disproportionately by lower-income households. Policymakers should know whether those households are subsidizing populations outside the United States.

2.10.4. More complexity but more flexibility

One reviewer of the revised draft observes that "they read like they were written by a graduate student in economics who was asked to review the developing literature on benefit–cost analysis over the last few decades." He worries that "they will make benefit–cost analysis so complicated and esoteric that OIRA will lose its audiences and undermine its influence" (Elliott, 2023). The revised draft is almost twice as long as the 2003 version. In some areas (discount rates, distributional weights, and risk aversion, for example), the guidance is much more demanding and complex, and it assumes a level of sophistication and modeling capabilities that few regulatory agencies have (Morgenstern *et al.*, 2023, 4, 8, 11).

Perhaps more importantly, the results will be less transparent to policy officials and the public. The public usually has 60 days to review and comment on a rule and its accompanying RIA. For all but the most significant regulations, a simpler, more transparent presentation of alternatives (especially earlier in the rulemaking process, Carrigan & Shapiro, 2016; ACUS, 2021–3), with clear acknowledgment of uncertainties and their impact on projections, would be most valuable. The discussion on discounting, in particular, is needlessly complex, while decision-makers would benefit most from a simple exercise that bounds estimates with a reasonable range of rates.

While making the analysis more demanding, the Draft provides more flexibility to opt out of doing analysis. The 2023 Draft caveats guidance with when "feasible," "practicable," or "appropriate" more than 70 times, compared to fewer than 10 instances in the 2003 Circular. Such variation in analytical depth will make it much harder for policy officials and the public to evaluate the relative merits of different regulations.

2.11. Conclusions and recommendations

The regulatory impact analysis required by President Clinton's E.O. 12866 has a long history in the U.S. It is based on established economic principles and serves as a model for other developed countries (OECD, 2008). Both Clinton's principles and the detailed guidance for complying with them have proved durable across administrations with very different policy preferences because they offer objective evidence regarding the efficiency of regulatory policies.

Circular A-4 was last published almost 20 years ago, and the OMB's draft revisions contain some worthwhile updates. However, some aspects of the 2023 Draft are not as well supported as others. Supporters of the revisions see them as representing an "entirely new regulatory philosophy, one that is unwilling to sacrifice widely shared values like dignity and equity for brutal, cold, calculating efficiency" (Goodwin, 2023).

Indeed, certain elements of the guidance appear designed to steer analytical results to support this administration's policy preferences rather than present objective evidence and estimates to policymakers and the public. For example,

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i. The draft reflects a mistrust of market forces and a willingness to intervene by providing agencies with much more latitude in justifying when regulation is appropriate (III);
ii. While the draft puts more emphasis on equity impacts, it allows agencies not to reveal the distributional impacts of regulations by examining only global impacts (which would support more aggressive policies directed at climate change) (IV, X);
iii. It blurs the line between benefits and costs that are related to the regulation's purpose and those that are not, allowing agencies to support more stringent regulation by adding benefits not directly associated with the statutory authority (V);
iv. It no longer requires agencies to present the costs of actions that agencies assert are non-discretionary or to present the full costs and benefits of compliance (V);
v. While the added guidance on distributional impacts is welcome, the section on weighting the impacts is a recipe for hiding normative factors that, by definition, reduce efficiency in what should be a descriptive analysis (VI);
vi. The recommended discount rate appears biased to support actions that "impose short-term costs to obtain long-term benefits such as environmental and health improvements" (Howard *et al*., 2023) (VII);
vii. The guidance encourages agencies to override behavioral biases when doing so will lead to more intervention, but defer to them when it will not (VIII, X).

To the extent that the final Circular is perceived as not being objective and non-partisan, this exercise will open the door for the next administration to write its own revisions to support its policy preferences. It will further polarize regulatory policy debates and reduce the value of, and trust in, evidence-based analysis. That may have ramifications for judicial decisions as well because BCA helps provide an "intelligible principle" that supports agencies' interpretations of sometimes vague statutory authority (Mannix, 2016; Sunstein, 2017).

To retain the integrity of regulatory impact analysis and OIRA's role in providing a "dispassionate and analytical second opinion" (Obama, 2009) on agency actions, the final Circular should:

i. Focus on economic efficiency and on presenting the best estimates of likely benefits and costs. It should avoid incorporating more normative methods and factors in the BCA itself, and
    a. Direct agencies to examine benefits, costs, and transfers using a range of reasonable discount rates that reflect the academic literature and evidence over a longer time period (VII);
    b. Encourage the transparent presentation of distributional effects without embedding weights in the BCA (VI);
    c. Assume risk neutrality and focus on presenting expected values of likely outcomes (VIII);
    d. Present domestic benefits alongside global estimates (IV); and
    e. Return to the "*presumption* against economic regulation" language that appeared in both the 1996 and 2003 guidelines (III).
ii. Provide agencies less latitude in identifying the need for regulation and direct them to demonstrate the *significance* of the problem identified, as specified in E.O. 12866.
    a. If relying on behavioral justifications, require agencies to provide situation-specific evidence that individuals behave irrationally (III).

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   b. Return to the language of the 2003 Circular with respect to "showing that regulation at the federal level is the best way to solve the problem" (OMB, 2003, 6), which provides more clarity regarding when federal versus state and local regulations are appropriate (III).

iii. When international impacts of regulation are likely to be an important factor in a decision, insist that agencies present domestic as well as global impacts. Specifically, make the edits below (IV):

iv. "When your primary analysis focuses on the global effects of the regulation, you should still ~~it is generally appropriate to~~ produce a separate supplementary analysis of the effects experienced by U.S. citizens and residents~~, unless you determine that such effects cannot be separated in a practical and reasonably accurate manner, or that the separate presentation of such effects would likely be misleading or confusing in light of the factors detailed above~~.

v. Encourage agencies to adopt a learning agenda when considering regulation to improve the available evidence for meaningful retrospective evaluation. Agencies should:
   a. Design rules with evaluation in mind (IX),
   b. Consider when gathering more information would be beneficial by focusing on assumptions to which outcomes are most sensitive (VIII),
   c. Consider opportunities for natural experiments, including by allowing state, local, and tribal governments to take the lead on regulations (IX).

vi. Provide guidance on adapting risk assessment inputs for use in BCA, recognizing that they may not be compatible (IX).

vii. Avoid needless complexity, recognizing that agencies have limited resources and expertise. This could include encouraging simpler analyses conducted earlier in the regulatory process (Carrigan & Shapiro, 2016) that could engage public input and improve the evidence supporting successful outcomes. (X)

3. Epilogue to Dudley Comment

The final Circular issued in November 2023 was largely unchanged from the draft, despite concerns raised by peer reviewers and in public comments (including mine). I had warned that because the revised version would lead to less transparent and objective regulatory impact analyses, it would not likely be as durable as the 2003 version, which had survived 20 years across very different presidential administrations (Dudley, 2020, 2021b). Thus, the OMB's 2025 decision to revoke the 2023 amendments and revert to the 2003 version of A-4 was not unexpected. It was also not unreasonable since the prior version is arguably more consistent with the 2023 peer review and public comments than the revisions.

As noted in my public comment, while some of the 2023 changes were reasonable, others would have obfuscated important information on the welfare effects of regulatory actions. Moreover, the final Circular was unnecessarily long, dense, and repetitive, and likely beyond the capacity of most regulatory agencies, which face resource and time constraints. If OMB chooses to make revisions in the future, the Circular could be streamlined and reorganized "to emphasize key points and to ensure the analysis is evidence-based, clearly describes the data sources and assumptions used and their justification, and explores the implications of associated uncertainties" (Harberger *et al.*, 2023).

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An objective and informative regulatory impact analysis is not only an important input for executive branch policymakers; it is also becoming more relevant for judicial review. Federal courts are increasingly reluctant to defer to agencies' interpretations of their authority (*Loper Bright v. Raimondo*, 2024), especially with respect to "major questions," and an objective benefit–cost analysis can help provide an "intelligible principle" that helps justify such deference (Mannix, 2016; Sunstein, 2017; Noe, 2025).

Regulatory impact analysis applies an economic lens to examine the welfare differences among alternative policies. While it is rarely the only factor in a regulatory decision, it "promotes accountability and transparency and is a central part of open government" (OMB, 2011, 2). Ultimately, a sound analysis supports the legitimacy of final regulatory decisions, improving the likelihood that courts will grant them deference and the public will accept them. Any future revisions of the Circular should be careful to follow established practice and avoid embedding policy preferences in analytical inputs and assumptions.

Acknowledgments. I appreciate the discussions and helpful feedback on my original comment from my colleagues in the GW Regulatory Studies Center, including Howard Beales, Joseph Cordes, Mark Febrizio, Sarah Hay, Donald Kenkel, Brian Mannix, Mary Sullivan, and Zhoudan Xie, as well as comments from other contributors to this special issue.

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Cite this article: Dudley, Susan E. 2025. "Ensuring Durability and Objectivity in Regulatory Analysis: Comments on OMB Circular A-4." *Journal of Benefit-Cost Analysis* 16: 225–247, doi:10.1017/bca.2025.16

https://doi.org/10.1017/bca.2025.16 Published online by Cambridge University Press