**Online Appendix: Detailed Text-based Evidence for Table 1**

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| **Call for Retrospective Review** | **Within Agency** | **Across Agencies** |
| **Rule Relevance Goal** | Carter 12044, 4(d), (e), (f)[[1]](#endnote-1) Reagan 12498[[2]](#endnote-2)Clinton 12866, 5(a),[[3]](#endnote-3) (b)[[4]](#endnote-4)Obama 13563, 6(a)[[5]](#endnote-5)Obama 13579, 2(a)[[6]](#endnote-6)Obama 13610, 1[[7]](#endnote-7)RFA s. 610(b)(1)–(3), (5);[[8]](#endnote-8)TSCA, 15 U.S.C. 2625(l)(2)(B);[[9]](#endnote-9)Telecomm Act, 47 U.S.C. 161(a)(2);[[10]](#endnote-10)Consolidated Appropriations Act of 2012, s. 202(c)[[11]](#endnote-11) | Clinton 12866, 5(c)[[12]](#endnote-12) |
| **Rule Improvement Goal** |  |  |
| ***Cost Criterion*** *(has the rule imposed high costs or burdens, and could they be eased)* | Carter 12044, 4(c)[[13]](#endnote-13)Reagan 12498[[14]](#endnote-14)Clinton 12866, 1(a),[[15]](#endnote-15) 5(a),[[16]](#endnote-16) (b)[[17]](#endnote-17)Obama 13563, 1(a)[[18]](#endnote-18) & (b)[[19]](#endnote-19), 6(a)[[20]](#endnote-20)Obama 13579, 2(a)[[21]](#endnote-21)Obama 13610, 3[[22]](#endnote-22)Trump 13771, 1[[23]](#endnote-23)RFA, 5 U.S.C. 610(a)[[24]](#endnote-24)PRA, 44 U.S.C. 3507 (g), (h)(1)[[25]](#endnote-25) | Clinton 12866, 5(c)[[26]](#endnote-26) |
| ***Benefits and Effectiveness Criterion*** *(has the regulation accomplished its intended goals or achieved its intended benefits)* | Carter 12044, 4(a)[[27]](#endnote-27)Obama 13563, 1(a),[[28]](#endnote-28) 6[[29]](#endnote-29)SDWA, 42 U.S.C. 300g-1(b)(9);TSCA, 15 U.S.C. 2625(l)(2)(A);Telecomm Act, 47 U.S.C. 161(a)(2); | Clinton 12866, 5(c)[[30]](#endnote-30) |
| ***Cost-effectiveness Criterion*** *(has the regulation accomplished its intended benefits at least cost)* | Clinton 12866, 5(a)[[31]](#endnote-31)Obama 13563, 1(a)[[32]](#endnote-32) | Clinton 12866, 5(c)[[33]](#endnote-33) |
| ***Ancillary Impacts Criterion*** *(has the regulation yielded unintended consequences or side effects, such as ancillary benefits (co-benefits) or ancillary harms (countervailing risks))* | Reagan 12291, 2(a)[[34]](#endnote-34)Obama 13610, 2[[35]](#endnote-35)Trump 13771[[36]](#endnote-36)RFA s. 610(a)[[37]](#endnote-37)CAA, s. 812 |  |
| ***Efficiency Criterion*** *(has the regulation maximized net benefits (benefits minus costs, including ancillary impacts) or could they be increased)* | Reagan 12291, 2(b)–(d)[[38]](#endnote-38)Clinton 12866, 1(a)[[39]](#endnote-39)Obama 13563, 1(b)[[40]](#endnote-40) | Reagan 12291, 6(a)(5)[[41]](#endnote-41)Clinton 12866, 5(c)[[42]](#endnote-42) |
| ***Distributional Equity Criterion*** *(has the regulation achieved the goals for which it was designed in a manner that provided (in)equitable distribution of net benefits or could the same level of net benefits be provided with improved distribution of those net gains)* | Clinton 12866, 1(a),[[43]](#endnote-43) 5Obama 13563, 1(c)[[44]](#endnote-44) |  |
| **Regulatory Learning Goal** |  |  |
| *Interactive & Cumulative Effects Criterion (improving the understanding of the interaction effects of multiple regulations and in the aggregate)* | Clinton 12866, 5[[45]](#endnote-45) Obama 13610, 3[[46]](#endnote-46)RFA s. 610(b)(4)[[47]](#endnote-47)  | Clinton 12866, 5(c)[[48]](#endnote-48) |
| *Policy Design Criterion (improving understanding of policy alternatives to evaluate how they actually work in practice compared to predictions in theory)* | GPRA, 31 U.S.C. 1115(b)(7) |  |
| *Methods Accuracy Criterion (improving the forecasting methods used to conduct ex ante RIAs)* |  |  |

1. Notes and Sources for Table 1:

 Section 4 of EO 12044 mandates that agencies periodically review their existing regulations according to criteria including “(d) the need to simplify or clarify language; (e) the need to eliminate overlapping and duplicative regulations; and (f) the length of time since the regulation has been evaluated or the degree to which technology, economic conditions or other factors have changed in the area affected by the regulation.” [↑](#endnote-ref-1)
2. One of the policy objectives specified in the preamble is to “minimize duplication and conflict of regulations.” [↑](#endnote-ref-2)
3. “The agency shall also identify any legislative mandates that require the agency to promulgate or continue to impose regulations that the agency believes are unnecessary or outdated by reason of changed circumstances.” [↑](#endnote-ref-3)
4. Section 5(b) of EO 12866 mandates “the identification of regulations that impose significant or unique burdens

on those governmental entities *and that appear to have outlived their justification or be otherwise inconsistent with the public interest*” (emphasis added). [↑](#endnote-ref-4)
5. “[A]gencies shall 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.” [↑](#endnote-ref-5)
6. “[I]ndependent regulatory agencies should 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.” [↑](#endnote-ref-6)
7. “[I]t is particularly important for agencies to conduct retrospective analyses of existing rules to examine whether they remain justified and whether they should be modified or streamlined in light of changed circumstances, including the rise of new technologies.” [↑](#endnote-ref-7)
8. The Regulatory Flexibility Act requires that agencies consider the following factors in reviewing rules “to minimize any significant economic impact of the rule on a substantial number of small entities”: “(1) the continued need for the rule; (2) the nature of complaints or comments received concerning the rule from the public; (3) the complexity of the rule . . . (5) the length of time since the rule has been evaluated or the degree to which technology, economic conditions, or other factors have changed in the area affected by the rule.” [↑](#endnote-ref-8)
9. The Lautenberg Amendment to TSCA in 2016 requires that the EPA “revise . . . policies . . . to reflect new scientific developments or understandings” every five years. [↑](#endnote-ref-9)
10. “[The FCC] shall determine whether any such regulation is no longer necessary in the public interest as the result of meaningful economic competition between providers of such service.” [↑](#endnote-ref-10)
11. The Act requires that OMB’s EO 13563 report to “identify[] existing regulations that have been reviewed and determined to be outmoded, ineffective, or excessively burdensome.” [↑](#endnote-ref-11)
12. Section 5(c) of EO 12866 permits the identification for review, according to the policy principles set out in this section, “existing regulations of an agency or *groups of regulations of more than one agency that affect a particular group, industry, or sector of the economy*” (emphasis added). One of the policy principles in section 5 is whether the regulations “have become unjustified or unnecessary as a result of changed circumstances.” [↑](#endnote-ref-12)
13. Section 4(c) of EO 12044 requires that agencies consider “the burdens imposed on those directly or indirectly affected by the regulation” when conducting periodic reviews. [↑](#endnote-ref-13)
14. One of the policy objectives identified in the preamble is to “reduce the burdens of existing and future regulations.” [↑](#endnote-ref-14)
15. “In deciding whether and how to regulate, agencies should assess all costs and benefits of available regulatory alternatives, including the alternative of not regulating.” [↑](#endnote-ref-15)
16. Section 5(a) of EO 12866 requires that agencies periodically review their regulations, in part, “to make the agency’s regulatory program . . . less burdensome.” [↑](#endnote-ref-16)
17. Section 5(b) of EO 12866 mandates “the identification of regulations that *impose significant or unique burdens*

*on those governmental entities* and that appear to have outlived their justification or be otherwise inconsistent with the public interest” (emphasis added). [↑](#endnote-ref-17)
18. The preamble says that regulations “must take into account benefits and costs, both quantitative and qualitative.” [↑](#endnote-ref-18)
19. Mandates that each agency “tailor its regulation to impose the least burden on society . . . taking into account . . . the costs of cumulative regulations” [↑](#endnote-ref-19)
20. “[A]gencies shall 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.” [↑](#endnote-ref-20)
21. Requires that regulatory periodic review identify rules that may be, among others, “excessively burdensome.” [↑](#endnote-ref-21)
22. “In implementing and improving their retrospective review plans, and in considering retrospective review suggestions from the public, agencies shall give priority, consistent with law, to those initiatives that will produce significant quantifiable monetary savings or significant quantifiable reductions in paperwork burdens while protecting public health, welfare, safety, and our environment.” [↑](#endnote-ref-22)
23. The policy of EO is to cut costs, and section 1 specifies that “for every one new regulation issued, at least two prior regulations be identified for elimination, and that the cost of planned regulations be prudently managed and controlled through a budgeting process.” [↑](#endnote-ref-23)
24. The Regulatory Flexibility Act requires that agencies conduct periodic reviews “to minimize any significant economic impact of the rules upon a substantial number of such small entities.” [↑](#endnote-ref-24)
25. The PRA prohibits that OMB approve information collection that takes place for longer than three years (section (g)), and it requires that agencies seeking an extension of the three-year limit to conduct a review and consider the “burden imposed by he collection of information” (section (h)(1)). [↑](#endnote-ref-25)
26. Section 5(c) of EO 12866 permits the identification for review, according to the policy principles set out in this section, “existing regulations of an agency or *groups of regulations of more than one agency that affect a particular group, industry, or sector of the economy*” (emphasis added). One of the policy principles in section 5 is “to reduce the regulatory burden,” and one of the criteria is whether the regulations “are inappropriately burdensome in the aggregate.” [↑](#endnote-ref-26)
27. Section 4(a) of EO 12044 requires that agencies consider “the continued need for the regulation” when conducting periodic reviews. [↑](#endnote-ref-27)
28. Section 1(b) of EO 13563, which sets out general principles of regulation, says that regulations “must take into account benefits and costs, both quantitative and qualitative.” [↑](#endnote-ref-28)
29. Requires that agencies consider rules that may be “outmoded, ineffective, insufficient, or excessively burdensome.” [↑](#endnote-ref-29)
30. Section 5(c) of EO 12866 permits the identification for review, according to the policy principles set out in this section, “existing regulations of an agency or *groups of regulations of more than one agency that affect a particular group, industry, or sector of the economy*” (emphasis added). One of the policy principles in section 5 is whether the regulations “have become unjustified or unnecessary as a result of changed circumstances,” which can include the regulations having achieved their intended goals. [↑](#endnote-ref-30)
31. Section 5(a) of EO 12866 requires that agencies periodically review their regulations, in part, “to make the agency’s regulatory program more effective in achieving the regulatory objectives.” [↑](#endnote-ref-31)
32. The preamble says that regulation “must identify and use the best, most innovative, and least burdensome tools for achieving regulatory ends.” [↑](#endnote-ref-32)
33. Section 5(c) of EO 12866 permits the identification for review, according to the policy principles set out in this section, “existing regulations of an agency or *groups of regulations of more than one agency that affect a particular group, industry, or sector of the economy*” (emphasis added). One of the policy principles in section 5 is “to improve the effectiveness of existing regulations.” [↑](#endnote-ref-33)
34. The subsection on regulatory philosophy says “[a]dministrative decisions shall be based on adequate information concerning the need for and consequences of proposed government action.” [↑](#endnote-ref-34)
35. Invites public and local governments to participate in the rule review process because they “have important information about the actual effects of existing regulations.” [↑](#endnote-ref-35)
36. Considers “the costs associated with governmental imposition of private expenditures required to comply with Federal regulations.” [↑](#endnote-ref-36)
37. “to minimize any significant economic impact of the rules upon a substantial number of such small entities” [↑](#endnote-ref-37)
38. Section 2 of EO 12291 sets out the general requirements, and it requires: “(b) Regulatory action shall not be undertaken unless the potential benefits to society for the regulation outweigh the potential costs to society; (c) Regulatory objectives shall be chosen to maximize the net benefits to society; (d) Among alternative approaches to any given regulatory objective, the alternative involving the least net cost to society shall be chosen; and (e) Agencies shall set regulatory priorities with the aim of maximizing the aggregate net benefits to society, taking into account the condition of the particular industries affected by regulations, the condition of the national economy, and other regulatory actions contemplated for the future.” [↑](#endnote-ref-38)
39. Section 1(a) of 12866 sets out the policy objectives of EO 12866, which includes requiring that agencies select approaches that “maximize net benefits.” [↑](#endnote-ref-39)
40. Section 1(b) of EO 13563, which sets out general principles of regulation, requires that agencies “select . . . those approaches that maximize net benefits.” [↑](#endnote-ref-40)
41. Allows OMB director to identify rules that are inconsistent with the policy objectives of this EO, which includes maximization of net benefits (see cell to the left). [↑](#endnote-ref-41)
42. Section 5(c) of EO 12866 permits the identification for review, according to the policy principles set out in this section, “existing regulations of an agency or *groups of regulations of more than one agency that affect a particular group, industry, or sector of the economy*” (emphasis added). One of the policy principles in section 5 is whether the regulations “have become unjustified or unnecessary as a result of changed circumstances.” [↑](#endnote-ref-42)
43. Section 1(a) of 12866 sets out the policy objectives of EO 12866, which includes requiring that agencies select approaches that “maximize net benefits,” which includes considering the “distributive impacts” of the regulation. [↑](#endnote-ref-43)
44. “Where appropriate and permitted by law, each agency may consider (and discuss qualitatively) values that are difficult or impossible to quantify, including equity, human dignity, fairness, and distributive impacts.” [↑](#endnote-ref-44)
45. Section 5 of EO 12866 includes as one of its policy objectives “to confirm that regulations are both compatible with each other and not duplicative or inappropriately burdensome in the aggregate.” [↑](#endnote-ref-45)
46. “[A]gencies shall give consideration to the cumulative effects of their own regulations, including cumulative burdens, and shall to the extent practicable and consistent with law give priority to reforms that would make significant progress in reducing those burdens while protecting public health, welfare, safety, and our environment.” [↑](#endnote-ref-46)
47. Mandates that reviews include “the extent to which the rule overlaps, duplicates or conflicts with other federal rules.” [↑](#endnote-ref-47)
48. Section 5(c) of EO 12866 permits the identification for review, according to the policy principles set out in this section, “existing regulations of an agency or *groups of regulations of more than one agency that affect a particular group, industry, or sector of the economy*” (emphasis added). One of the policy in EO 12866 is whether the regulations “are both compatible with each other and not duplicative or inappropriately burdensome in the aggregate.” [↑](#endnote-ref-48)