

THE ANALYSIS OF BENEFITS IN CONSUMER PROTECTION REGULATIONS

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Over the past decade, cost-benefit analysis in the field of financial regulation (“financial CBA”) has emerged as a topic of intense public interest. In reviewing rulemakings under the Administrative Procedure Act, courts have demanded greater rigor in the financial CBA that regulators provide in support of new regulations. Industry experts and other analysts have repeatedly questioned the adequacy of agency assessments of costs and benefits. And legal academics have engaged in a robust dialogue over the merits of financial CBA and the value of alternative institutional structures for overseeing financial CBA.

This Article adds to the expanding literature on financial CBA by offering a detailed study of how regulatory agencies actually undertake benefit analysis in promulgating new regulations involving matters of consumer finance and other analogous areas of consumer protection. After a brief literature review, the Article proposes a taxonomy for categorizing benefit analysis in the area of consumer financial regulation. This taxonomy reflects traditional market failures, cognitive limitations of consumers, as well as several other beneficial outcomes commonly associated with regulations designed to protect consumers. Taking the taxonomy as a framework, the Article then reports on a detailed survey of seventy-two consumer protection regulations adopted in recent years, and presents an overview of the range and quality of benefit analysis that government officials actually undertook in the surveyed regulations. The Article next provides a more detailed discussion of twenty “exemplars” of benefit analysis drawn from regulations in the sample and focusing on the strengths and weaknesses of what might be considered state-of-the-art benefit analysis in consumer protection regulation in the years immediately following the enactment of the Dodd-Frank Act. The Article concludes with a discussion of potential lines of academic research and institutional reform that might assist financial regulators in conducting more complete benefit analysis for consumer protection regulation in the future.

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INTRODUCTION

In this Article, we present a survey of the benefit analysis in seventy-two recent consumer protection regulations. We proceed on the assumption that there is value in organizing the study of benefit analysis around the specific types of benefits that consumer finance regulations and analogous forms of regulation are intended to provide. In particular, we assume that it is useful to sort benefit analysis into separate categories of market failures, limitations in consumer decision-making, and other justifications for regulatory action and then to compare how different agencies undertake benefit analysis in each of these separate categories.

In designing our study, we adapt a taxonomy introduced in a pair of articles on consumer financial protection in 2011.¹ These articles identified seven theoretical justifications for the regulation of consumer finance, including considerations that track traditional neoclassical economics (information failures, market power, public goods, negative externalities), limitations in consumer behavior associated with behavioral economics (cognitive biases and limited financial capabilities), as well as a more open-ended category of fairness, which embraces distributional concerns.² In the course of our review of actual rulemakings, we expanded these seven original justifications to include six additional justifications for regulatory action that our investigations reveal routinely appear in benefit analysis. These additional justifications relate to principal-agent issues, international cooperation, clarification of legal standards to reduce litigation-enforcement costs, and improved compliance or self-regulation, as well as two more amorphous categories of benefits (consumer welfare and market efficiency). Taken together, these thirteen categories of benefit analysis provide the foundation of our analysis.

Over the course of the 2013–14 academic year, we engaged a team of more than a dozen research assistants at Harvard Law School to review in detail a sample of seventy-two recent rulemakings involving consumer finance or in contexts that present analogous challenges to consumer decision-making or welfare. Nineteen of the rulemakings are from the Consumer Financial Protection Bureau (CFPB); fifteen are from independent agencies (including the Commodities and Futures Trading Commission (CTFC), the Security and Exchange Commission (SEC), and the Consumer Products Safety Commission (CPSC)), and fifty-six are from agencies subject to Of-

¹ See John Campbell, Howell E. Jackson, Brigitte Madrian & Peter Tufano, *Consumer Financial Protection*, 25 J. ECON. PERSPECTIVES 91–114 (2011) [hereinafter Campbell et al., *Consumer Financial Protection*]; John Y. Campbell, Howell E. Jackson, Brigitte Madrian & Peter Tufano, *Making Financial Markets Work for Consumers: An Open Letter to America's First Consumer Financial Protection Czar*, HARV. BUS. REV. 47–54 (July–August 2011) [hereinafter Campbell et al., *Making Financial Makers Work for Consumers*].

² Campbell et al., *Consumer Financial Protection*, *supra* note 1, at 92–96; Campbell et al., *Making Financial Makers Work for Consumers*, *supra* note 1, 93–95.

Office of Management and Budget (OMB) review under Executive Orders 12866 and 13563³ (including the Department of Labor (DOL), the Department of Health and Human Services (HHS), and the Food and Drug Administration (FDA)). In creating the sample—especially the large number of regulations subject to OMB review—we attempted to select regulations that addressed regulatory problems that were roughly analogous to the kinds of regulatory problems that the CFPB and other agencies with a consumer protection mandate face in their rulemakings.⁴

This Article consists of five Parts. Part I locates the paper within the existing academic literatures on cost-benefit analysis in financial regulation and regulatory impact analysis more generally. Part II describes our survey design: explaining how our sample of regulations was constructed, the procedures we followed in developing our taxonomy for categorizing benefits, the guidelines under which our research assistants were instructed to evaluate and code each regulation, and the procedures we followed for resolving differences of opinion in coding across different research assistants. Part III reports on the aggregate results of our survey, including various statistics about the incidence and intensity of benefit analysis across our entire sample and selected subsamples. Here we highlight a number of differences in benefit analysis across different types of agencies and different legal contexts. We also explore the extent to which certain kinds of benefit analysis are correlated with other categories of benefit analysis. Part IV offers a more qualitative assessment of the benefit analysis in our sample, focusing on lessons learned from twenty “exemplars” of benefit analysis across ten different benefit types. The exemplars discussed in this section were selected from surveyed rulemakings that our research assistants identified as scoring high on either qualitative or quantitative measures of benefit analysis. Together these exemplars could be said to represent the state of the art of benefit analysis for consumer finance and other analogous areas of regulation in the United States.⁵ Part V concludes with some preliminary thoughts on fruitful lines for further academic research and institutional reforms to improve the quality of benefit analysis for consumer financial protection regulations in the future.

I. REVIEW OF LITERATURES

We begin with an attempt to locate this Article within the very large and ever-expanding literature on regulatory impact analysis. We first review

³ Exec. Order No. 13,563, 76 Fed. Reg. 3,821 (Jan. 18, 2011); Exec. Order No. 12,866, 58 Fed. Reg. 51,735 (Sept. 30, 1993).

⁴ A complete list of the seventy-two regulations included in our survey is attached as Appendix One.

⁵ A more detailed discussion of these exemplars appears in an unpublished Appendix Three, which is available on-line at https://www.hblr.org/wp-content/uploads/sites/18/2019/12/Jackson_Appendix-Three.pdf.

recent scholarship on cost-benefit analysis in the specific context of financial regulation (“financial CBA”) and then consider relevant elements of the broader and more established literature on regulatory impact analysis.

A. *Recent Scholarship on Cost-Benefit Analysis in Financial Regulation*

At least within the United States, public officials and scholars of policy analysis paid relatively little attention to financial CBA before 2010.⁶ One reason for this inattention was the fact that many financial regulators enjoyed independent agency status⁷ and their regulations were therefore not

⁶ See, e.g., Edward Sherwin, *The Cost-Benefit Analysis of Financial Regulation: Lessons from the SEC’s Stalled Mutual Fund Reform Effort*, 12 STAN. J.L. BUS. & FIN. 1, 4 (2006) (“Administrative law scholars engaged in the study of CBA are rarely experts on financial regulation, and vice versa, and there has been little cross-pollination between the two disciplines. Moreover . . . financial regulators who shun the use of CBA provide scholars with little to study.”).

⁷ Although OIRA has never formally required independent agencies to conduct cost-benefit analysis in their rulemakings, the office has over the years nonetheless encouraged independent agencies to provide some discussion of the costs and benefits of new rules and to review the costs and benefits of existing rules. See also Memorandum from Cass R. Sunstein, Adm’r of Office of Info. and Regulatory Affairs, to the Heads of Exec. Departments and Agencies, and of Independent Reg. Agencies (Feb. 2, 2011) (“Executive Order 13563 does not apply to independent agencies, but such agencies are encouraged to give consideration to all of its provisions, consistent with their legal authority. In particular, such agencies are encouraged to consider undertaking, on a voluntary basis, retrospective analysis of existing rules.”); Sherwin, *supra* note 6, at 8–12 (discussing the history of presidential administrations’ efforts to encourage independent agencies to adopt cost-benefit analysis requirements, including a letter sent by the Reagan administration asking independent agencies to comply with the cost-benefit requirements in Executive Order 12,291); compare Exec. Order No. 12,291, 46 Fed. Reg. 13,193, §§ 1(d), 2(b)–(e) (Feb. 17, 1981) (requiring executive agencies to consider costs and benefits in their rulemakings but specifically exempting independent agencies), with Exec. Order No. 13,579, 76 Fed. Reg. 41,587, § 1(c) (July 11, 2011) (“Executive Order 13563 set out general requirements directed to executive agencies concerning public participation, integration, and innovation, flexible approaches, and science. *To the extent permitted by law, independent regulatory agencies should comply with these provisions as well.*”) (emphasis added), Exec. Order No. 13,563, 76 Fed. Reg. 3,821, § 1 (Jan. 18, 2011) (reiterating principles of Executive Order 12866 for executive agencies and adding several new requirements), and Exec. Order No. 12,866, 58 Fed. Reg. 51,735, § 4(c)(1)(B) (Sept. 30, 1993) (requiring that independent agencies submit regulatory plans with a “summary of each planned significant regulatory action including, to the extent possible, alternatives to be considered and preliminary estimates of the anticipated costs and benefits”). Note that the definition of “independent agency” encompasses many of the nation’s financial regulators, which may help explain the relatively slow progress of financial cost-benefit analysis. See Paperwork Reduction Act, Pub. L. No. 104-113, § 2, 44 U.S.C. § 3502(5) (1995) (amended 2006, 2008, 2010) (“[I]ndependent regulatory agency”; means the Board of Governors of the Federal Reserve System, the Commodity Futures Trading Commission, the Consumer Product Safety Commission, the Federal Communications Commission, the Federal Deposit Insurance Corporation, the Federal Energy Regulatory Commission, the Federal Housing Finance Board, the Federal Maritime Commission, the Federal Trade Commission, the Interstate Commerce Commission, the Mine Enforcement Safety and Health Review Commission, the National Labor Relations Board, the Nuclear Regulatory Commission, the Occupational Safety and Health Review Commission, the Postal Rate Commission, the Securities and Exchange Commission, and any other similar agency designated by statute as a Federal independent regulatory agency or commission”); see also Sherwin, *supra* note 6, at 11 (“Among the agencies excluded from OMB oversight were many of the nation’s financial regulators: the Board of Governors of the

subject to review by the Office of Information and Regulatory Affairs (“OIRA”) housed within the Office of Management and Budget (OMB). But even with respect to executive agencies with responsibility for consumer financial matters—such as the Department of Labor with respect to retirement savings or the Department of Housing and Urban Development with respect to mortgage originations—OIRA did not subject those agencies’ proposed regulations to the same degree of scrutiny that it applied to health, safety, and environmental regulations.⁸ As a result, until early in this decade, financial regulators in the United States allocated relatively few resources to developing robust financial CBA.⁹

Federal Reserve Board, the CFTC, the FDIC, the FTC, and the SEC.”). The Dodd-Frank Act revised the Paperwork Reduction Act to include the OCC, CFPB, and the Office of Financial Research as independent regulatory agencies. *See* Dodd-Frank Act §§ 315, 1100D(a), 44 U.S.C. §3502(5) (2018).

⁸ *See* Nicholas Bagley & Richard L. Revesz, *Centralized Oversight of the Regulatory State*, 106 COLUMB. L. REV. 1260, 1268 (2006) (“Although OIRA oversees a wide array of different agencies, our environmental emphasis reflects the fact that OIRA has focused its attention primarily on the review of EPA regulations, presumably as a result of the economic significance of these regulations. Predictably, then, much of the controversy surrounding OIRA review has arisen in the environmental context.”); Steven P. Croley, *White House Review of Agency Rulemaking: An Empirical Investigation*, 70 U. CHI. L. REV. 821, 865–66, 872–73 (2003) (finding that EPA oversight makes up very large fraction of OIRA’s work and attracts considerable controversy); Sherwin, *supra* note 6, at 2 (“CBA has not been utilized consistently across the different sectors of government regulation. In particular, the nation’s financial regulators have largely failed to perform the rigorous analysis required of most other government agencies, especially those in the fields of health, safety, and environmental regulation.”); Sunstein, *infra* note 30, at 269 (“OIRA’s staff is relatively small (around fifty people), and it does not now have a great deal of expertise on financial regulation in particular. It would be challenging for OIRA to review financial regulations without adding more personnel, and it is not clear that it has the authority to do that.”) (footnotes omitted). *But see* Cass R. Sunstein, *The Office of Information and Regulatory Affairs: Myth and Realities*, 126 HARV. L. REV. 1838, 1845 (2013) (“OIRA consists of about forty-five people, almost all of them career staff. They work in a number of branches, covering different agencies and areas. Each of the branches has a number of desk officers, all with substantive expertise in one or more areas, and spending most of their time on one or a small number of agencies.”) (internal quotation marks omitted).

⁹ In some jurisdictions outside of the United States, financial CBA received more attention. Notably, the now defunct United Kingdom’s Financial Services Authority, which operated under explicit cost-benefit requirements, generated a significant amount of regulatory focus on financial CBA as early as 1999. *See e.g.*, FIN. SERVS. AUTH., CENT. POLICY, PRACTICAL COST-BENEFIT ANALYSIS FOR FINANCIAL REGULATORS: VERSION 1.1 5 (June 2000), <http://www.fsa.gov.uk/pubs/foi/cba.pdf> (providing a justification for financial CBA); Isaac Alfon & Peter Andrews, *Cost-Benefit Analysis in Financial Regulation: How to Do It and How It Adds Value* (Fin. Servs. Auth., Occasional Paper Series No. 3, 1999), at 25 (expressing optimism about the FSA’s ability to overcome the “central problem” of identifying “extremely complex” economic interactions); David Simpson et al., *Some Cost-Benefit Issues in Financial Regulation* (Fin. Servs. Auth., Occasional Paper Series No. 12, 2000), at 5 (discussing various problems with financial CBA). This scholarly trend in the United Kingdom has continued to mature, yielding technically sophisticated cost-benefit analyses. *See, e.g.*, Jonathan Brogaard et al., *High-Frequency Trading and the Execution Costs of Institutional Investors*, 49 FIN. REV. 345, 347 (2014) (modeling the execution costs of institutional investors due to high-frequency trading); Sebastián de-Ramon et al., *Measuring the Impact of Prudential Policy on the Macroeconomy: A Practical Application to Basel III and Other Responses to the Financial Crisis* (Fin. Servs. Auth., Occasional Paper Series No. 42, 2012), at 3 (modeling the “trade-offs between stability and the provision of finance to the real economy”). For an excellent

Starting in 2010, however, the legal landscape in the United States changed. First, with the passage of the Dodd-Frank Act that year, financial regulators were charged with the task of promulgating large numbers of new regulations, which focused industry attention on the potential costs of new compliance requirements.¹⁰ Second, and even more importantly within the legal academy, the D.C. Circuit in 2011 placed financial CBA at the forefront of regulatory and scholarly agendas through its controversial and now much debated *Business Roundtable* decision.¹¹ While building on prior rulings,¹² *Business Roundtable* signaled that the federal courts, in applying the Administrative Procedure Act,¹³ might demand fairly detailed financial CBA for all new regulations of the SEC and perhaps also other financial agencies.¹⁴

overview of the current British approach to economic analysis of financial regulation, see Fin. Conduct Auth., *Economics for Effective Regulation* (Fin. Conduct Auth., Occasional Paper No. 13, Mar. 2016), at 6 (establishing a methodology for regulatory economic analysis that contemplates a three-stage process, to be conducted for all financial markets, and including “problem diagnosis,” intervention design, and “impact analysis”).

¹⁰ PAUL ROSE & CHRISTOPHER J. WALKER, *THE IMPORTANCE OF COST-BENEFIT ANALYSIS IN FINANCIAL REGULATION* 9 (2013) (“Dodd-Frank [passed in 2010] has brought cost-benefit analysis in financial regulation to the fore by requiring financial regulators to promulgate hundreds of new rules.”).

¹¹ *Bus. Roundtable v. SEC*, 647 F.3d 1144, 1148 (D.C. Cir. 2011) (holding that the SEC had acted arbitrarily and capriciously in adopting a rule governing shareholder proxy access rights because it failed to adequately assess the economic effects of the rule).

¹² *See Am. Equity Inv. Life Ins. Co. v. SEC*, 613 F.3d 166 (D.C. Cir. 2010) (holding that the agency “acted arbitrarily and capriciously for having failed . . . adequately to assess” the effects of its rule on “efficiency, competition, and capital formation”); *Chamber of Commerce v. SEC*, 412 F.3d 133, 144 (D.C. Cir. 2005) (holding that the SEC had “fail[ed] adequately to consider the costs” of its investment company reforms); *Pub. Citizen v. Fed. Motor Carrier Safety Admin.*, 374 F.3d 1209, 1216 (D.C. Cir. 2004) (holding that the Department of Transportation’s rule was “arbitrary and capricious because the agency neglected to consider a statutorily mandated factor - the impact of the rule on the health of drivers”); *see also* James D. Cox & Benjamin J.C. Baucom, *The Emperor Has No Clothes: Confronting the D.C. Circuit’s Usurpation of SEC Rulemaking Authority*, 90 TEX. L. REV. 1811, 1812–15 (2012) (describing how the D.C. Circuit in *Business Roundtable* “followed a now familiar path of invalidating SEC rulemaking efforts on the ground that the SEC failed to” consider the rule’s effects on efficiency, competition, and capital formation); Sherwin, *supra* note 6, at 3 (describing the D.C. Circuit’s invalidation of the SEC’s rulemaking on cost-benefit grounds in *Chamber of Commerce*).

¹³ 5 U.S.C. §§ 551–59, 701–06 (2018).

¹⁴ *See, e.g.*, Robert B. Ahdieh, *Reanalyzing Cost-Benefit Analysis: Toward a Framework of Function(s) and Form(s)*, 88 N.Y.U. L. REV. 1983, 1989, 1991 (2013) (“Perhaps most surprising . . . was *Business Roundtable*’s dramatic departure from the deference the courts had previously shown agency evaluations of costs and benefits . . . *Business Roundtable* is no less important for students of administrative law generally than it is for experts in financial regulation.”) (footnote omitted); Grant M. Hayden & Matthew T. Bodie, *The Bizarre Law and Economics of Business Roundtable v. SEC*, 38 J. CORP. L. 101, 102 (2012) (“Other commentators have noted that the D.C. Circuit’s opinion rests on an extremely muscular version of judicial review—one that contravenes the traditional deference to administrative authority.”) (footnote omitted); Bruce Kraus & Connor Raso, *Rational Boundaries for SEC Cost-Benefit Analysis*, 30 YALE J. ON REG. 289, 290–91 (2013) (“Other financial regulators are alarmed, and with good reason, since their economic analyses of their own rules are generally less sophisticated than the SEC’s.”) (footnotes omitted). Since *Business Roundtable*, Supreme Court and other court decisions have suggested that some courts should demand some form of cost-benefit analysis

Reactions to *Business Roundtable* have been plentiful and can be sorted into four groups. First, academic commentators produced a spate of articles largely critical of the decision,¹⁵ arguing that the D.C. Circuit had imposed too stringent a standard on the SEC, misconstruing the statutory mandate under which the Commission operates.¹⁶ Second, the SEC and other agencies responded to the *Business Roundtable* case by instituting internal reforms to improve their cost-benefit procedures, in some instances¹⁷ embracing the

for a wide range of administrative agency decisions, irrespective of whether the agencies are independent. *See, e.g.,* Michigan v. EPA, 135 U.S. 2699, 2707 (2015) (“No regulation is ‘appropriate’ if it does significantly more harm than good.”); MetLife v. Fin. Stability Oversight Council, 177 S. Supp. 3d 219, 241–42 (D.D.C. 2016) (citing the Supreme Court’s Michigan v. EPA decision and concluding that costs represent “a consideration that is essential to reasoned rulemaking”). For a discussion of how and why cost benefit analysis might be incorporated into judicial review of administrative decisions, see Cass R. Sunstein, *Cost-Benefit Analysis and Arbitrariness Review*, 41 HARV. ENVTL. L. REV. 1 (2017).

¹⁵ *But see, e.g.,* ROSE & WALKER, *supra* note 10, at 33 (“[T]he D.C. Circuit’s more-searching inquiry in *Business Roundtable* must be placed within its proper context—one in which the SEC had failed for years to take seriously its statutory obligation to consider the costs and benefits of its proposed regulatory actions.”); Caroline Cecot & W. Kip Viscusi, *Judicial Review of Agency Benefit-Cost Analysis*, 22 GEO. MASON L. REV. 575, 577 (2015) (providing an “evaluat[ion of] judicial review of agency [CBA] based on a substantial sample of thirty-eight judicial decisions” and finding that courts are both willing and competent to evaluate CBA, including its methodology and assumptions).

¹⁶ *See, e.g.,* Cox & Baucom, *supra* note 12, at 1813 (“[T]he level of review invoked by the D.C. Circuit in *Business Roundtable* and its earlier decisions is dramatically inconsistent with the standard enacted by Congress.”); Jill E. Fisch, *The Long Road Back: Business Roundtable and the Future of SEC Rulemaking*, 36 SEATTLE U. L. REV. 695, 697–98 (2013) (“In evaluating the SEC’s decision to adopt a proxy access rule, the D.C. Circuit completely disregarded the congressional policy judgments reflected in Dodd-Frank.”); Anthony W. Mongone, *Business Roundtable: A New Level of Judicial Scrutiny and its Implications in a Post-Dodd-Frank World*, 2012 COLUM. BUS. L. REV. 746, 749 (2012) (“[T]he correct level of judicial scrutiny that the [D.C. Circuit] should have applied is far more deferential than the nearly insurmountable de novo-like review it employed throughout [*Business Roundtable*].”); J. Robert Brown, Jr., *Shareholder Access and Uneconomic Economic Analysis: Business Roundtable v. SEC*, 88 DENVER U.L. REV. ONLINE (2011), <http://www.denverlawreview.org/dlr-onlinearticle/2011/9/30/shareholder-access-and-uneconomic-economic-analysis-business.html> (“The D.C. Circuit struck down the rule, imposing a ‘high impossible’ standard with respect to the applicable economic analysis.”) (footnote omitted).

¹⁷ *See, e.g.,* *The SEC’s Aversion to Cost-Benefit Analysis: Hearing Before H. Subcomm. on Oversight and Government Reform Subcommittee on TARP, Financial Services, and Bailouts of Public and Private Programs*, 112th Cong. (2012) (statement of Mary Schapiro) (“Our new guidance . . . reflects many of the current best practices in economic analysis, which the agency will continue to refine in the future as necessary.”); U.S. GOV’T ACCOUNTABILITY OFFICE, GAO-12-151, DODD-FRANK ACT REGULATIONS: IMPLEMENTATION COULD BENEFIT FROM ADDITIONAL ANALYSES AND COORDINATION 12 (2011) (“Although federal financial regulatory agencies are not required to follow E.O. 12866 or OMB Circular A-4, CFTC, Federal Reserve Board, FDIC, NCUA, OCC, and SEC officials have said that their agencies follow OMB’s guidance in spirit or principle. CFPB officials also said that the Bureau expects to follow the spirit of OMB’s guidance.”); Letter (Response to a Congressional Request Regarding the Economic Analysis Associated with Specified Rulemakings) from Office of Inspector Gen., Bd. of Governors of the Fed. Reserve Sys., to Senate Comm. on Banking, Hous., and Urban Affairs 9, 19–20 (June 2011), http://oig.federalreserve.gov/reports/Congressional_Response_economic_analysis_2011web.pdf (June 2011) (arguing that the Federal Reserve “conducts its rulemaking activities in a manner that is generally consistent with the philosophy and principles outlined in the Executive Orders” and suggesting that the Federal Reserve acts consistently with at least some aspects of the guidance in Circular A-4); Memorandum of Under-

standards that the OMB had developed for executive agencies.¹⁸ Third, governmental bodies and independent organizations commissioned a series of studies of CBA at independent agencies in general¹⁹ and financial agencies

standing between Office of Info. and Regulatory Affairs and Commodity Futures Trading Comm'n (May 9, 2012), http://www.whitehouse.gov/sites/whitehouse.gov/files/omb/inforeg/inforeg/regpol/oira_cftc_mou_2012.pdf ("The CFTC staff guidance for the consideration of costs and benefits in rulemakings is informed by OIRA's guidance for the conduct of cost-benefit analyses . . ."); Memorandum from the SEC Div. of Risk, Strategy, and Fin. Innovation and the Office of the Gen. Counsel to the Staff of the Rulewriting Divs. and Offices (Mar. 16, 2012), https://www.sec.gov/divisions/riskfin/rsfi_guidance_econ_analy_secrulemaking.pdf (providing extensive guidance on economic analysis in SEC rulemakings); *see also* ROSE & WALKER, *supra* note 10, at 34 ("[T]he SEC's Guidance Memorandum embraces the cost-benefit analysis fundamentals set forth in the D.C. Circuit's trilogy [of cases]."); Jerry Ellig & Hester Peirce, *SEC Regulatory Analysis: A Long Way to Go and a Short Time to Get There*, 8 BROOK. J. CORP. FIN. & COM. L. 361, 371 (2014) (arguing that the SEC's internal reforms are "based on the executive orders and the accompanying OIRA guidance governing economic analysis at executive agencies") (footnote omitted); Craig M. Lewis, Chief Economist and Director, Sec. & Exch. Comm'n, Speech at the SIFMA Compliance & Legal Society Luncheon: The Expanded Role of Economists in SEC Rulemaking (Oct. 16, 2012), http://www.sec.gov/News/Speech/Detail/Speech/1365171491420#.VPtoO_nF-So (defending the SEC's use of economic analysis in rulemakings and "urg[ing]" commenters to "engage in the same thoughtful and difficult analyses that we are performing at the Commission").

¹⁸ Exec. Order No. 13,579, 76 Fed. Reg. 41,587, § 2(b) (July 11, 2011) (stating that "each independent regulatory agency should develop and release to the public a plan . . . under which the agency will periodically review its existing significant regulations to determine whether any such regulations should be modified, streamlined, expanded, or repealed so as to make the agency's regulatory program more effective or less burdensome in achieving the regulatory objectives"); Exec. Order No. 12,866, 58 Fed. Reg. 51,735, § 4(c)(1)(B) (Sept. 30, 1993) (requiring that independent agencies submit regulatory plans with a "summary of each planned significant regulatory action including, to the extent possible, alternatives to be considered and preliminary estimates of the anticipated costs and benefits"); *see* OFFICE OF INFO. & REGULATORY AFFAIRS, OFFICE OF MGMT. & BUDGET, REGULATORY IMPACT ANALYSIS: A PRIMER I (Aug. 15, 2011), http://www.whitehouse.gov/sites/whitehouse.gov/files/omb/inforeg/inforeg/regpol/circular-a-4_regulatory-impact-analysis-a-primer.pdf (explaining to executive agencies how to "develop[] regulatory impact analyses"); OFFICE OF MGMT. & BUDGET, CIRCULAR A-4, REGULATORY ANALYSIS I (Sept. 17, 2003), http://www.whitehouse.gov/sites/whitehouse.gov/files/omb/assets/regulatory_matters_pdf/a-4.pdf (explaining to executive agencies on how to conduct regulatory analysis); *see also* Sherwin, *supra* note 6, at 11–12 (describing how Executive Order 12866 "serve[s] to keep OMB apprised of [independent] agencies' activities").

¹⁹ *See, e.g.*, U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-14-714, FEDERAL RULEMAKING: AGENCIES INCLUDED KEY ELEMENTS OF COST-BENEFIT ANALYSIS, BUT EXPLANATIONS OF REGULATIONS' SIGNIFICANCE COULD BE MORE TRANSPARENT 16 (2014) (criticizing financial regulators as well as OIRA for "[n]ot [a]lways [being] [t]ransparent about [h]ow [r]ules [a]re [d]esignated"); U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-13-101, DODD-FRANK ACT REGULATIONS: AGENCIES' EFFORTS TO ANALYZE AND COORDINATE THEIR RULES 10 (Dec., 2012) (criticizing financial regulators for not "consistently follow[ing] key elements of [OMB] guidance in their regulatory analysis"); U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-12-151, *supra* note 17, at 14 (criticizing financial regulators' policies and procedures for not "fully reflect[ing] OMB guidance on regulatory analysis"); *see also* ADMIN. CONFERENCE OF U.S., ADMINISTRATIVE CONFERENCE RECOMMENDATION 2013-2: BENEFIT-COST ANALYSIS AT INDEPENDENT REGULATORY AGENCIES 5–8 (June 13, 2013), <https://www.acus.gov/sites/default/files/documents/Recommendation%202013-2-%20Benefit-Cost%20Analysis%29.pdf>; COMM. ON CAPITAL MKTS. REGULATION, A BALANCED APPROACH TO COST-BENEFIT ANALYSIS REFORM 4–10, 17–18 (2013) (analyzing the CBA performance of financial regulators and proposing that "Congress should subject all independent financial regulatory agencies . . . to CONSISTENT COST-BENEFIT STANDARDS aligned with the principles set forth by the Clinton Or-

in particular.²⁰ Finally, members of Congress and lobbying groups have responded with various legislative proposals that would, in some sense, codify the *Business Roundtable* holding and impose some sort of statutory CBA requirement on independent agencies, including independent financial regulators.²¹ While none of these legislative proposals have been enacted, the Trump Administration has emphasized the importance of financial CBA²² and recently taken some preliminary steps to give OIRA greater visibility

der and the First Obama Order”); ROSE & WALKER, *supra* note 10, at 2 (observing that the GAO “faulted financial regulators for failing to monetize or quantify costs and benefits”) (footnote omitted); Curtis W. Copeland, *Economic Analysis and Independent Regulatory Agencies* 4 (Admin. Conference of U.S., Apr. 30, 2013), <https://www.acus.gov/sites/default/files/documents/Copeland%20Final%20BCA%20Report%204-30-13.pdf> (offering “a series of ‘best practices’ that independent regulatory agencies could use to improve their economic analyses,” such as adopting the guidelines in OMB’s Circular A-4).

²⁰ See, e.g., OFFICE OF THE INSPECTOR GEN., DEP’T OF THE TREASURY, DODD-FRANK ACT: CONGRESSIONAL REQUEST FOR INFORMATION REGARDING ECONOMIC ANALYSIS BY OCC (OIG-CA-11-006) 2 (June 13, 2011), <http://www.treasury.gov/about/organizational-structure/ig/Documents/OIG-CA-11-006.pdf> (praising OCC for having the “processes in place to ensure that required economic analyses are performed consistently and with rigor” and recommending that OCC develop procedures for intra-office and inter-agency coordination); OFFICE OF THE INSPECTOR GEN. OF THE CFTC, A REVIEW OF COST-BENEFIT ANALYSES PERFORMED BY THE COMMODITY FUTURES TRADING COMMISSION IN CONNECTION WITH RULEMAKINGS UNDERTAKEN PURSUANT TO THE DODD-FRANK ACT ii (June 13, 2011), http://www.cftc.gov/ucm/groups/public/@aboutcftc/documents/file/oig_investigation_061311.pdf (criticizing the CFTC for the “greater ‘say’” of the Office of General Counsel in the cost-benefit analysis process); OFFICE OF THE INSPECTOR GEN. OF THE SEC, FOLLOW-UP REVIEW OF COST-BENEFIT ANALYSES IN SELECTED SEC DODD-FRANK RULEMAKINGS iii-iv (Jan. 27, 2012), http://www.sec.gov/about/offices/oig/reports/audits/2012/rpt499_followupreviewofd-f_costbenefitanalyses_508.pdf (criticizing the SEC for “a lack of macro-level analysis and a lack of quantitative analysis on the impact of the [agency’s] rules”); see also ROSE & WALKER, *supra* note 10, at 2 (observing that “the Inspectors General of the [SEC] and the [CFTC] have found serious deficiencies in the financial regulators’ use of cost-benefit analysis after Dodd-Frank”) (footnote omitted).

²¹ See, e.g., Regulatory Accountability Act of 2015, H.R. 185, 114th Cong. §3(b) (2015) (requiring all federal agencies to conduct cost-benefit analysis in rulemakings, including an assessment of the costs and benefits of regulatory alternatives); Independent Agency Regulatory Analysis Act of 2013, S. 1173, 113th Cong. (2013) (intending “[t]o affirm the authority of the President to require independent regulatory agencies to comply with regulatory analysis requirements applicable to executive agencies”); SEC Regulatory Accountability Act, H.R. 1062, 113th Cong. § 2 (2013) (requiring the SEC to conduct cost-benefit analysis in its rulemakings); see also *Legislative Proposals Regarding Derivatives and SEC Economic Analysis: Hearing Before the Subcomm. on Capital. Mkt. & Gov. Sponsored Enter. of the H. Comm. on Fin. Serv.*, 113th Cong. 1 (2013) (“Today’s hearing will examine seven specific legislative proposals to . . . codify a good government regulatory approval process for the SEC.”); *The SEC’s Aversion to Cost-Benefit Analysis: Hearing Before the Subcomm. On TARP, Fin. Serv. & Bailouts of Pub. & Private Programs of the H. Comm. on Oversight & Gov. Reform*, 112th Cong. 3 (2012) (examining the role of cost-benefit analysis in SEC rulemaking).

²² See, e.g., U.S. DEP’T OF TREASURY, A FINANCIAL SYSTEM THAT CREATES ECONOMIC OPPORTUNITIES: BANKS AND CREDIT UNIONS 17 (June 2017) (“Treasury recommends that financial regulatory agencies perform and make available for public comment a cost-benefit analysis with respect to at least all ‘economically significant’ proposed regulations . . .”). The CFPB itself also recently scheduled a symposium on cost-benefit analysis in the near future. Press Release, Consumer Fin. Prot. Bureau, Consumer Financial Protection Bureau Announces Symposium Series (Apr. 18, 2019), <https://www.consumerfinance.gov/about-us/newsroom/bureau-announces-symposia-series/>.

into the ways in which independent financial agencies are assessing costs and benefits.²³ Although the more dire predictions regarding the implications of the *Business Roundtable* decision for financial regulators have yet to be borne out,²⁴ the decision is nonetheless of lasting importance for the attention it has brought to financial CBA.

The past few years have also seen a flood of articles on financial CBA that move well beyond the early critiques of the *Business Roundtable* decision. Crudely put, academics can be divided into two camps, with the CBA enthusiasts, led by Eric Posner and Glenn Weyl, on one side, and the CBA skeptics, including John Coates and Jeff Gordon, on the other. The enthusiasts argue that financial regulation is no different than other kinds of regulation and the same rules governing CBA in other areas should be applied to financial CBA.²⁵ The skeptics, in contrast, emphasize the complexity of fi-

²³ In particular, the Acting Director of OMB recently issued a memorandum requiring all federal agencies, including independent financial agencies, to submit to OIRA information about the “costs, benefits, and transfer impacts” of new rules in order for OMB to evaluate whether those rules are “major rules” for purposes of the Congressional Review Act. Memorandum from Russel T. Vought, Acting Dir., Consumer Fin. Prot. Bureau, to the Heads of Executive Departments and Agencies (Apr. 11, 2019), <https://www.whitehouse.gov/wp-content/uploads/2019/04/M-19-14.pdf>. While this requirement does not bring the CBA analysis of independent financial agencies under the same intensity of OIRA review as applies to executive agencies, it does represent a movement in that direction. See Victoria Guida, *White House Moves to Tighten Control Over Federal Regulators*, POLITICO (Apr. 11, 2019), <https://www.politico.com/story/2019/04/11/white-house-federal-regulators-1347496>.

²⁴ *Compare* Nat’l Ass’n of Mfrs. v. SEC, 748 F.3d 359, 370–71, 373 (D.C. Cir. 2014) (holding that the SEC’s analysis of costs and benefits was adequate but that aspects of the SEC’s rule violated the First Amendment), *and* R.J. Reynolds Tobacco Co. v. FDA, 696 F.3d 1205, 1222 (D.C. Cir. 2012) (holding that the FDA did not meet the APA’s substantial evidence standard because the agency failed to show that “enacting their proposed graphic warnings [on cigarette packages] will accomplish [its] stated objective of reducing smoking rates”), *with* Am. Meat Inst. v. U.S. Dep’t of Agric., 760 F.3d 18, 22–23 (D.C. Cir. 2014) (overruling the First Amendment holdings of *R.J. Reynolds Tobacco Co. v. FDA* and *Nat’l Ass’n of Mfrs. v. SEC*), *and* Inv. Co. Inst. v. Commodity Futures Trading Comm’n, 720 F.3d 370, 380 (D.C. Cir. 2013) (holding that the CFTC’s consideration of costs and benefits was not arbitrary or capricious); *see also* Jeff Gordon, *The Empty Call for Benefit-Cost Analysis in Financial Regulation*, 43 J. LEGAL STUD. S351, S373 (2014) (“*Investment Company Institute v. CFTC* therefore provides a basis for optimism that the D.C. Circuit will not interfere with rule making that implements the Dodd-Frank Act by the financial regulatory agencies, even the SEC.”); Cass R. Sunstein & Adrian Vermeule, *Libertarian Administrative Law*, 82 U. CHI. L. REV. 393, 451 (2015) (“*Investment Co[mpany] Institute* displays a tolerance of regulation under conditions of uncertainty that is entirely foreign to its predecessor [*Business Roundtable*].”); *But see* Bianca Nunes, Case Note, *The Future of Government-Mandated Health Warnings After R.J. Reynolds and American Meat Institute*, 163 U. PENN. L. REV. 177, 180, 212 (“Although *American Meat Institute* lessened the blow *R.J. Reynolds* dealt to regulators, both decisions left open important questions about the First Amendment treatment of government-mandated warnings that are neither ‘purely factual and uncontroversial’ disclosures nor overt government-sanctioned opinions, and about whether graphic cigarette warnings belong in this middle ground.”) (“Despite this victory for regulators [in *American Meat Institute*], FDA still faces a formidable challenge in selecting revised graphic cigarette warnings.”) (footnotes omitted).

²⁵ *See, e.g.*, ROSE & WALKER, *supra* note 10, at 20–24 (providing justifications for cost-benefit analysis in financial regulation); Eric A. Posner & E. Glenn Weyl, *Benefit-Cost Paradigms in Financial Regulation*, 43 J. LEGAL STUD. S1, S2 (2014) (“[T]here is no reason to believe that BCA would be appropriate for environmental or workplace regulation and not for

nancial markets and the challenges of estimating both the positive and negative effects of financial regulatory intervention.²⁶ The skeptics also highlight the distortions that CBA may create in the regulatory process, arguing that regulatory personnel would face incentives to doctor the administrative record underlying financial CBA in order to withstand judicial review.²⁷ While the skeptics do not oppose careful consideration of the pros and cons of regulatory intervention—admitting the usefulness of “conceptual” CBA—they do oppose mandated quantification or monetization of financial regulation as counterproductive and wasteful, at least given the present state of CBA techniques.²⁸ The enthusiasts, including Cass Sunstein,²⁹ have responded by criticizing the skeptics’ proposed alternatives and reiterating the

financial regulation. Indeed, BCA would seem more appropriate for financial regulation where data are better and more reliable and where regulators do not confront ideologically charged valuation problems like those concerning mortality risk and environmental harm. The benefits and costs of financial regulation are commensurable monetary gains and losses and so can be easily compared.”); cf. John H. Cochrane, *Challenges for Cost-Benefit Analysis of Financial Regulation*, 43 J. LEGAL STUD. S63, S63 (2014) (arguing for a cost-benefit process that “[i]es) between pure conceptual [CBA] and the rigid legal structure currently envisioned”).

²⁶ See, e.g., John C. Coates IV, *Cost-Benefit Analysis of Financial Regulation: Case Studies and Implications*, 124 YALE L.J. 882, 999–1003 (2015) (arguing that quantified financial CBA is likely to be unreliable because financial regulation generates “large (and uncertain) effects on economic growth,” “the main units of variation and change in finance are not things, or even individuals, but *groups* of people,” and financial regularities are “more likely to change over time than in other domains.”); cf. Gordon, *supra* note 24, at S360, S366 (arguing that financial CBA will not be helpful because “the financial system is not a natural system” and “continuous second-order effects make the benefits and costs of rule adoption impossible to quantify in a meaningful way”).

²⁷ Coates, *supra* note 26, at 1004 (“Judicial review is not likely to generate any significant improvement in CBA/FR itself, as agencies will likely respond to the threat of such review by hiding, not exposing, the weaknesses in their analyses.”); Gordon, *supra* note 24, at S353 (“[Financial BCA] as it has come to be used in the modern administrative state is virtually useless in the setting of optimal financial regulation and simply gets in the way of the genuinely hard work to be done. If applied through the machinery of the legal system—especially hard look judicial review that invites *de novo* relitigation of empirically contestable conjectures—[financial CBA] is likely to stymie regulation aimed at the reduction of systemic risk in favor of privileging a status quo that we know is unstable.”).

²⁸ See, e.g., John C. Coates IV, *Towards Better Cost-Benefit Analysis: An Essay on Regulatory Management*, 78 LAW & CONTEMP. PROBS. 1, 3 (2015) (“I believe that quantified CBA/FR is a worthy if distant goal, and conceptual CBA is currently a valuable if limited element of the regulatory toolkit.”); Gordon, *supra* note 24, at S354 (“[P]ragmatic judgment in the financial regulatory arena ought to include efforts to understand the consequences of particular proposals, including through the use of social science methods that may forecast economic consequences. But the desire to ground decisions on that which can be quantified is a self-deceptive conceit in the financial regulatory area that obscures more than it illuminates.”).

²⁹ Sunstein has written extensively on CBA. See, e.g., Cass R. Sunstein, *Empirically Informed Regulation*, 78 U. CHI. L. REV. 1349, 1350 (2011) (exploring the implications of social science research for regulation); Cass R. Sunstein, *The Limits of Quantification*, 102 CAL. L. REV. 1369 (2014) (advocating for the use of breakeven analysis when dealing with nonquantifiable values); Cass R. Sunstein, *The Real World of Cost-Benefit Analysis: Thirty-Six Questions (And Almost as Many Answers)*, 114 COLUM. L. REV. 167, 202 (2014) (exploring “highly stylized problems” in CBA). While much of Sunstein’s work addresses CBA more generally, he has begun to address financial CBA specifically. See Sunstein, *infra* note 30, at 263, 267–68 (arguing for the use of breakeven analysis in financial CBA and addressing judicial review concerns). For a less technical overview of his views on the subject, see CASS R. SUNSTEIN, *THE COST-BENEFIT REVOLUTION* (2018).

feasibility of financial CBA.³⁰ Professor Coates, who has emerged as the most prolific member of the skeptical camp, maintains his reservations with respect to the current state of financial CBA but also emphasizes what he sees as a gradual convergence between the two sides of the debate as even financial CBA enthusiasts acknowledge limitations in current practices.³¹

In addition to this ongoing debate, the legal literature on financial CBA also includes a number of articles exploring related issues, such as optimal institutional arrangements for producing financial CBA,³² literature reviews designed to ascertain whether previous regulatory actions produced net benefits,³³ explorations of the soundness of previous agency attempts at financial

³⁰ See, e.g., Eric A. Posner & E. Glen Weyl, *Cost-Benefit Analysis of Financial Regulations: A Response to Criticisms*, 124 YALE L.J.F. 246, 247 (2015), <http://www.yalelawjournal.org/forum/cost-benefit-analysis-of-financial-regulations> (arguing that Coates and Gordon's alternatives provide "empty if not circular standard[s] for evaluating regulations" and that the valuations of financial CBA are easier to conduct than the ones for other areas of regulation); Cass R. Sunstein, *Financial Regulation and Cost-Benefit Analysis*, 124 YALE L.J.F. 263, 263, 267–68 (2015), <http://www.yalelawjournal.org/forum/financial-regulation-and-cost-benefit-analysis> ("There is no reason to think that it is always or usually impossible for financial regulators to conduct cost-benefit analysis. And when agencies face serious gaps in knowledge, they should enlist 'breakeven analysis' . . .") ("[I]t is unclear whether judicial review would be helpful or harmful. On the one hand, such review could decrease the likelihood of mistakes on the part of agencies, creating an ex post corrective and an ex ante deterrent for poor policymaking . . . On the other hand, judges might themselves err.").

³¹ See John C. Coates IV, *Cost-Benefit Analysis of Financial Regulation: A Reply*, 124 YALE L.J.F. 305, 305, 310 (2015), <http://www.yalelawjournal.org/forum/cost-benefit-analysis-of-financial-regulation-a-reply> ("Sunstein's focus on alternatives to standard CBA (such as breakeven analysis, in my view, implicitly concedes [that there are significant challenges in quantifying the costs and benefits of financial regulation].") ("While [Posner and Weyl] point out correctly that financial modeling can be usefully used to predict markets, they offer no examples where quantified CBA of major financial regulations is or could be reliable and precise.") (footnote omitted).

³² See, e.g., Robert P. Bartlett III, *The Institutional Framework for Cost-Benefit Analysis in Financial Regulation: A Tale of Four Paradigms?*, 43 J. LEGAL STUD. S379, S403 (2014) (arguing that "[t]he institutional framework under which agencies conduct CBA significantly affects [their] rigor . . . and the likelihood that CBA can undermine their regulatory agendas," and proposing "a more uniform" institutional framework for financial CBA, including "some degree of interagency coordination"); Coates, *supra* note 28 (proposing a host of institutional reforms to improve financial CBA, including the restriction of 'hard look' judicial review, elimination of legal impediments on agency data gathering, and improvement of funding for financial CBA); Matthew Spitzer & Eric Talley, *On Experimentation and Real Options in Financial Regulation*, 43 J. LEGAL STUD. S121 (2014) (arguing that there is a tension between the judiciary and agencies regarding the use of field experimentation in CBA); Richard L. Revesz, *Cost-Benefit Analysis and the Structure of the Administrative State: The Case of Financial Services Regulation*, 34 YALE J. ON REG. 545 (2017) (proposing a role for FSOC and OIRA in overseeing financial CBA); Ryan Bubb, Comment, *The OIRA Model for Institutionalizing CBA of Financial Regulation*, 78 LAW & CONTEMP. PROBS. 47, 52 (2015) (proposing that "an OIRA-type regime" serve as an integral part of a regulatory review regime for financial CBA).

³³ See, e.g., Sumit Agarwal et al., *Regulating Consumer Financial Products: Evidence from Credit Cards*, 130 Q.J. ECON. 111, 112, 115 (2014) (studying "the effectiveness of" credit card regulation and finding that the CARD Act created a net reduction in borrowing costs); John C. Coates & Suraj Srinivasan, *SOX after Ten Years: A Multidisciplinary Review*, 28 ACCT. HORIZONS 627, 628 (2014) (finding that research on the "net costs and benefits" of the Sarbanes-Oxley Act is "inconclusive"); Martin Eling & David Pankoke, *Costs and Benefits of Financial Regulation: An Empirical Assessment for Insurance Companies*, 41 GENEVA

CBA in specific cases,³⁴ and discussions of how financial CBA might be conducted and improved in the future within specific areas of regulation.³⁵

PAPERS ON RISK & INSURANCE 529 (2016) (analyzing the costs and benefits of insurance regulation).

³⁴ See, e.g., Frank J. Chaloupka et al., *An Evaluation of the FDA's Analysis of the Costs and Benefits of the Graphic Warning Label Regulation*, 24 TOBACCO CONTROL 112, 112 (2014),) (arguing that “the [FDA’s] analysis of the impact of [graphic warning labels on cigarette packages] substantially underestimated the benefits and overestimated the costs”). But see Coates, *supra* note 26, at 926–78 (presenting four case studies of agencies’ financial CBAs); Lawrence Jin et al., *Retrospective and Prospective Benefit-Cost Analysis of US Anti-Smoking Policies*, 6 J. BENEFIT COST ANAL. 154, 180 (2015) (arguing that the FDA’s “health benefits” methodology is sound and that “[o]ur illustrative calculations are consistent with the higher end of the range of consumer surplus offset ratios discussed in recent [including FDA] RIAs [(Regulatory Impact Analyses)] that use the health benefits approach to conduct BCAs of health-related regulations”); Bruce R. Kraus, *Economists in the Room at the SEC*, 124 YALE L.J.F. 280, 283 (2015), <http://www.yalelawjournal.org/forum/economists-in-the-room-at-the-sec> (arguing that the “work of the SEC’s economists is neither a meaningless exercise nor a partisan weapon, but honest, interesting work that should be informative to policymakers”); Omri Ben-Shahar & Carl E. Schneider, *The Futility of Cost Benefit Analysis in Financial Disclosure Regulation* 11–13 (Univ. of Chi. Coase-Sandor Inst. for Law & Econ., Working Paper No. 680, Mar. 2014), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2412688 (analyzing the CFPB’s CBA of its mortgage disclosure regulation).

³⁵ See, e.g., Sumit Agarwal et al., *A Simple Framework for Estimating Consumer Benefits from Regulating Hidden Fees*, 43 J. LEGAL STUD. S239, S240 (2014) (providing “a simple framework for estimating the overall consumer cost savings from regulating hidden fees”); Daniel Carpenter, *Accounting for Financial Innovation and Borrower Confidence in Financial Rule Making: Analogies from Health Policy*, 43 J. LEGAL STUD. S331, S347 (2014) (suggesting that “the rate of new-product innovation and the distribution governing the market’s beliefs in those future products . . . be taken into account” by regulators in “[i]n an industrial context where new products may appear regularly over time”); Coates & Srinivasan, *supra* note 33 (proposing various improvements to modeling the costs and benefits of the Sarbanes-Oxley Act); Prasad Krishnamurthy, *Rules, Standards, and Complexity in Financial Regulation*, 43 J. LEGAL STUD. S273, S294 (2014) (contending “that rules for minimum capital [requirements] are superior to standards in the presence of aggregate risks, regulatory uncertainty, and agency costs”); Thomas Philippon, *Efficiency and Benefit-Cost Analysis of the Financial System*, 43 J. LEGAL STUD. S107, S112–18 (2014) (describing techniques for modeling the efficiency of financial intermediation); Eric Posner & E. Glen Weyl, *Benefit-Cost Analysis for Financial Regulation*, 103 AM. ECON. REV.: PAPERS & PROC. 393, 393–96 (2013) (describing how to quantify systemic crises, informational externalities, and financial gambling); Eric A. Posner & E. Glenn Weyl, *An FDA for Financial Innovation: Applying the Insurable Interest Doctrine to Twenty-First-Century Financial Markets*, 107 NW. U. L. REV. 1307, 1307 (2013) (proposing that agencies approve financial products based on the likelihood that they will be used for insurance as opposed to gambling.); see also Robert W. Hahn & Cass R. Sunstein, *A New Executive Order for Improving Federal Regulation? Deeper and Wider Cost Benefit Analysis*, 150 U. PA. L. REV. 1489, 1489 (2002) (“[T]he regulatory state continues to suffer from significant problems, including poor priority-setting, unintended adverse side-effects, and, on occasion, high costs for low benefits. In many cases, agencies do not offer an adequate account of either costs or benefits, and hence the commitment to cost-benefit balancing is not implemented in practice. A major current task is to ensure a deeper and wider commitment to cost-benefit analysis, properly understood. We explain how this task might be accomplished and offer a proposed executive order that would move regulation in better directions.”); Eric A. Posner, *Controlling Agencies with Cost-Benefit Analysis: A Positive Political Theory Perspective*, 68 U. CHI. L. REV. 1137, 1140 (2001) (“This Article analyzes cost-benefit analysis as a method by which the President, Congress, or the judiciary controls agency behavior. It uses a model from the literature on positive political theory to show why the President and Congress will often want agencies to perform cost-benefit analyses. It also uses the model to explore the impact of cost-benefit analysis on courts and interest groups. The model generates testable predictions, including the prediction that introduction of cost-benefit analysis will increase the

This Article joins the literature described above, but with a more positive agenda and limited to consumer financial regulation as opposed to financial regulation more broadly. We are also largely focused on the benefits side of financial CBA,³⁶ emphasizing how regulatory agencies have conducted benefit analysis for consumer protection regulations and giving considerably less attention to the cost side of financial CBA on which industry critics most commonly focus.

B. Broader Scholarship on Regulatory Impact Analysis

Distinct from recent work on financial CBA is a much broader literature on regulatory impact analysis in general and cost-benefit work in other fields of regulation.³⁷ While most of this literature is not directly relevant to the current inquiry,³⁸ Robert Hahn and Patrick Dudley offer a convenient typol-

amount of regulation.”); Richard L. Revesz, *Cost-Benefit Analysis and the Structure of the Administrative State: The Case of Financial Services Regulation*, 34 *YALE J. ON REG.* 545 (2017) (proposing *inter alia* a role for the FSOC in coordinating macro-economic estimates).

³⁶ This focus on benefits is similar in spirit to the case studies in Coates’s recent Yale Law Journal piece, where he reviews the benefit analysis of, for example, the SEC’s regulations under the Sarbanes-Oxley Act section 404. Coates, *supra* note 26. However, we draw from a much larger sample of regulations and from a wider range of agencies. *Cf. id.* at 946 (“Depending on assumptions, guesstimated CBA suggests that SOX 404 could be a very good idea, a very bad idea, or anything in between. If one arbitrarily chose the range’s midpoint, SOX 404 created a net benefit of \$9 billion. But this bottom line is highly sensitive, as reflected in Table 3, with net benefits changing by between 2x and 13x as one moves from low to high values for each of five major inputs . . .”).

³⁷ For a good overview of policy analysis in general, including an in-depth discussion of cost-benefit analysis, see DAVID L. WEIMER & ADRIAN R. VINING, *POLICY ANALYSIS: CONCEPTS AND PRACTICE* 398-434 (6th ed. 2017); ANTHONY E. BOARDMAN, DAVID H. GREENBERG, AIDAN R. VINING, AND DAVID L. WEIMER, *COST-BENEFIT ANALYSIS, CONCEPTS AND PRACTICE* (5th ed. 2018).

³⁸ For example, we do not address the normative implications of reliance on cost-benefit analysis. *See, e.g.*, James K. Hammit, *Positive versus Normative Justifications for Benefit-Cost Analysis: Implications for Interpretation and Policy*, 7 *REV. ENVTL. ECON. & POL’Y* 199, 214 (2013) (arguing that the appropriate interpretations, implications, and methods of benefit-cost analysis depend on whether the rationale for benefit-cost analysis is positive or normative); Christopher Robert & Richard Zeckhauser, *The Methodology of Normative Policy Analysis*, 30 *J. POL’Y ANALYSIS & MGMT.* 613, 614 (2011) (providing a taxonomy of “positive and normative sources of disagreement” in policy analysis). We also do not address a long-standing debate in environmental regulation on the usefulness and acceptability of discounting lives in particular, and of cost-benefit analysis in general. *See also* Lisa Heinzerling, *Regulatory Costs of Mythic Proportions*, 107 *YALE L.J.* 1981, 2070 (1998) (arguing that the discounting lives method makes it difficult to engage “with a range of fundamental issues, such as the relative worth of lives saved today and lives saved tomorrow, the proper response to scientific uncertainty, and the purposes of environmental law”); Richard L. Revesz, *Environmental Regulation, Cost-Benefit Analysis, and the Discounting of Human Lives*, 99 *COLUM. L. REV.* 941, 1016 (1999) (arguing that the discounting lives method is appropriate for contexts dealing with “latent harms” but possibly unethical in contexts dealing with “harms to future generations”); *see also* Richard L. Revesz, *The Green Community Should Mend, Not Work in Vain to End, Cost-Benefit Analysis*, *GRIST* (May 8, 2008), <http://grist.org/article/cost-benefit-environmentalism> (arguing that environmental regulators should “mend” cost-benefit analysis by showing where it has “been twisted” by deregulatory proponents); Lisa Heinzerling, *Lisa Heinzerling Responds to Richard Revesz on Cost-Benefit Analysis*, *GRIST* (May 15, 2008), <http://grist.org/article/cost-benefit-environmentalism-an-oxymoron> (responding to Revesz by arguing that

ogy for organizing work in this area designed to measure the quality of regulatory analysis³⁹ (the sub-literature in which our work is most comfortably located). The first Hahn-Dudley category consists of case studies “examin[ing] the details of a particular benefit-cost analysis or group of analyses.”⁴⁰ Their second category includes retrospective studies undertaken after a policy initiative is implemented, with the goal of estimating the impact of the initiative after the fact based on some sort of parameter like net benefits or cost effectiveness.⁴¹ Hahn and Dudley’s final category—to which the current study belongs—consists of efforts “to score a large number of benefit-cost analyses according to whether they meet a number of basic, objective

“cost-benefit analysis is at odds with fundamental premises of environmentalism, and it’s not particularly good at either reason or compassion”); Richard L. Revesz, *Richard Revesz Responds to Lisa Heinzerling, Defending Cost-Benefit Analysis*, GRIST (June 5, 2008), <http://grist.org/article/a-tool-in-the-toolbox> (responding to Heinzerling by arguing that “rejecting cost-benefit analysis instead of seeking to reform it would be a major strategic error for the environmental movement”).

³⁹ See Robert W. Hahn & Patrick M. Dudley, *How Well Does the U.S. Government Do Benefit-Cost Analysis*, 1 REV. ENVTL. ECON. & POL’Y 192, 195–96 (2007) (discussing “three approaches for measuring the quality of regulatory analyses”).

⁴⁰ Hahn & Dudley, *supra* note 39, at 195. A good deal of Professor Coates’s recent *Yale Law Journal* article would fall within this category to the extent that it includes detailed reviews of a handful of specific examples of cost-benefit analysis in financial regulation. See Coates, *supra* note 26, at 927–97 (presenting four case studies of imperfect cost-benefit analysis in financial regulation and analyzing two “gold standard” examples of cost-benefit analysis by the SEC and the FSA). For more examples of this case study approach, see, e.g., Chaloupka et al., *supra* note 34, at 112 (arguing that the FDA’s “analysis of the impact of [graphic warning labels on cigarette packages] substantially underestimated the benefits and overestimated the costs”); Kraus, *supra* note 34, at 283 (arguing that the “work of the SEC’s economists is neither a meaningless exercise nor a partisan weapon, but honest, interesting work that should be informative to policymakers”); Ben-Shahar & Schneider, *supra* note 34, at 11–13 (analyzing the CFPB’s CBA of its mortgage disclosure regulation); see also DAVID L. WEIMER & ADRIAN R. VINING, *POLICY ANALYSIS: CONCEPTS AND PRACTICE* 411–23 (5th ed. 2011) (illustrating cost-benefit analysis techniques through a case study involving an alcohol tax); see also *infra* notes 86–87 (citing to several CFPB retrospective reviews).

⁴¹ Hahn & Dudley, *supra* note 39, at 196. For examples of this retrospective analysis approach, see, e.g., Howell E. Jackson & Jeffery Y. Zhang, *Private and Public Enforcement of Securities Regulation*, in *THE OXFORD HANDBOOK OF CORPORATE LAW AND GOVERNANCE* 928–45 (Jeffrey N. Gordon & Wolf-Georg Ringe eds., 2018) (exploring the impact of staffing and budget levels on the quality of financial markets); RESOURCES FOR THE FUTURE, *REFORMING REGULATORY IMPACT ANALYSIS* (Winston Harrington et al. eds., 2009) (describing and critiquing three regulatory impact analyses of the EPA); Agarwal et al., *supra* note 33, at 15 (analyzing “the effectiveness” of credit card regulation and finding that the CARD Act created a net reduction in borrowing costs); Coates & Srinivasan, *supra* note 33, at 628 (finding that research on the “net costs and benefits” of the Sarbanes-Oxley Act is “inconclusive”); Winston Harrington et al., *On the Accuracy of Regulatory Cost Estimates*, 19 J. POL’Y ANALYSIS & MGMT. 297, 305–13 (2000) (comparing ex ante and ex post cost estimates of various environmental regulations); see also JOSEPH E. ALDY, *LEARNING FROM EXPERIENCE: AN ASSESSMENT OF THE RETROSPECTIVE REVIEWS OF AGENCY RULES AND THE EVIDENCE FOR IMPROVING THE DESIGN AND IMPLEMENTATION OF REGULATORY POLICY* 6–7 (2014), <https://www.acus.gov/sites/default/files/documents/Aldy%2520Retro%2520Review%2520Draft%252011-17-2014.pdf> (demonstrating that less than ten percent of “recent economically significant rules . . . are the result of a retrospective review” and recommending various improvements in how agencies conduct retrospective reviews); Jennifer Baxter, Lisa A. Robinson, & James Hammitt *Retrospective Benefit-Cost Analysis* (Apr. 20, 2015) (Regulatory Reform for the 21st Century City White Paper) (providing a framework for conducting retrospective analysis).

criteria, such as whether some costs and benefits were monetized, whether costs and benefits were discounted, and whether alternatives were considered.”⁴²

Within the third category, researchers have developed numerous approaches to scoring. For example, the degree of quantification and monetization can be scored by assessing whether costs and benefits have at least been “expressed in some countable unit” (quantification), and perhaps even in dollar values (monetization).⁴³ Within the quantification and monetization inquiry, whether the agency gave “a point estimate” (or a specific value) as opposed to a range of estimates can also be scored.⁴⁴ Alternatively, an agency’s comparison of costs and benefits can be scored by assessing whether the agency calculated net benefits, which “requires monetized costs and monetized benefits,” or cost-effectiveness, which “requires only monetized costs and quantified benefits,” or a breakeven analysis that establishes

⁴² Hahn & Dudley, *supra* note 39, at 196. For examples of this “scorecard” approach, see, e.g., U.S. GOV’T ACCOUNTABILITY OFFICE, GAO-RCED-98-142, AGENCIES COULD IMPROVE DEVELOPMENT, DOCUMENTATION, AND CLARITY OF REGULATORY ECONOMIC ANALYSES 3 (1998,) (reviewing twenty regulatory impact analyses and finding that several failed to “incorporate the best practices set forth in OMB’s guidance,” such as discussing alternatives and assigning dollar values to benefits); U.S. GOV’T ACCOUNTABILITY OFFICE, GAO-RCED-97-38, AIR POLLUTION: INFORMATION CONTAINED IN EPA’S REGULATORY IMPACT ANALYSES CAN BE MADE CLEARER 2 (1997,) (reviewing twenty-three regulatory impact analyses and finding that several failed to identify “key economic assumptions,” “such as the discount rate and the value of human life”); Robert W. Hahn et al., *Assessing Regulatory Impact Analyses: The Failure of Agencies to Comply with Executive Order 12,866*, 23 HARV. J.L. & PUB. POL’Y 859, 862–77 (2000) (assessing the quality of forty-eight regulatory impact analyses from environmental, health, and safety regulations and finding that information on relevant alternatives and net benefits was not typically provided); Hahn & Dudley, *supra* note 39, at 196–210 (assessing the quality of seventy-four of the EPA’s regulatory impact analyses and finding that “fundamental economic information,” such as relevant policy alternatives and net benefits, was not reported most of the time).

⁴³ Hahn & Dudley, *supra* note 39, at 199. For examples of this scoring approach, see, e.g., Jerry Ellig et al., *Continuity, Change, and Priorities: The Quality and Use of Regulatory Analysis across U.S. Administrations*, 7 REG. & GOV. 153, 158 (2012) (assessing 111 regulatory impact analyses along multiple evaluation criteria, including “[h]ow well . . . the analysis assess[ed] costs and benefits”); Hahn & Dudley, *supra* note 39, at 199–200 (finding that more than ninety percent of regulatory impact analyses monetized at least some costs, while “only about fifty percent monetized at least some benefits”); Hahn et al., *supra* note 42, at 868 (“We found that agencies were less likely to quantify benefits than costs, and rarely monetized benefits.”); see also OFFICE OF MGMT. & BUDGET, 2014 REPORT TO CONGRESS ON THE BENEFITS AND COSTS OF FEDERAL REGULATIONS AND UNFUNDED MANDATES ON STATE, LOCAL, AND TRIBAL ENTITIES 8–19 (2014), https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/inforeg/inforeg/2014_cb/2014-cost-benefit-report.pdf (discussing monetized estimates of costs and benefits of federal regulations from fiscal year 2004 to 2013); Copeland, *supra* note 19 (analyzing the degree of quantification and monetization in twenty-two independent agency rules and finding that twenty-one out of the twenty-two rules failed to quantify benefits).

⁴⁴ Hahn & Dudley, *supra* note 39, at 199. For examples of this scoring approach, see, e.g., Hahn & Dudley, *supra* note 39, at 199–200 (finding that “[f]ew RIAs provided both a point estimate and a range” for both costs and benefits); Hahn et al., *supra* note 42, at 867 (“Only 13 percent of the regulations presented both a best estimate and a range of costs.”); see also OFFICE OF MGMT. & BUDGET, *supra* note 43, at 8–12 (providing monetized point and range estimates of costs and benefits of federal regulations from fiscal years 2004 to 2013).

a minimum lower bound of benefits necessary to outweigh projected costs.⁴⁵ Yet another approach is to score regulations for compliance with OMB and other statutory requirements—for example, assessing whether agencies have provided a regulatory flexibility analysis or complied with the requirements of OMB Circular A-4.⁴⁶ (Box One summarizes the key elements of cost-benefit analysis under OIRA standards.) Lastly, regulatory analysis can be evaluated based on whether risks were evaluated against a normative standard, such as the precautionary principle.⁴⁷

⁴⁵ Hahn & Dudley, *supra* note 39, at 201. For examples of this scoring approach, see, e.g., Jerry Ellig et al., *supra* note 43, at 158 (assessing 111 regulatory impact analyses along multiple evaluation criteria, including net benefits); Hahn et al., *supra* note 42, at 874 (“[A]pproximately half (48 percent) of the forty-eight rules examined in this Article provided no direct measures of net benefits or indirect measures based on cost-effectiveness.”); Hahn & Dudley, *supra* note 39, at 201 (finding that most regulatory impact analyses calculated either net benefits or cost-effectiveness, but that few calculated both measures); see also WEIMER & VINING, *supra* note 41, at 411–23 (demonstrating how to calculate net benefits and cost-effectiveness using a case study involving an alcohol tax); Sunstein, *The Limits of Quantification*, *supra* note 29 (advocating for the use of breakeven analysis when dealing with nonquantifiable values); Sunstein, *supra* note 30, at 263 (arguing for the use of breakeven analysis in financial CBA).

⁴⁶ See Copeland, *supra* note 19, at 31–38, 87–91 (identifying analytical requirements for independent agencies and evaluating twenty-two independent agency rules for compliance with those requirements, including regulatory flexibility and paperwork reduction). For more examples of this scoring approach, see, e.g., Ellig et al., *supra* note 43, at 157–70 (assessing 111 regulatory impact analyses using twelve criteria based on requirements set out in Executive Order 12866 and OMB Circular A-4); Hahn & Dudley, *supra* note 39, at 205 (“[L]ow scores on our scorecard strongly suggest noncompliance with executive orders and OMB guidelines.”).

⁴⁷ See, e.g., James K. Hammitt et al., *Precautionary Regulation in Europe and the United States: A Quantitative Comparison*, 25 RISK ANALYSIS 1215, 1215 (2005) (evaluating regulations for the “relative stringency” with which they addressed a random sample of 100 risks); see also Andreas Klinke et al., *Precautionary Risk Regulation in European Governance*, 9 J. RISK RESEARCH 373, 373 (2006) (presenting a model for precautionary risk regulation and discussing various challenges).

BOX ONE: OIRA STANDARDS FOR COST-BENEFIT ANALYSIS

This Box offers a brief overview of the requirements and related guidance that executive agencies must follow when conducting cost-benefit analysis in their rulemakings.

Executive Order 12866 sets out the following cost-benefit principles for executive agencies:

- (5) “When an agency determines that a regulation is the best available method of achieving the regulatory objective, it shall design its regulations in the most cost-effective manner to achieve the regulatory objective. In doing so, each agency shall consider incentives for innovation, consistency, predictability, the costs of enforcement and compliance (to the government, regulated entities, and the public), flexibility, distributive impacts, and equity.
- (6) Each agency shall assess both the costs and the benefits of the intended regulation and, recognizing that some costs and benefits are difficult to quantify, propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs.
- (7) Each agency shall base its decisions on the best reasonably obtainable scientific, technical, economic, and other information concerning the need for, and consequences of, the intended regulation.
- (8) Each agency shall identify and assess alternative forms of regulation and shall, to the extent feasible, specify performance objectives, rather than specifying the behavior or manner of compliance that regulated entities must adopt.”⁴⁸

Moreover, for agency actions deemed to be “significant regulatory action[s]” by the OIRA Administrator, Executive Order 12866 also requires that agencies provide the following information to OIRA:

- (i) “An assessment, including the underlying analysis, of benefits anticipated from the regulatory action (such as, but not limited to, the promotion of the efficient functioning of the economy and private markets, the enhancement of health and safety, the protection of the natural environment, and the elimination or reduction of discrimination and bias) together with, to the extent feasible, a quantification of those benefits;
- (ii) An assessment, including the underlying analysis, of costs anticipated from the regulatory action (such as, but not limited to, the direct cost both to the government in administering the regulation and to businesses and others in complying with the regulation, and any adverse effects on the efficient functioning of the economy, private markets (including productivity, employment, and competitiveness), health, safety, and the natural environment), together with, to the extent feasible, a quantification of those costs; and
- (iii) An assessment, including the underlying analysis, of costs and benefits of potentially effective and reasonably feasible alternatives to the planned regulation, identified by the agencies or the public (including improving the current regulation and reasonably viable nonregulatory actions), and an explanation why the planned regulatory action is preferable to the identified potential alternatives.”⁴⁹

⁴⁸ Exec. Order No. 12,866, 58 Fed. Reg. 51,735, § 1(b) (Sept. 30, 1993).

⁴⁹ *Id.* at § 6(3)(C).

Interpreting the above requirements, OMB's Circular A-4 serves as a guidance document to executive agencies "on the development of regulatory analysis as required under Section 6(a)(3)(c) of Executive Order 12866." Circular A-4 sets out the following elements for a "good regulatory analysis": "(1) A statement of the need for the proposed action, (2) An examination of alternative approaches, an (3) An evaluation of the benefits and costs—quantitative and qualitative—of the proposed action and the main alternatives identified by the analysis."⁵⁰

Circular A-4 elaborates on the third element, explaining that in order to "evaluate properly the benefits of regulations and their alternatives," agencies will have to:

- "Explain how the actions required by rule are linked to the expected benefits. For example, indicate how additional safety equipment will reduce safety risks. A similar analysis should be done for each of the alternatives.
- Identify a baseline. Benefits and costs are defined in comparison with a clearly stated alternative. This normally will be a 'no action' baseline: what the world will be like if the proposed rule is not adopted. Comparisons to a 'next best' alternative are also especially useful.
- Identify the expected undesirable side-effects and ancillary benefits of the proposed regulatory action and the alternatives. These should be added to the direct benefits and costs as appropriate."⁵¹

Circular A-4 then presents agencies with the choice between two analytical approaches: benefit-cost analysis and cost-effectiveness analysis. Although both approaches should be used in "a major rulemaking . . . wherever possible," Circular A-4 does specify that cost-effectiveness analysis should be used in "all major rulemakings for which the primary benefits are improved public health and safety to the extent that a valid effectiveness measure can be developed to represent expected health and safety outcomes," while benefit-cost analysis should be used "to the extent that valid monetary values can be assigned to" those outcomes.⁵²

"For all other major rulemakings" that do not concern improved health and safety, Circular A-4 directs agencies to use benefit-cost analysis, unless: (a) some of the "primary benefit categories cannot be expressed in monetary units," in which case cost-effectiveness analysis should also be used; or (b) neither benefits nor costs can be quantified, in which case the agency should provide "a qualitative discussion."⁵³

⁵⁰ OFFICE OF MGMT. & BUDGET, CIRCULAR A-4 REGULATORY ANALYSIS 2 (2003), <https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/circulars/A4/a-4.pdf>.

⁵¹ *Id.* at 2–3.

⁵² *Id.* at 9.

⁵³ *Id.* at 9–10.

Circular A-4 goes on to provide specific protocols for presenting the results of a cost-benefit analysis:

- “include separate schedules of the monetized benefits and costs that show the type and timing of benefits and costs, and express the estimates in this table in constant, undiscounted dollars . . .
- list the benefits and costs you can quantify, but cannot monetize, including their timing;
- describe benefits and costs you cannot quantify; and
- identify or cross-reference the data or studies on which you base the benefit and cost estimates.”⁵⁴

Lastly, Circular A-4 also directs agencies to include in their analyses “other benefit and cost considerations” when “they are significant”:

- “Private-sector compliance costs and savings;
- Government administrative costs and savings;
- Gains or losses in consumers’ or producers’ surpluses;
- Discomfort or inconvenience costs and benefits; and
- Gains or losses in time in work, leisure, and/or commuting/travel settings.”⁵⁵

There is also a fair amount of variation in the methods used to establish categories for making comparisons as to the quality of regulatory analysis. For example, comparisons have been made between agencies within a jurisdiction or between groups of agencies, such as independent agencies versus those overseen by OMB.⁵⁶ Alternatively, the nationality of regulatory bodies, such as U.S. agencies versus European agencies, has provided a basis for comparison.⁵⁷ Another approach has been to make comparisons based on the type of risk assessed, such as specific environmental or health risks.⁵⁸ Fi-

⁵⁴ *Id.* at 18.

⁵⁵ *Id.* at 37.

⁵⁶ See, e.g., Copeland, *supra* note 19, at 8 (“The primary objective of this report is to assess the extent to which independent regulatory agencies currently prepare cost-benefit and other types of economic analyses in connection with the issuance of their ‘economically significant’ or ‘major’ rules.”) (footnotes omitted); Hahn et al., *supra* note 42, at 861 (describing how the study was based on an evaluation of forty-eight RIAs from executive agencies in the “environmental, health, and safety” fields); Hahn & Dudley, *supra* note 39, at 197 (“The sample used in this study consists of a total of seventy-four RIAs . . . the EPA was selected because it accounts for a majority of all available regulatory analyses and more than half of the total costs of regulation.”) (citations omitted).

⁵⁷ See, e.g., Caroline Cecot et al., *An Evaluation of the Quality of Impact Assessment in the European Union with Lessons for the US and the EU*, 2 REG. & GOV. 405, 406 (2008) (using United States impact assessments “as a benchmark” for evaluating European impact assessments); Hammitt et al., *supra* note 47, at 1216 (“The objective of our research was to accurately characterize the observed pattern of relative precaution in U.S. and European risk regulation.”); Ragnar E. Löfstedt & David Vogel, *The Changing Character of Regulation: A Comparison of Europe and the United States*, 21 RISK ANALYSIS 399, 399 (2001) (arguing that European consumer and environmental regulatory regimes have “become stricter” since the 1980s while their United States counterparts have not).

⁵⁸ See, e.g., Hammitt et al., *supra* note 47, at 1216–17 (describing the study’s development of a matrix of almost 11,000 unique risks for assessing regulations).

nally, comparisons have been made based on areas of regulation, such as the environment or health generally.⁵⁹

The current paper presents a scoring framework that draws heavily on these prior efforts but also adds a unique dimension of analysis. To begin with what is unique: our approach to benefit analysis is based on a taxonomy organized around market failures and other perceived shortcomings in consumer outcomes, including unfairness,⁶⁰ which regulatory interventions purport to address. We supplement this scoring of purported market shortcomings with additional information on the degree of quantification and monetization of benefit analysis in a manner similar to Hahn and Dudley,⁶¹ but we also score regulations based on other kinds of information—such as intensity of analysis, reliance on expert sources and word counts—that have typically not been tracked. In terms of categories used for comparison, we follow the conventional approach of collecting and comparing regulatory scores by agencies (with a special emphasis on CFPB regulations) while also offering comparisons across groups of agencies (typically independent versus OIRA agencies), across types of regulations (typically consumer financial protection versus other kinds of consumer protection), and across differences in governing laws (such as whether a are or are not required to conduct additional analysis under the Regulatory Flexibility Act or the Congressional Review Act).

C. A Preliminary Synthesis

In organizing what is becoming an increasingly unwieldy literature on cost-benefit analysis, we find it helpful to distinguish two dimensions. The first, located on the horizontal axis of Figure One, concerns the range of analytical techniques being employed, conventionally running from qualitative analysis to quantitative analysis to monetized analysis.⁶² The second di-

⁵⁹ See, e.g., *id.* at 1218 (“We . . . categorized the risks according to whether they affect ecological, health, or safety endpoints.”). This approach is sometimes called “endpoint” analysis.

⁶⁰ Our scoring of distributional considerations within the category of fairness is in tension with the preferences of some policy analysts working in this area. See, e.g., Aanund Hylland & Richard Zeckhauser, *Distributional Objectives Should Affect Taxes but Not Program Choice or Design*, 81 SCANDINAVIAN J. ECON. 264, 264 (1979) (arguing that “those projects that yield the greatest total of unweighted benefits across the population should be selected” and that redistribution should be “carried out solely through the tax system”).

⁶¹ See *supra* note 43 and accompanying text.

⁶² Another important strain of academic work in this area, with which we do not directly engage, is the consideration of whether cost-benefit analysis should use a non-monetary metric, such as aggregate utility, which might better map into a morally defensible social utility function. For an illuminating defense of this alternative approach, see Matthew Adler, *A Better Calculus for Regulators: From Cost-Benefit Analysis to the Social Welfare Function* (Duke Envtl. and Energy Econ. Working Paper Series, Paper EE 17-01, March 2017), <http://sites.nicholasinstitute.duke.edu/environmentaleconomics/files/2017/03/WP-EE-17-01.pdf>. For a helpful exploration of the relative merits of traditional forms of cost benefit analysis (built around monetary estimates of changes in consumer and producer surpluses) as opposed to

mension, located on the vertical axis of Figure One, relates to the standard of assessment required of the government body evaluating a new rule or some other course of action. Cost-benefit analysis can be entirely discretionary on the part of the agency—the most lax kind of requirement. Or there can be a requirement that an agency consider costs or both costs and benefits. More stringent regimes require break-even analysis or some sort of net benefit assessment, or even a fully monetized benefit assessment.⁶³

On this simple, two-dimensional mapping, one can locate various approaches. In Germany, for example, administrative agencies are required to consider costs (but not benefits) in adopting new regulations and have a fair amount of latitude in employing a range of analytical techniques.⁶⁴ In the United States, executive agencies subject to OIRA oversight are generally required to make a “net benefit assessment” for new regulations and are encouraged to quantify and monetize costs and benefits to the extent feasible.⁶⁵ The CFPB, in contrast, operates under a general statutory mandate requiring only the consideration of costs and benefits in the adoption of new regulations, and it follows a practice of engaging in quantitative and monetized analysis where feasible.⁶⁶

more sophisticated utilitarian approaches, see CASS R. SUNSTEIN, *THE COST-BENEFIT REVOLUTION* 39–77 (2018). See generally Richard Revesz, *Regulation and Distribution*, 93 N.Y.U. L. REV. 1489 (2018) (exploring reforms to incorporate elements of distributional analysis into administration decision-making at the federal level). Our analytical framework does, however, relate to distributional analysis to the extent that we do consider whether agencies used the concept of fairness as a justification for the adoption of the rules in our sample.

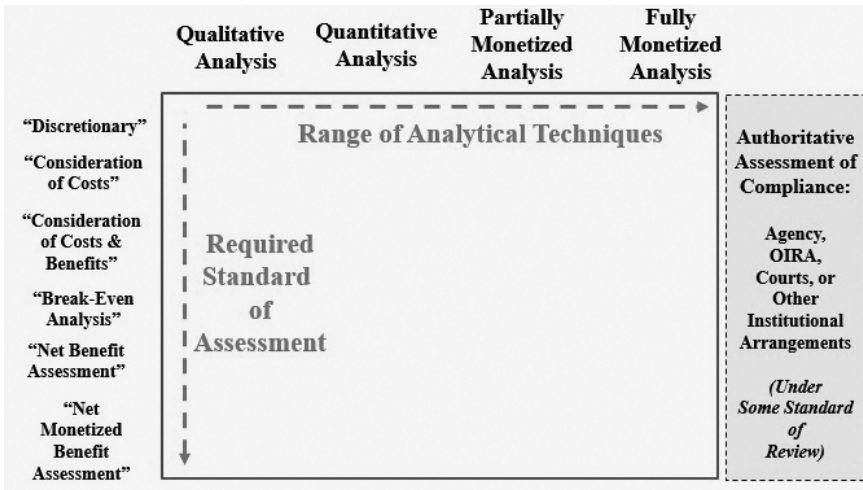
⁶³ One could easily imagine providing additional levels of gradation to Figure One, for example specifying with greater detail the standards for monetizing both costs and benefits, perhaps eliminating transfers or imposing some other restrictions on analysis.

⁶⁴ See National Council for the Review of Legal Norms, §§1(3), 2 (Ger.), <http://www.gesetze-im-internet.de/nkr/BJNR186600006.html>.

⁶⁵ See *infra* Box Two.

⁶⁶ *Id.*

FIGURE ONE - MAPPING COST-BENEFIT ANALYSIS



An additional dimension of differentiation—represented by the column to the extreme right-hand side of Figure One—relates to an issue of institutional design: what body has authority to decide whether an agency has complied with its obligations to engage in cost-benefit analysis. That could be left to the discretion of the agency itself, as seems to be the case in Germany.⁶⁷ It could fall to another governmental body, such as OIRA for executive agencies. The responsibility could lie with the courts, as suggested by *Business Roundtable* and related cases.⁶⁸ Some recent academic commentators have also suggested other institutional arrangements, such as a new oversight body for financial CBA or a panel of outside academic experts.⁶⁹

The financial CBA skeptics, discussed above in Part I.A, can be understood to be arguing that, because the analytical techniques located on the right-hand side of the horizontal axis of Figure One are not yet available, it does not make sense to impose a rigorous standard of assessment—that is, move down the vertical axis of Figure One—or to enlist courts for authoritative review. The defenders of financial CBA are more sanguine about the availability of more rigorous analytical techniques, but also generally take the position that only by imposing more stringent standards of assessment (moving down the vertical axis of Figure One) and empowering external bodies, like the courts or OIRA, will agencies invest in analytical techniques required for more sophisticated quantification and monetization of costs and benefits.⁷⁰

⁶⁷ National Council for the Review of Legal Norms, §§1(3), 2 (Ger.).

⁶⁸ *Business Roundtable v. SEC*, 647 F.3d 1144, 1148 (D.C. Cir. 2011).

⁶⁹ See *supra* note 32.

⁷⁰ See, e.g., Bubb, *supra* note 32. Interestingly, one of the leading skeptics of financial CBA has expressed enthusiasm for independent external assessment of financial CBA on the

The goal of the current study is to investigate how regulatory authorities currently conduct benefit analysis in consumer financial protection regulation and analogous regulatory fields. We explore which kinds of benefits these consumer protection regulations purport to provide and—within the framework of Figure One—how far along the horizontal axis their benefit analyses are located. This study bears on the debate between financial CBA enthusiasts and skeptics in that it offers a more comprehensive study of the quality of benefit analysis in this area of financial regulation than has heretofore been attempted. To the extent that the courts are moving towards a standard of judicial review that requires financial regulators to justify new regulations based on what might be called “best practices” in the field of cost-benefit analysis,⁷¹ our study offers a plausible summary of the current quality of cost-benefit analysis in consumer finance and analogous areas of consumer protection. Finally, and perhaps most importantly, the analysis that follows suggests where additional academic work would be most useful for improving financial cost-benefit analysis in the future. Developing a research agenda for the analysis of benefits in consumer financial protection regulation is implicit in much of the discussion that follows and is taken up directly in Part V below.

II. OVERVIEW OF SURVEY DESIGN STRUCTURE

We now turn to an overview of our survey design and implementation strategy. The results of the survey are reported in Part III and Part IV. As the CFPB is the source of one of our key samples, we include in Box Two an Overview of CFPB Statutory Requirements Related to Cost-Benefit Analy-

grounds that it would allow for useful cross-agency comparisons and encourage the development of new and better analytical techniques. *See* Coates, *supra* note 26, at 1009 (“Conceptual CBA involves a common language and mode of thought that could facilitate interagency dialogue by floating above any one statutory mandate or set of agency-specific regulatory goals Thinking through conceptual CBA for a rule can lead to novel insights about how the rule is (or is not) similar to rules issued by other agencies, or how it might generate unintended consequences [C]onceptual CBA/FR can facilitate improvements in quantified CBA/FR.”).

⁷¹ The state of this law in this area is unclear and may vary from agency to agency depending on the statutory standard under which the agency is acting. Some recent cases could be read to suggest that a statutory requirement for financial CBA establishes something like a best practices standard. For example, in *Business Roundtable*, the D.C. Circuit wrote “[t]he [SEC] also has a ‘statutory obligation to determine *as best it can* the economic implications of the rule.’” 647 F.3d at 1148 (emphasis added) (quoting *Chamber of Commerce v. SEC*, 412 F.3d 133, 143 (D.C. Cir. 2005); *see* *Chamber of Commerce v. SEC*, 412 F.3d 133, 145 (D.C. Cir. 2005) (“The Commission may ultimately decide the disclosure alternative will not sufficiently serve the interests of shareholders, but the Commission—not its counsel and not this court—is charged by the Congress with *bringing its expertise and its best judgment* to bear upon that issue.”) (citations omitted) (emphasis added); *see also* *R.J. Reynolds Tobacco Co. v. FDA*, 696 F.3d 1205, 1222 (D.C. Cir. 2012) (suggesting regulatory action not warranted because the agency failed to show that “enacting their proposed graphic warnings [on cigarette packages] will accomplish [its] stated objective of reducing smoking rates”).

sis. These standards establish the legal framework for cost benefit analysis at the Bureau.

A. Sample Selection

Our survey sample consists of three distinct subsamples. The first subsample is made up of nineteen regulations promulgated by the CFPB from its establishment in July 2011 through December 2013. This subsample represents all the major rulemakings that the CFPB adopted during this period, excluding only regulations that dealt with procedural matters unrelated to consumer finance or with purely technical matters.⁷²

⁷² Box Two summarizes the key elements of cost-benefit analysis under the CFPB's enabling legislation.

BOX TWO: OVERVIEW OF CFPB STATUTORY REQUIREMENTS RELATED TO
COST-BENEFIT ANALYSIS

This Box offers a brief overview of the statutory mandates that require the CFPB to consider benefits and costs in its rulemaking activities, as well as certain provisions that arguably relate to cost-benefit analysis.

1. General Rulemaking Under Section 1022(b)(2)

Under Section 1022(b)(2) of the Dodd-Frank Act (codified at 12 U.S.C. § 5512(b)(2)), the CFPB is required to consider benefits and costs in adopting new regulations. The relevant statutory language reads as follows:

In prescribing a rule under the Federal consumer financial laws—

(A) the Bureau shall consider—

(i) the potential benefits and costs to consumers and covered persons,⁷³ including the potential reduction of access by consumers to consumer financial products or services resulting from such rule; and

(ii) the impact of proposed rules on covered persons, as described in section 1026,⁷⁴ and the impact on consumers in rural areas⁷⁵

As a result of this provision, CFPB rulemakings routinely include a section titled “Section 1022(b)(2) Analysis,” which summaries the benefits and costs associated with the rulemaking in question.

2. Additional Requirements in Specific Regulatory Contexts

At least two other provisions in the Bureau’s enabling legislation contain explicit references to cost-benefit analysis. In contrast to the general rulemaking requirements of Section 1022(b)(2) mandating the mere consideration of benefits and costs, these additional references suggest that, in certain contexts, the Bureau is required to compare the identified benefits of a proposed regulation to identified costs.⁷⁶ For example, Section 1031(c)(1) of Dodd-Frank Act (codified at 12 U.S.C. § 5531(c)(1) (2012)) concerns the Bureau’s authority to declare certain practices unfair, deceptive or abusive. The subsection provides:

⁷³ A “covered person” is defined as “(A) any person that engages in offering or providing a consumer financial product or service; and (B) any affiliate of a person described in subparagraph (A) if such affiliate acts as a service provider to such person.” 12 U.S.C. § 5481(6) (2018).

⁷⁴ A covered person “as described in section 1026” is defined as “(1) an insured depository institution with total assets of \$10,000,000,000 or less; or (2) an insured credit union with total assets of \$10,000,000,000 or less.” 12 U.S.C. § 5516(a) (2018).

⁷⁵ 12 U.S.C. § 5512(b)(2) (2018) (emphasis added).

⁷⁶ The comparisons specified in these provisions are narrower than a full net benefit requirement of the sort contemplated in other contexts. *See, e.g.*, Exec. Order No.12,866, 58 Fed. Reg. 51,735 (Sept. 30, 1993); Memorandum (Circular A-4, Subject: Regulatory Analysis) from Off. of Mgmt. & Budget to the Heads of Exec. Agencies and Establishments 2 (Sept. 17, 2013), <https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/circulars/A4/a-4.pdf>.

The Bureau shall have no authority under this section to declare an act or practice in connection with a transaction with a consumer for a consumer financial product or service, or the offering of a consumer financial product or service, to be unlawful on the grounds that such act or practice is unfair, unless the Bureau has a reasonable basis to conclude that—

(A) the act or practice causes or is likely to cause substantial injury to consumers which is not reasonably avoidable by consumers; and

*(B) such **substantial injury is not outweighed by countervailing benefits to consumers or to competition.***⁷⁷

Somewhat similar in structure is Section 1041(c) of the Dodd-Frank Act (codified at 12 U.S.C. § 5551(c) (2012), which establishes standards under which the Bureau is required to adopt federal consumer protection regulations in an area when a majority of States have adopted state regulations stricter than those previously imposed by the Bureau. In subsection (c)(2), the provision specifies:

Before prescribing a final regulation . . . the Bureau shall take into account whether—

(A) the proposed regulation would afford greater protection to consumers than any existing regulation;

*(B) **the intended benefits of the proposed regulation for consumers would outweigh any increased costs or inconveniences for consumers, and would not discriminate unfairly against any category or class of consumers; and***

*(C) a Federal banking agency has advised that the proposed regulation is likely to present an unacceptable safety and soundness risk to insured depository institutions.*⁷⁸

3. Regulatory Flexibility Analysis

Like most other government agencies, the CFPB is required under the Regulatory Flexibility Act (RFA)⁷⁹ to consider whether proposed and final rules would have a significant economic impact on a substantial number of small entities. For proposed rules, agencies must generally provide either an Initial Regulatory Flexibility Analysis (IRFA) or a certification that the proposed rule will not have a significant economic impact on a substantial number of small entities along with the factual basis for this certification. Similarly, for final rules, agencies must generally provide either a Final Regulatory Flexibility Analysis (FRFA) or the certification and factual basis for certification just described.

⁷⁷ 12 U.S.C. § 5531(c)(1) (2018) (emphasis added).

⁷⁸ 12 U.S.C. § 5551(c)(2) (2018) (emphasis added).

⁷⁹ 5 U.S.C. §§ 601–12 (2018).

Both the IRFA and FRFA require agencies to consider significant alternatives. In addition, a FRFA must provide, “a description of the steps the agency has taken to minimize the significant economic impact on small entities...including a statement of the factual, policy, and legal reasons for selecting the alternative adopted in the final rule and why each one of the other significant alternatives to the rule considered by the agency which affect the impact on small entities was rejected.” However, the RFA explicitly permits qualitative or quantitative analysis in the IRFA and FRFA,⁸⁰ and it does not define “significant” or “substantial” for purposes of certification.

In addition to these general requirements, the Dodd-Frank Act imposes an obligation for the Bureau to consider “any projected increase in the cost of credit for small entities” in both the IRFA and FRFA. Further, the Dodd-Frank Act imposes an obligation that, prior to publishing an IRFA, the Bureau must engage in a consultation process with the Office of Information and Regulatory Affairs, the Small Business Administration, and small entity representatives regarding certain elements of the IRFA.⁸¹ Besides the Bureau, only the Environmental Protection Agency and Occupational Safety and Health Administration are subject to this requirement.⁸²

Finally, like most other agencies, the Bureau is required under the Regulatory Flexibility Act to review within ten years of publication final rules that have or will have a significant economic impact on a substantial number of small entities.⁸³

4. Retrospective Review of Significant Rules and Orders

The CFPB has a unique statutory mandate to engage in retrospective reviews of certain rulemakings. Under section 1022(d) of the Dodd-Frank Act (codified at 12 U.S.C. § 5512(d)) the Bureau must conduct an ex-post review of “significant rule[s] or order[s]”⁸⁴ within five years of the effective date of the rule:

⁸⁰ 5 U.S.C. § 607 (2018) (“In complying with sections 603 and 604 of this title, an agency may provide either a quantifiable or numerical description of the effects of a proposed rule or alternatives to the proposed rule, or more general descriptive statements if quantification is not practicable or reliable.”).

⁸¹ See Dodd-Frank Act, § 1100G(a) (“Panel Requirement” amending 5 U.S.C. § 609), § 1100G(b) (“Initial Regulatory Flexibility Analysis” amending 5 U.S.C. § 603), § 1100G(c) (“Final Regulatory Flexibility Analysis” amending 5 U.S.C. § 604).

⁸² 5 U.S.C. § 609(d) (2018).

⁸³ 5 U.S.C. § 610 (2018).

⁸⁴ There is no statutory definition for “significant rule or order” in the Dodd-Frank Act. Therefore, the determination of what is “significant” has been left to the Bureau itself. Although the Bureau has not published a test for whether a rule is a significant rule under section 1022(d), the GAO described the Bureau’s test in its eighth annual review of financial services regulations. See U.S. GOV’T ACCOUNTABILITY OFFICE, GAO-19-158, DODD-FRANK REGULATIONS: CONSUMER FINANCIAL PROTECTION BUREAU NEEDS A SYSTEMATIC PROCESS TO PRIORITIZE CONSUMER RISKS 18–24 (2018). As explained in the GAO report, the Bureau considers four factors in determining whether a rule is a significant rule. *Id.* at 18–19. The first factor is whether or not the annual ongoing cost of the rule exceeds \$100 million. *Id.* at 19. The other

(1) In general

*The Bureau shall conduct an assessment of each significant rule or order adopted by the Bureau under Federal consumer financial law. **The assessment shall address, among other relevant factors, the effectiveness of the rule or order in meeting the purposes and objectives of this subchapter and the specific goals stated by the Bureau.** The assessment shall reflect available evidence and any data that the Bureau reasonably may collect.*

(2) Reports

The Bureau shall publish a report of its assessment under this subsection not later than 5 years after the effective date of the subject rule or order.

(3) Public comment required

Before publishing a report of its assessment, the Bureau shall invite public comment on recommendations for modifying, expanding, or eliminating the newly adopted significant rule or order.

Section 1022(d) states that the assessment of a significant rule shall address the effectiveness of the rule in meeting certain purposes, objectives, and goals. There is no explicit requirement that the assessment consider the benefits and costs of the significant rule, as is generally required under Section 1022(b)(2)(A)(i) for new rules, nor that the assessment conduct a comparative analysis of the costs and benefits of significant rules. On the other hand, Section 1022(d) does allow for addressing “other relevant factors.” Given the directive to include relevant data in the assessment and the Bureau’s broad powers to collect such information, it is possible that a cost-benefit analysis of some sort could be conducted during these reviews.⁸⁵

factors are the “effects [of the rule] on the features of consumer financial products and services . . . effects on business operations of providers that support the product or service, and . . . effects on the market, including the availability of consumer financial products and services.” *Id.* No single factor determines the outcome, although the first factor is weighed “more heavily” and the other three factors are considered “cumulatively.” The test is therefore related to, but somewhat different from, the factor tests for “major rule” under the Congressional Review Act and “significant regulatory action” under Executive Order 12866. The Congressional Review Act defines a “major rule” as any rule that the OIRA Administrator “finds has resulted in or is likely to result in: (A) an annual effect on the economy of \$100,000,000 or more; (B) a major increase in costs or prices for consumers, individual industries, Federal, State, or local government agencies, or geographic regions; or (C) significant adverse effects on competition, employment, investment, productivity, innovation, or on the ability of United States-based enterprises to compete with foreign-based enterprises in domestic and export markets.” 5 U.S.C. § 804 (2018). Executive Order 12866, Section 3(f), defines “significant regulatory action” as any action likely to result in a rule that may: “(1) Have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities; (2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency; (3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or (4) Raise novel legal or policy issues arising out of legal mandates, the President’s priorities, or the principles set forth in this Executive order.” Exec. Order No. 12,866, 58 Fed. Reg. 51,735 (Sept. 30, 1993).

⁸⁵ Dodd-Frank Act § 1022(c)(4)(A) gives the Bureau the authority to gather information for purposes of both market monitoring and assessment. 12 U.S.C. § 5512(c)(4)(A) (2018). Dodd-Frank Act § 1022(c)(4)(B) further provides that the “Bureau may . . . gather and compile information from a variety of sources, including examination reports concerning covered persons or service providers, consumer complaints, voluntary surveys and voluntary interviews of consumers, surveys and interviews with covered persons and service providers, and review

In October 2018, the Bureau published its first assessment report, for a rule on consumer remittance transfers.⁸⁶ In January 2019, the Bureau published two additional assessment reports, for rules establishing ability-to-repay requirements for mortgage loans and servicing standards for these loans.⁸⁷ The reports provide extensive analyses of the impacts of the rules, to the extent that this was possible with available information and data that the Bureau could reasonably collect. The Bureau notes that this information on impacts would be needed for any retrospective analysis of benefits and costs. However, with certain exceptions, the Bureau did not monetize major benefits and costs or compare cumulative monetized benefits and costs to each other.⁸⁸

5. Paperwork Reduction Act and Congressional Review Act

As with most agencies, Bureau rulemaking is subject to requirements of the Paperwork Reduction Act and the Congressional Review Act.

of available databases. . .” 12 U.S.C. § 5512(c)(4)(B) (2018). The Bureau can also “require covered persons and service providers to file reports and answers to questions with the Bureau,” so that it may fulfill the broader “monitoring, assessment, and reporting responsibilities imposed by Congress.” 12 U.S.C. § 5512(c)(4)(B)(ii) (2018). Additionally, the statute gives the Bureau the right to access reports of examination created by other Federal agencies, including the prudential regulators. Dodd-Frank Act § 1022(c)(6)(B), 12 U.S.C. § 5512(c)(6)(B) (2018). Like other agencies, however, the Bureau is subject to the Paperwork Reduction Act and generally cannot survey 10 or more “persons” (including business entities) without approval from the Office of Management and Budget. 44 U.S.C. §§ 3501–20; *see* 44 U.S.C. § 3502(3)(A)(i) (2018) (defining “collection of information” to include posing identical questions to ten or more persons); 44 U.S.C. § 3507 (2018) (prohibiting collection of information absent certain conditions, including approval from the Director of the Office of Management and Budget).

⁸⁶ BUREAU OF CONSUMER FIN. PROT., REMITTANCE RULE ASSESSMENT REPORT (2018), https://s3.amazonaws.com/files.consumerfinance.gov/f/documents/bcfp_remittance-rule-assessment_report.pdf.

⁸⁷ BUREAU OF CONSUMER FIN. PROT., ABILITY TO REPAY AND QUALIFIED MORTGAGE RULE ASSESSMENT REPORT (2019), https://files.consumerfinance.gov/f/documents/cfpb_ability-to-repay-qualified-mortgage_assessment-report.pdf; BUREAU OF CONSUMER FIN. PROT., 2013 RESPA SERVICING RULE ASSESSMENT REPORT (2019), https://files.consumerfinance.gov/f/documents/cfpb_mortgage-servicing-rule-assessment_report.pdf; *see also* David Silberman, *Assessing our Rules: Our Reports on the Ability to Repay and Qualified Mortgage Rule and the RESPA Mortgage Servicing Rule*, BUREAU OF CONSUMER FIN. PROT. (Jan. 11, 2019), <https://www.consumerfinance.gov/about-us/blog/assessing-our-rules-our-reports-ability-repay-and-qualified-mortgage-rule-and-RESPA-mortgage-servicing-rule/>; Press Release, Bureau of Consumer Fin. Prot., Consumer Financial Protection Bureau Publishes Assessments of Ability-to-Repay and Mortgage Servicing Rules (Jan. 10, 2019), <https://www.consumerfinance.gov/about-us/newsroom/consumer-financial-protection-bureau-publishes-assessments-ability-repay-and-mortgage-servicing-rules/>.

⁸⁸ *See, e.g.*, BUREAU OF CONSUMER FIN. PROT., *supra* note 86, at 3 (“[A]lthough this assessment addresses matters relating to the costs and benefits of the Rule, neither this report nor other assessments under development include a benefit-cost analysis of the Rule or parts of the Rule. For Section 1022(d) assessments that the Bureau undertakes going forward, the Bureau in its discretion is reconsidering whether to include cost-benefit analysis in its assessment and its published report. The Bureau expects that this report will help inform the Bureau’s future policy decisions concerning remittance transfers, including whether to commence a rulemaking proceeding to make the Remittance Rule more effective in protecting consumers, less burdensome to industry, or both.”).

In certain respects, the regulations that the CFPB adopted during this period have distinctive features. Quite a number of these regulations involve mortgage lending and other areas of credit markets, and in many instances the CFPB was operating under statutory mandates to complete rulemaking procedures within a specified period of time. A number of the CFPB regulations articulate jurisdictional boundaries, such as the so-called “Larger Participant” rulemakings, in which the CFPB specified the scope of its supervisory oversight. Other regulations include regulatory safe harbors that provide exemptions from the application of regulatory requirements. The Remittance Safe Harbor Regulation, which the CFPB promulgated in August 2012, illustrates a regulation of this sort.

The second subsample of regulation in the survey consists of fifteen regulations adopted by independent agencies, that is, federal agencies that are not subject to OMB review under Executive Order 12866.⁸⁹ This subsample was developed on an ad hoc basis and consists largely of regulations adopted by agencies with financial oversight responsibilities, including the

TABLE ONE – OVERVIEW OF SAMPLE OF 72 REGULATIONS

Consumer Financial Protection Bureau (19)

Independent Agencies (15)

- CFTC (6 financial)
- CPSC (2)
- FRB (2 financial)
- FTC (2;1 financial)
- SEC (3 financial)

Executive Agencies (subject to OIRA review) (38)

- DOE (3)
- DOJ (4)
- DOL (7; 4 financial)
- DOT (7)
- FSOC (2 financial)
- HHS (7)
- HUD (2 financial)
- OCC (2 financial)
- USDA (4)

Note: SEC includes 1 joint
With CFTC; DOL incudes 2
Joint with Treasury & HHS;
DOT includes one joint with EPA]

Federal Reserve Board (FRB), the SEC, and the CFTC, although some independent agencies dealing with analogous regulatory matters, such as the CPSC and the Federal Trade Commission (FTC), were also included. These rulemakings were all promulgated between the years 2010 and 2012. While most of the rulemakings included in this subsample represent financial regu-

⁸⁹ 58 Fed. Reg. 51,735 (Sept. 30, 1993).

latory contexts analogous to those of the CFPB, a few—particularly those of the CFTC—address issues of financial stability or prudential regulation.

The final subsample includes thirty-eight rulemakings of executive agencies subject to OMB oversight under Executive Order 12866, during the period 2008 to 2013, a range that begins a few years earlier than the time periods used for the other subsamples. This subsample, which we sometimes denominate the “OIRA subsample” based on the fact that the cost-benefit analyses of these agencies are reviewed by OIRA, were compiled through a structured procedure designed to ensure that the subject matters of these regulations would be roughly analogous to the regulations in the CFPB subsample.

The first step in developing this OIRA subsample was to identify all final rules and interim final rules issued by the nine executive agencies listed above that were deemed significant under Executive Order 12866 and were published in the Federal Register from July 1, 2008 through June 30, 2013.⁹⁰ The search engine at www.federalregister.gov readily produces a spreadsheet with all rules that meet these criteria, together with associated corrections, technical amendments and notices (for example, approvals of information requests). This gives a database with 911 items. After some inspection and sorting by various criteria (including page count) we were able to roughly separate significant rulemakings from the ancillary material.

The next step was to systematically select the rules for the study. As discussed above, we attempted to select a set of regulations that addressed regulatory problems that were roughly analogous to the kinds of regulatory problems that the CFPB and other agencies with a consumer protection mandate address in their rulemakings. By controlling for subject matter, we expected that the regulatory impact analyses for these rules would navigate analogous challenges and might therefore be informative in regard to the potential characteristics of the impact analyses for consumer protection regulations and especially consumer financial protection regulations. These characteristics include, among other things, the extent to which the benefits can be quantified and monetized.

To develop the selection criteria, we took as fundamental that the class of regulations we wanted to study addressed “consumer alternatives” (that is, alternatives for personal consumption, investment, or employment), the providers of these alternatives, or the consumer-facing or “nearly” con-

⁹⁰ Prior to the formal development of the OIRA subsample, fifteen rules focusing on consumer products, choice and protection (broadly defined) from eight executive agencies were reviewed for possible inclusion in this study. All fifteen of these preliminary rules were significant and published within the time frame of the analysis and fourteen were ultimately included in the OIRA subsample. As noted above, the Dodd-Frank Act removed the Office of the Comptroller of the Currency from OMB Oversight, so for this agency the range for inclusion ended on July 31, 2010. *Supra* note 7 (citing Dodd-Frank Act §§ 315, 1100D(a), 44 U.S.C. §3502(5) (2018)).

sumer-facing activities of these providers.⁹¹ These criteria are broad enough to capture the most common requirements or factors in traditional consumer protection regulations. These requirements include mandatory disclosure to consumers; restrictions on product features; requirements on the providers themselves (for example, registration, certification, supervision); requirements on the providers of after-market services (for example, on debt collectors and loan servicers); requirements to limit conflicts-of-interest or their effects (for example, restrictions on the timing, sources, and types of compensation), and requirements for fair access to products or services. We also looked for rules that affected large numbers of people, were important on other intuitive criteria, and helped balance the sample in regards to the types of requirements imposed.

As summarized above in Table One, our full sample consists of seventy-two regulations from fifteen different agencies, several of which were engaged in joint rulemakings. Aside from the CFPB, with nineteen regulations, the Department of Health and Human Services (HHS), the Department of Transportation (DOT), and the Department of Labor (DOL) had the most regulations in the sample, with seven each. The CFTC had the next largest number of regulations, with six. In the analysis that follows in Part II, we typically report results either in terms of the full sample of seventy-two reg-

TABLE TWO – SCOPING CRITERIA FOR OIRA SUBSAMPLE

	Imposes, eliminates or modifies requirements on the design or performance of consumer alternatives; the consumer-facing activities of providers of consumer alternatives; or the consumer-facing activities of providers of products or services offered in connection with consumer alternatives.				Imposes, eliminates or modifies other requirements on the providers of consumer alternatives or on the providers of products or services offered in connection with consumer alternatives.			
	Disclosure	Fair Access	Scope Adjustment	Other significant	Application-Registration-Certification-Supervision of provider	Reporting to Government or Recordkeeping	Conflict of Interest	Other significant
CFPB Regulations (19)	11	0	5	12	12	4	1	2
(percentage)	58%	0%	26%	63%	63%	21%	5%	11%
Independent Agencies (15)	4	0	3	2	2	8	4	4
(percentage)	27%	0%	20%	13%	13%	53%	27%	27%
OIRA Agencies (38)	20	7	0	22	22	19	4	25
(percentage)	53%	18%	0%	58%	58%	50%	11%	66%
Total (72)	35	7	8	36	36	31	9	31
(percentage)	49%	10%	11%	50%	50%	43%	13%	43%

ulations or in terms of our three principal subsamples: the CFPB subsample (nineteen), the Independent Agency subsample (fifteen), and the OIRA Agency subsample (thirty-eight). In a limited number of cases, we break out the rulemakings, other than CFPB rulemakings, that involve financial regulations in a separate subsample we denominate “Other Financial Rulemak-

⁹¹ The criteria echo to some extent the defining characteristics of a consumer financial product or service in the Dodd-Frank Act. Roughly speaking, a consumer financial product or service is a financial product or service that “is offered or provided for use . . . primarily for personal, family or household purposes” or “is delivered, offered or provided in connection with” such personal, family or household financial products or services. *See* Dodd-Frank Act § 1002(5), 12 U.S.C § 5481(5) (2018).

ings.” This subsample includes all the rulemakings of the CFTC, the FRB, the SEC, the Financial Stability Oversight Council (FSOC), the Department of Housing and Urban Development (HUD) and the Office of the Comptroller of the Currency (OCC), as well as five rulemakings of the Federal Trade Commission (FTC) and the DOL that address matters of financial regulation. The Other Financial Rulemaking subsample includes twenty-two regulations, including regulations from both the Independent Agency subsample and the OIRA subsample.

B. *Development of the Taxonomy of Benefits*

Our premise in undertaking this study was that the seven justifications for consumer financial regulation identified in Campbell et al.⁹² would provide a workable framework for cataloging the kinds of benefits that regulatory authorities would assert as flowing from rulemakings in consumer finance or in contexts that present analogous challenges to consumer decision-making or welfare. Those justifications, which are summarized in Box Three, include both neo-classical justifications for regulatory interventions as well as justifications grounded in behavioral economics and principles of fairness. To validate this premise, we assigned a pair of research assistants in the spring of 2013 to undertake a preliminary review of several dozen regulations, most but not all of which were eventually included in our final survey sample. Among other things, we asked these two research assistants to identify all the benefits that agencies identified in the preamble material for final rules and to ascertain whether all of these identified benefits could be comfortably mapped onto the justifications identified by Campbell et al.

Our research assistants reported back that there were six categories of benefits that routinely appeared in these regulations but that did not easily map onto the Campbell et al. justifications. Of the six, two of the new benefits that our research assistants identified—correction of principal-agent issues and improved international coordination—might be understood as specific instances of neo-classical market failures, such as information failures and externalities. However, as rulemaking releases

⁹² See Campbell et al., *Consumer Financial Protection*, *supra* note 1, at 91–114. Organizing our analysis around market failures is conceptually similar to the British approach to financial CBA which begins with market studies designed to “[i]dentify, as precisely as possible, the specific ways in which the market is not working well . . . and [a]ssess the nature of the harm caused.” See Fin. Conduct Auth, *supra* note 9, at 7.

BOX THREE – JUSTIFICATIONS FOR CONSUMER FINANCIAL REGULATION⁹³

Potential Problems	Explanation	Example
Externalities	When the actions of one party impact another party who had no say in the outcome	Foreclosures are costly for entire neighborhoods, not just the borrowers and lenders who are directly involved
Information Failures	When one party has more information relevant to the transaction than the other	Consumers may have better information than the bank about their likelihood of defaulting on a loan
Market Power	The ability of firms to set prices higher than their costs of production	The costs of comparing the prices and features of different cell phone plans reduces the likelihood that consumers will switch providers and allows firms to charge higher prices
Public Goods	When it is difficult for firms to prevent consumers from using a product even if they haven't paid	Unbiased information about products, firms and markets tends to be underprovided because it is costly to supply and consumers can often access information without paying for it
Cognitive Biases	Systematic errors in judgment that result from the way our brains process information	Individuals tend to place more weight on the immediate consequences of a decision than on the future consequences which may lead them to save too little or borrow too much
Limited Financial Capabilities	How much people know about financial markets and how to make financial decisions	Dementia, which increases steadily with age, is one reason that the elderly are often the primary targets of financial scams
Unfair Outcomes	Markets may make some people better off and other people worse off	The costs to banks of providing “free checking” are paid for by those consumers who incur overdraft charges

⁹³ Adapted from Campbell et al., *Making Financial Markets Work for Consumers*, *supra* note 1, at 47–54.

discussed these benefits in a distinctive manner,⁹⁴ we added them to our taxonomy. We also added two additional benefits that reflect efforts to adjust to existing legal standards. The first encompasses regulatory amendments that clarify legal standards by reducing litigation costs. The second involves reforms that enhance compliance efforts and improve self-regulation on the part of regulated entities. Finally, we added two residual categories for improvements in consumer welfare and enhanced market efficacy, which were often cited as benefits without additional explanation of why markets were previously inefficient or consumer welfare not optimized.⁹⁵

Table Three summarizes the full taxonomy of benefit categories that we employed in our survey. While the taxonomy we developed incorporates both broad economic and narrower pragmatic goals in rulemaking, one cannot deny that there are other taxonomies that might be employed for this project. There are different ways of characterizing the benefits of consumer protection—such as lowering prices or deterring wrongdoing or even simply protecting consumers—that do not track our taxonomy. Or one could substitute a transaction cost perspective for some of our categories. One could even combine the benefits we have identified in different ways, such as folding principal-agent issues into the more general category of information failures. Our framework does, however, as a practical matter, do a fairly good job of capturing the kinds of benefits that regulatory authorities currently cite as the positive effects of consumer protection regulations. As is explained in more detail below, the framework is also one that allowed classification of benefits in a manner that could be replicated with reasonable consistency across a number of different individual research assistants.

C. *Survey Structure*

Over the course of the 2013–2014 academic year, a dozen research assistants from Harvard Law School utilized our benefits taxonomy to conduct a systematic review of the seventy-two rulemakings in our sample. Two research assistants analyzed each regulation, with our lead research assistant reviewing all seventy-two regulations and independently coding certain key information. Our research assistants were given detailed instructions on how to code each regulation and followed a number of protocols designed to

⁹⁴ See, e.g., CFPB Mortgage Servicing Rules under the Real Estate Settlement Procedures Act (Regulation X), 78 Fed. Reg. 10,696, 10, 843-44 (Feb. 14, 2013) (describing principal agent problem in connection with mortgage servicers); CFTC Final Rulemaking on Swap Data Recordkeeping, 77 Fed. Reg. 35,200, 35,221 (June 12, 2012) (“[A] universally available system for uniquely identifying legal entities in multiple financial data applications . . . would constitute a global public good”).

⁹⁵ As explained below, our instructions for research assistants specified that consumer welfare and market efficiency should be coded as an asserted benefit only if the discussion was not tied to another of the benefits in our taxonomy. Accordingly, these two benefits served as residual categories in our analysis.

TABLE THREE – THE CAMPBELL JUSTIFICATIONS (EXPANDED)

Neoclassical Perspectives

- Information Failures
 - Principal-Agent Problems
- Market Power
- Public Goods
- Externalities
 - International Coordination

Behavioral Economics

- Cognitive Biases
- Limited Financial Capabilities

Unfairness

Adjustments of Existing Legal Standards

- Clarity/Reducing Litigation
- Increased Compliance/Self Regulation

Residual Benefits

- Consumer Welfare
- Market Efficiency

maintain consistency of analysis across the sample. In summary, the research assistants were instructed to ascertain the extent to which the agency in question evaluated the benefits and costs of proposed regulations, and then to characterize the manner in which benefits related to our taxonomy were analyzed. Their review covered both qualitative and quantitative analyses of benefits, as described in more detail below. The survey process also included a number of queries regarding the manner in which agencies conducted their benefit analysis and the sources upon which the agencies relied in their analysis. Research assistants were also asked to extract the text of key components of the benefit analysis and to annotate PDF versions of Federal Register releases associated with each regulation, identifying the sections of each release dealing with the benefits identified. Attached as Appendix Two is a sample of the form the research assistants utilized to evaluate these regulations and the first few pages of the instructions given to the research assistants for this assignment.

As the numerical scores that our research assistants were instructed to report factor prominently into the analysis that follows, some additional detail on the scoring procedures is in order. For each regulation, our research

assistants were asked to ascertain which, if any, of our thirteen benefit categories were discussed in the Federal Register release associated with the rulemaking and then, for each benefit, to give “Qualitative Scores” on a six-tier scale: 0 = Not mentioned or implied; 1 = Implied, but not mentioned; 2 = Mentioned as a benefit; 3 = Discussed in detail; 4 = Key benefit cited; 5 = Only benefit cited. The Qualitative Score for a benefit category reflects the emphasis that the benefit analysis places on the benefit category as a reason for regulating. Note that “emphasis” reflects both the relevance of a benefit (for example, externalities are not relevant if the rule addresses transactions with no external effects) and, conditional on relevance, the amount of detail and focus in the analysis of the benefit. We discuss this further below. The scores provide an ordinal ranking of benefits according to stated emphasis. Further, for certain analyses, the average Qualitative Score (for example, across rules with a common relevant benefit) provides a useful summary of the data.

Our research assistants were also asked to score the effort with which the agencies attempted to quantify both benefits and costs identified in each rulemaking. This generated a series of “Quantification Scores” for the surveyed regulations. Again, scoring was on a six-tier scale: 0 = Qualitative, No explanation for why not quantified; 1 = Qualitative, Explanation for why not quantified; 2 = Quantitative Data, Impact not Quantified; 3 = Impact Quantified, Not Monetized; 4 = Some Monetization; and 5 = Fully Monetized. Where practical, we also asked the research assistants to indicate for which benefit category the Quantification Score related. The scores provide an ordinal ranking of benefit and cost analyses according to quantification effort, and we find that for certain analyses the average Quantification Score provides a useful summary of the data.

All research assistants were given detailed instructions on how to undertake these scoring procedures and other elements of Template creation, and they underwent an initial training session before beginning work. Two different research assistants were assigned to code each regulation in our sample. Each research assistant initially made independent evaluations of each assigned regulation, and then was asked to meet with the other research assistant coding the same rule and review their results. Each pair was encouraged to reach consensus on the appropriate coding of their regulation, but was also instructed to maintain separate scores if they could not agree on a single score. Research assistants were also encouraged to communicate with our lead research assistant regarding interpretative issues and questions. At several points during the coding process, the research assistants met collectively to discuss difficult coding decisions and open questions. Our lead research assistant reviewed all coding decisions and did an independent third coding of the Qualitative Scores for each of the thirteen benefit categories for each of the seventy-two regulations in our survey.

D. The Resolution of Inter-Coder Disagreements and Assessments of Inter-Coder Reliability

As with any survey design, one potential concern is the possibility of inconsistencies across coding personnel. The procedures described above were designed to address that concern, and we also undertook several retrospective reviews of our data to ascertain the extent to which inter-coder reliability presented a problem. Table Four offers one relatively crude evaluation of this issue. The table reports differences in our Qualitative Scores for 936 benefit scores.⁹⁶ On average, our research assistants differed in their Qualitative Scores only twelve percent of the time, so they were in agreement in benefit scores in eighty-eight percent of their observations. Differences of opinion were significant—meaning Qualitative Scores differed across research assistants by more than one tier on the six-tier scale—in only four percent of the cases. As reported in Table Four, Qualitative Scoring was slightly less consistent in certain benefit categories, including the residual categories of Consumer Welfare and Market Efficiencies. Research assistants were instructed to use these categories only when other benefits were neither expressly stated nor implied, and that instruction may have contributed to the higher degree of variation in these scores.⁹⁷

⁹⁶ This table reflects the scoring of seventy-two regulations. For each regulation, thirteen benefit categories received Qualitative Scores, for a total of 936 benefit scores for each of three research assistants.

⁹⁷ As a further check on inter-coder reliability, we employed the krippalpha module in Stata to estimate Krippendorff alpha intercoder reliability coefficients for the full range of data collected by our research assistants. (In terms of interpretation, a Krippendorff alpha coefficient of 1 indicates perfect reliability, 0 indicates an absence of reliability, and < 0 indicates that disagreements are systematic.) The average Krippendorff alpha across all numerical variables equals 0.9058, which implies a high degree of inter-coder reliability.

TABLE FOUR – VARIATION IN RA QUANTIFICATION OF BENEFITS
(936 BENEFIT OBSERVATIONS; EACH WITH 3 SEPARATE RA
EVALUATIONS)

	Negative Externalities Variation	Information Failures Variation	Market Power Variation	Public Goods Variation	Cognitive Biases Variation	Limited Financial Capabilities Variation	Unfair Outcomes Variation
Any Variation	18%	14%	7%	14%	3%	6%	14%
Variation > 1	4%	3%	1%	7%	0%	4%	3%
	Principal/Agent Issues Variation	Clarity: Reducing Litigation Variation	Increased Compliance/Self-Regulation Variation	International Coordination Variation	Consumer Welfare Variation	Market Efficiency Variation	All Benefits Average Variation
Any Variation	8%	13%	17%	1%	15%	22%	12%
Variation > 1	1%	6%	11%	1%	8%	8%	4%

In terms of resolving the remaining inter-coder disagreements, we employed the following procedures. As a first step, we adopted a modal coding convention if two or more coders agreed on the score. In cases where all coders had separate scores, we averaged the remaining scores as our primary dispute resolution technique. As an alternative resolution technique for the Qualitative Scores, where our lead research assistant scored all seventy-two regulations in the survey, we utilized the lead research assistant's score, rather than the average of the three scores.⁹⁸

E. Reservations and Limitations

While we are confident that our survey techniques generate reasonably consistent and informative data with respect to the surveyed regulations, there are several limitations to our research design. One limitation arises from the challenge of maintaining consistent coding conventions for our thirteen benefit categories across seventy-two regulations and a coding period that lasted six months. Particularly with respect to instances in which the Federal Register releases combined discussion of information failures with limited financial capabilities or principal-agent issues, there was subjectivity in determining whether one or two benefits had been asserted. As our research team became more cognizant of such difficulties, the standards of coding may have shifted subtly across the sample, producing somewhat

⁹⁸ An advantage of this alternative approach is that it generates only integer scores, which are amenable to a broader range of statistical tests. We have not uncovered any instances in which the alternative approach produces different results than those reported in the text.

lower benefit counts in the regulations coded later in the process (the OIRA subsample).

Another complexity arises out of different drafting conventions across agencies surveyed. In regulations that have very extensive cost-benefit sections (especially the independent agencies with statutory mandates), our research assistants spent relatively little time reviewing sections of the Federal Register release beyond the cost-benefit section. With many of the regulations in the OIRA subsample, however, Federal Register releases had brief cost-benefit sections and referred readers to a separate Regulatory Impact Analysis document for a more thorough cost-benefit analysis. In these cases, our research assistants reviewed other sections of the Federal Register release to ensure they cataloged the full set of asserted benefits. This additional review was intended to compensate for the differences in presentation and enhance both the accuracy—and thus the comparability across agencies—of our benefit counts, Qualitative Scores and Quantification Scores. We cannot know for certain, however, if these efforts were successful. We return to this point in the discussion of our results.⁹⁹

III. QUANTITATIVE REVIEW OF SURVEY RESULTS

This section presents a quantitative review of our survey results, focusing on aggregate data across the full sample as well as various subsamples. In section IV, which follows, we present a more granular review of benefit analysis for a selection of twenty exemplars drawn from our full sample.

A. *The Incidence of Benefit Analyses*

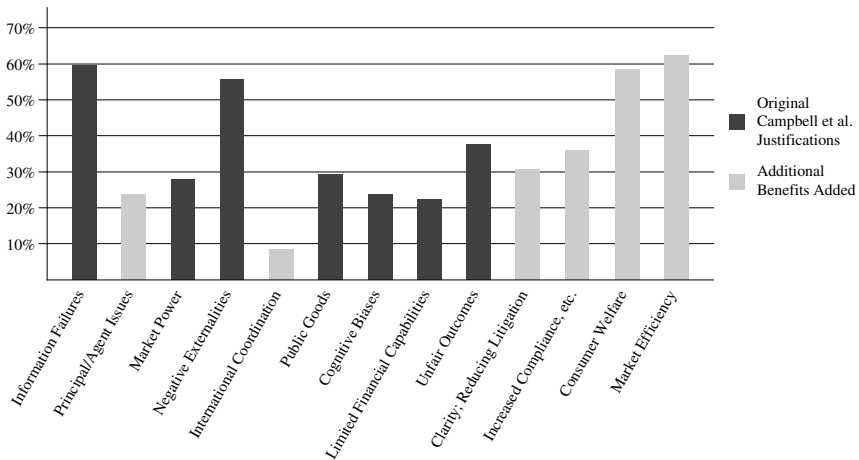
We begin with a review of the distribution of benefit analyses in our survey, starting first with the full sample of seventy-two regulations and focusing on the incidence of benefit analyses.¹⁰⁰ As displayed in Figure Two,

⁹⁹ In preparing our discussion of exemplars below in Part IV, we did make extensive use of Regulatory Impact Analyses in order to cull out details of benefit quantification.

¹⁰⁰ In Figure Two and subsequent figures and tables, the incidence of a benefit category for a particular regulation is measured by whether that benefit category received a Qualitative Score greater than zero for that particular regulation. In other words, the benefit category had to at least be implied in the Federal Register release. If a benefit category is at least implied in half of a group of regulations, then that benefit category has an incidence of fifty percent within that group. Elsewhere we will present data on the detail and focus (“intensity”) of benefit analysis for the full sample or specific subsamples. *See, e.g., infra* Part III.B. There, intensity is measured by the average Qualitative Score for the population in question, conditional upon the Qualitative Score being greater than zero. This intensity measure is designed to convey how thoroughly a benefit was evaluated once the agency or agencies in question identified the benefit category as relevant. If an agency discusses a particular benefit in detail (earning a Qualitative Score for that benefit category of 3.0 whenever that benefit is mentioned, *see supra* Part II.C), then the regulation would be considered to have a benefit intensity score of 3.0 for that benefit category. Figure Six, below, reports this intensity measure under the heading “Average Qualitative Scores When Positive” for the CFPB subsample and the subsample of all other agencies.

all of the thirteen benefit categories identified in our taxonomy were represented in the survey results. Information Failures and Negative Externalities were the most commonly cited benefits from the original Campbell et al. justifications, being present in 59.7 percent and 55.6 percent of the surveyed regulations, respectively. However, Consumer Welfare and Market Efficiencies—two residual benefit categories added as a result of our preliminary survey—were actually present even more frequently, with incidences of 58.3 percent and 62.5 percent, respectively. Other benefit categories appearing in more than a third of all survey regulations were the reduction of unfair outcomes (37.5 percent) and increased compliance/self-regulation (36.1 percent).

FIGURE TWO - INCIDENCE OF POSITIVE QUALITATIVE SCORES ACROSS COMBINED SAMPLE OF REGULATIONS (N=72)



When the full sample is decomposed into various subsamples, significant differences in the incidence of benefit categories begin to emerge. Figures Three through Six give four different presentations of the incidence of benefit analyses.¹⁰¹

Figure Three shows that the most prominent benefits in the nineteen regulations in the CFPB subsample were providing clarity-reducing litigation, improving consumer welfare, addressing information failures, and addressing unfair outcomes. Compared to the regulations of other agencies included in the full sample, the CFPB subsample was more likely to mention providing clarity-reducing litigation, improving consumer welfare, addressing principal-agent issues, and addressing market power. The frequency of providing clarity-reducing litigation may reflect the fact that many of the

¹⁰¹ Note that the CFPB bars are the same in Figures Three through Five. They represent the incidence of benefit analysis in the CFPB subsample.

CFPB rules were written pursuant to new statutory requirements, and therefore added definitions and specificity to those requirements. The frequency of reducing market power may reflect the importance of mandated disclosures, which can reduce search costs and the pricing power that search costs can create. The CFPB was also relatively more likely to discuss behavioral economic benefits (cognitive biases and limited financial capabilities). On the other hand, the CFPB was relatively less likely to cite the reduction of negative externalities, international coordination, and the promotion of public goods.

Figure Four decomposes the incidence of positive benefit scores across three subsamples: the CFPB, the other independent agencies, and the OIRA agencies. A few interesting distinctions emerge. First, the reduction of cognitive biases is mentioned infrequently compared to other benefits. This benefit, however, is almost equally prominent for the CFPB and the OIRA agencies, while it appears not to figure at all into the benefit analyses of the other independent agencies. Second, benefits associated with adjustments to existing legal baselines (providing clarity-reducing litigation and increased compliance) figure less prominently in the OIRA subsample than in other subsamples. Third, and perhaps not surprisingly, international cooperation emerges as nearly an exclusive concern of the independent agencies.

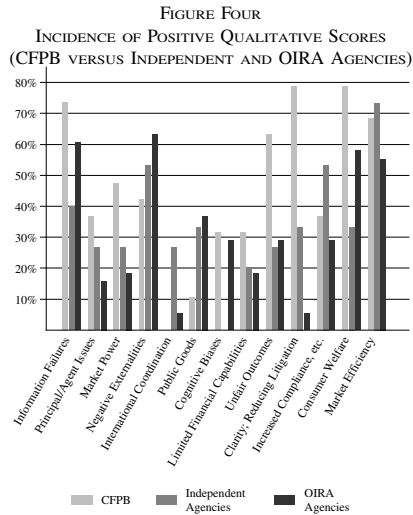
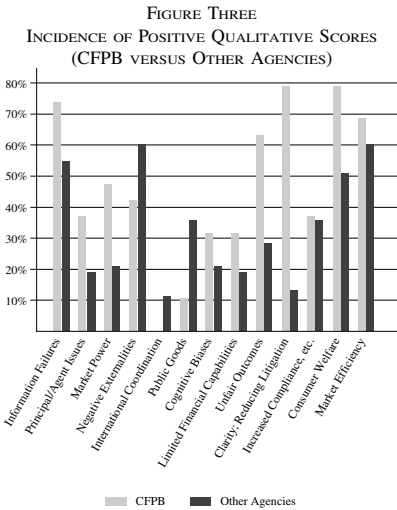


Figure Five compares the CFPB subsample with a subsample of twenty-two regulations involving financial rulemakings of other agencies (both independent and those subject to OIRA review). Comparing Figure Five and Figure Three, it is clear that restricting attention to financial rulemakings reduces the differences in the frequency with which benefits are mentioned. For example, in Figure Five, both subsamples are nearly identical in the frequency of addressing limited financial capabilities and improving

market efficiency. In Figure Three, these benefits are more frequently mentioned in the CFPB subsample. Even within the class of financial rulemaking, however, the CFPB has a relatively greater focus on information failures, principal-agent issues, market power, and cognitive biases. There is also a substantially greater emphasis on consumer welfare.

Figure Six separates out regulations in our sample that adopt significant consumer disclosure standards. Thirty-five of our seventy-two rulemakings have mandated significant consumer disclosure standards. Eleven of these thirty-five are by the CFPB (fifty-eight percent of the CFPB total), four by Independent Agencies (twenty-seven percent), and twenty by OIRA Agencies (fifty-three percent). The fact that Independent Agencies mandated fewer significant consumer disclosures than the CFPB is consistent with the notion that these agencies focus less on transactions directly involving consumers. We do not, however, claim that these rulemakings are representative for these independent agencies, either individually or as a group.¹⁰²

Perhaps not surprisingly, information failures, principal-agent issues, and market power are more prevalent in the disclosure rulemakings, as are behavioral economic benefits (reducing cognitive biases and addressing limited financial capabilities). The disclosure regulations are less likely to be associated with benefits tied to corrections of legal baselines, especially increased compliance/self-regulation. And of course, disclosure regulations only infrequently improve international coordination.

FIGURE FIVE
INCIDENCE OF POSITIVE QUALITATIVE SCORES
(CFPB RULEMAKINGS VERSUS OTHER FINANCIAL
RULEMAKINGS)

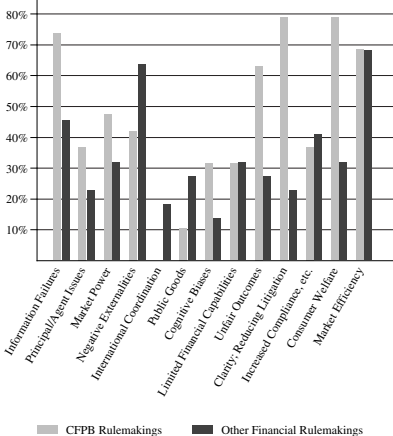
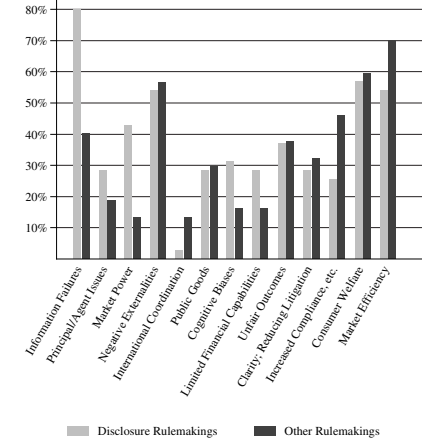


FIGURE SIX
INCIDENCE OF POSITIVE QUALITATIVE SCORES
(DISCLOSURE RULEMAKINGS VS. OTHER RULEMAKINGS)



¹⁰² Similarly, significant consumer disclosure standards occur in eight of twenty-two (thirty-six percent) financial rulemakings by agencies other than the CFPB.

B. Intensity of Benefit Analyses, Benefit Counts and Total Scores

We turn now to aspects of our survey data that speak more to the quality of benefit analyses in our surveyed regulations. We start with an overview of the detail and focus (“intensity”) of benefit analysis for each benefit category, measured by the average score of the Qualitative Scores awarded by our research assistants. Here and throughout subsequent analysis, this measure of intensity incorporates only those instances in which the benefit in question was present. In other words, we excluded here benefits that received Qualitative Scores of zero.¹⁰³ Figure Seven reports average Qualitative Scores by benefit category, separating out the CFPB subsample from the rulemakings of all other agencies. In general, there is much less variation in these averages than there are in the raw incidence of benefits, as presented in Figures One through Six. In general, the average measure of intensities ranged between a score of 2 (mentioned as a benefit) and 3 (discussed in detail), although in a few instances the averages dipped below 2, meaning that in some number of cases the benefit was merely implied. An interesting takeaway from Figure Seven is that agencies tended to discuss with greater intensity benefit categories that are more commonly cited in the agencies’ rulemakings. For example, information failures, which has a higher incidence in CFPB rulemaking as compared with the rulemakings of other agencies, also has a higher average Qualitative Score. Similarly, other agencies tend to cite more frequently and analyze more intensively negative externalities, as compared to the CFPB.

¹⁰³ See *supra* Part II.C (explaining methodology).

FIGURE SEVEN - AVERAGE QUALITATIVE SCORES WHEN POSITIVE (CFPB VERSUS ALL OTHER AGENCIES)

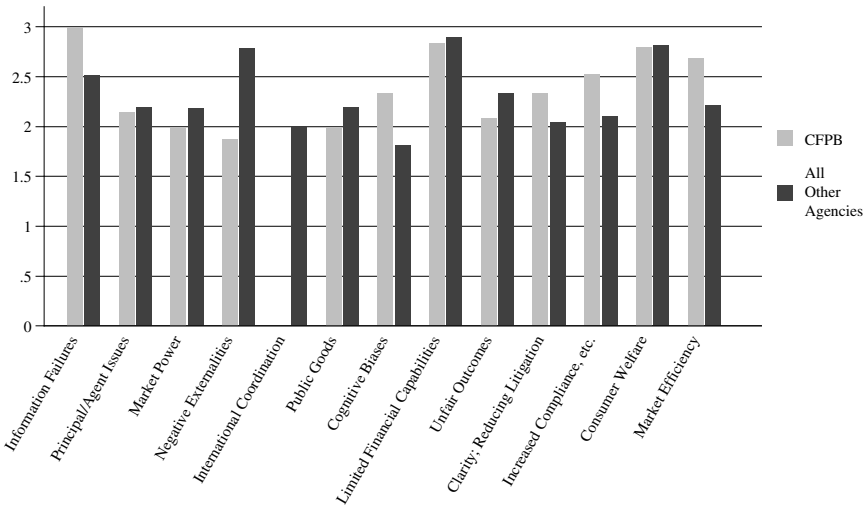


Table Five, and then Figures Eight through Ten, present another take on this data. Table Five presents averages of three measures of benefit analysis for the full sample and for five subsamples. Figures Eight through Ten present information on the distribution of one of these three measures for the full sample and the same five subsamples. An examination of each figure shows that, for the corresponding measure, there are notable similarities and differences in the dispersion of the measure across the different subsamples. Dispersion is described intuitively using box plots.¹⁰⁴

¹⁰⁴ In a box plot (or “box-and-whisker” plot), the lower end of the box occurs at the twenty-fifth percentile of the data being plotted and the upper end at the seventy-fifth percentile. Thus, the length of the box shows the interquartile range (IQR). The median is represented by a line that subdivides the box. The upper “whisker” is a line that starts at the top of the box and extends to the largest sample value above the box within 1.5 times the IQR. The lower whisker is a line that starts at the bottom of the box and extends to the smallest sample value below the box within 1.5 times the IQR. Sample values that fall outside the whiskers, the “outliers,” are indicated by points. See *Engineering Statistics Handbook. Boxplot*, NAT’L INST. OF STANDARDS AND TECH. (last visited Feb. 24, 2019), <https://www.itl.nist.gov/div898/handbook/eda/section3/boxplot.htm>; see also *Engineering Statistics Handbook. Percentiles*, NAT’L INST. OF STANDARDS AND TECH. (last visited Feb. 24, 2019), <https://www.itl.nist.gov/div898/handbook/prc/section2/prc262.htm>.

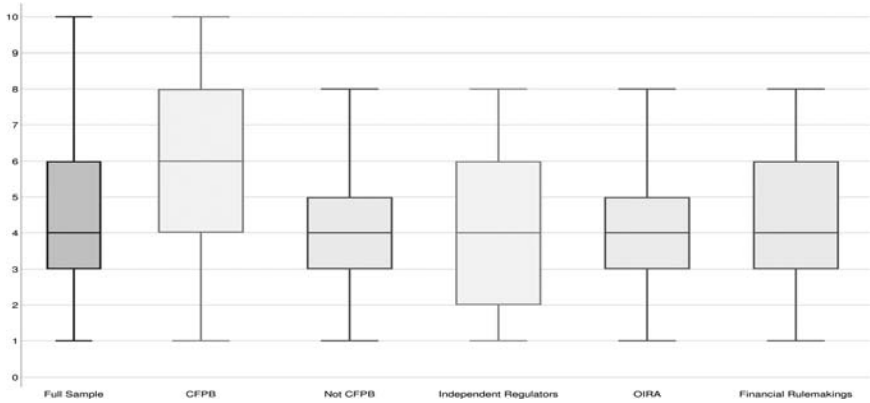
TABLE FIVE – BENEFIT COUNTS, AVERAGE INTENSITY,
& TOTAL EFFORT SCORES
(CFPB VERSUS OTHER SUBSAMPLES)

	Average of Count of Benefits Scored	Average of Avg. Intensity (If mentioned)	Average Total Effort (Count of Benefits Scored x Avg. Intensity)
CFPB	5.91	2.56	14.53
Other Agencies	4.26	2.52	10.34
Independent Agencies	4.33	2.50	10.20
OIRA Agencies	4.24	2.52	10.40
Financial Rulemakings	4.36	2.50	11.71
Full Sample	4.70	2.53	11.45

Consider first the count of benefits scored. The first column of Table 5 shows that, for the full sample, the average benefit count was 4.7 benefits. This means that our research assistants found an average of slightly under five benefits in the seventy-two rulemakings they surveyed. The CFPB subsample averages somewhat higher, with nearly six benefits (5.9) on average in the CFPB rulemakings.

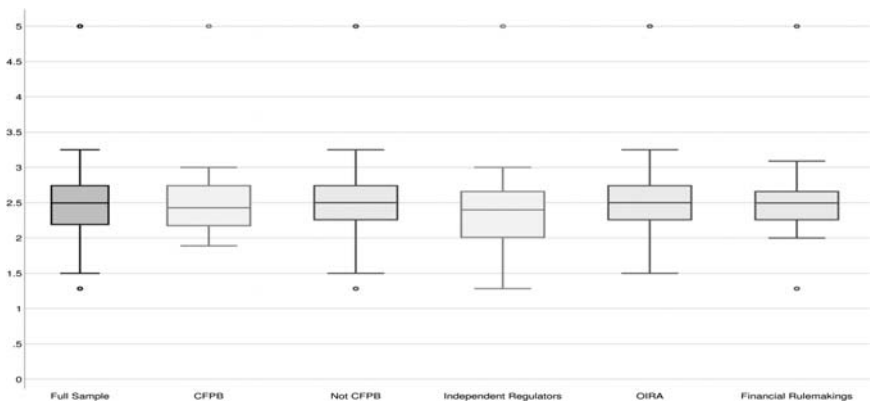
Figure Eight allows for some additional comparisons. The CFPB subsample has a higher median benefit count (6) than do the other subsamples (4), but the interquartile range for the CFPB (4) is the same as for other independent agencies and wider than that for the OIRA agencies. In other words, most rulemakings at the CFPB and other independent agencies show similar variation in the number of benefits cited, but this variation is between 4 and 8 for the CFPB, while it is between 2 and 6 for other independent agencies. The OIRA agencies generally show variation between 3 and 5.

FIGURE EIGHT – COUNT OF BENEFITS SCORED



The second column of Table Five shows that, for the full sample, the average intensity of benefit analysis was roughly 2.5.¹⁰⁵ The averages are similar across the subsamples. Figure Nine shows that the medians across subsamples are also about 2.5 and the interquartile ranges are similar. Since the numbers underlying Figure Nine are themselves averages of Qualitative Scores for each rule, we are cautious about drawing any specific conclusions from these numbers. Given the large benefit counts reported above, however, the data does suggest that agencies generally either mention benefits (2) or discuss them in detail (3), and do not identify a benefit as “key” (4) or the only benefit (5), regardless of the status of the agency.

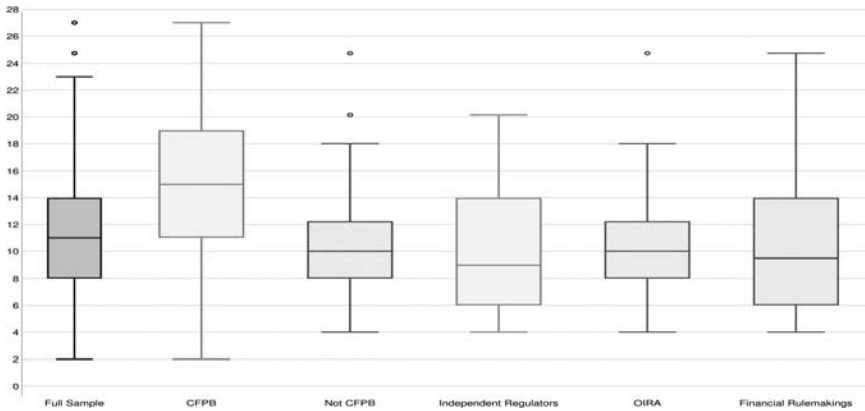
FIGURE NINE – AVERAGE INTENSITY



¹⁰⁵ Recall that, for each subsample, the average intensity of benefit analysis is the average Qualitative Score for each rule in the subsample averaged over the rules in the subsample.

The last column of Table Five shows a measure of total effort, defined as each group's benefit count times its average effort. Again, the CFPB subsample has the highest total effort score, largely a function of its higher benefit counts. Figure Ten is similar to Figure Eight, and similarly shows that the CFPB subsample has a higher median total effort than do the other subsamples, the interquartile range for the CFPB is the same as for other independent agencies, and wider than that for the OIRA agencies.

FIGURE TEN – TOTAL EFFORT



BOX FOUR – WHY ARE THE BENEFIT COUNTS SO HIGH?

One potential puzzling result of our survey is the relatively high number of benefits identified in our sample. Surveyed rulemakings averaged 4.7 asserted benefits, and the CFPB rulemakings in particular averaged 5.9 asserted benefits. Compared to cost-benefit analysis in other areas, such as environmental regulation, these relatively large numbers of asserted benefits may strike some as high, and they certainly complicated certain conventions in cost-benefit analysis, such as break-even analysis built around a unitary regulatory benefit.

Conceivably, the high benefit counts simply reflect the multifaceted ways in which consumer protection regulation addresses market failures. A new required form of disclosure might well simultaneously address information failures, problems of market power, cognitive biases, as well as limited financial capabilities, and also create some sort of public good, thus generating a benefit count of five. It is, however, somewhat unexpected that the average benefit count in our full sample approached that number, which raises the possibility that our benefit counts might reflect some sort of behavioral anomaly.

Also conceivably, agencies might artificially expand benefit counts in cases where quantitative measures of benefits were not possible. On this view, agencies could be “throwing in the kitchen sink” when they are unable to quantify asserted benefits. To test this hypothesis, we ran a series of simple regressions, exploring the relationship between benefit counts and the extent to which benefits were quantified, as proxied by each regulation’s highest benefit Quantification Score. We found no relationship for the full sample. Indeed, when we expanded our regression analysis to include three explanatory variables (the highest benefit Quantification Score interacted with a dummy for each of our principal subgroups), we found that higher benefit Quantification Scores for the CFPB subsample were positively associated with benefit counts. Thus, for at least this subsample, more extensive quantitative analysis seemed to be associated with more identified benefits. So, contrary to the speculation of some readers, at least the CFPB seemed to broaden its discussion of benefits when more quantification was undertaken rather than the other way around.

C. Quantification Scores of Benefit Analyses and Word Counts

On two different dimensions, our survey process attempted to distinguish between the intensity with which surveyed agencies assess benefits and costs. Our premise in undertaking this project was that the benefit analysis for consumer protection regulations has been less developed than cost analysis, and the data we collected comparing intensity of analysis as between benefits and costs largely confirmed this intuition.

Table Six presents data on Quantification Scores for both benefit analysis and cost analysis. As explained earlier, our research assistants were instructed to produce Quantification Scores for both costs and benefits, and typically produced multiple scores for individual benefits and costs in each regulation. For purposes of our analysis in Table Six and elsewhere, we focused on the highest benefit Quantification Score and the highest cost Quantification Score for each regulation on the view that quantification should be measured by the areas in which the agencies expended the greatest effort.

TABLE SIX – QUANTIFICATION SCORES FOR BENEFITS AND COSTS
(CFPB VERSUS OTHER AGENCIES)

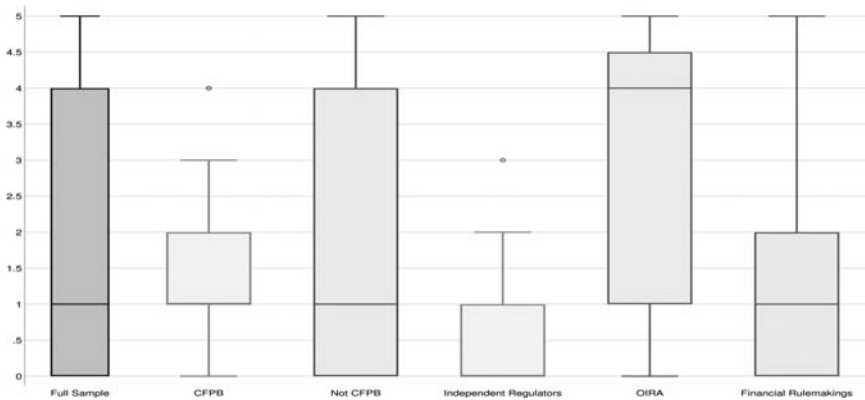
	Median of Highest Benefit Quantifi- cation Score	Median of Highest Cost Quantifi- cation Score	Average of Highest Benefit Quantifi- cation Score	Average of Highest Cost Quantifi- cation Score
CFPB	1.00	2.00	1.45	2.47
Other Agencies	1.00	4.00	2.25	3.68
Independent Agencies	0.00	1.00	0.60	2.07
OIRA Agencies	4.00	4.75	2.91	4.32
Financial Rulemakings	1.00	4.00	1.54	3.11
Full Sample	1.00	4.00	2.04	3.36

Consider first the quantification of benefits. For the full sample, the highest benefit quantification scores are quite low. The overall average (2.04) suggests that there is generally some quantification of beneficial impacts. The median (1), however, indicates that only a minority of rules have any meaningful quantification at all. The data for the subsamples shows that these summary measures mask some important variation. The mean and the median of the Quantification Scores are highest for the OIRA agencies, then the CFPB, and then the other independent agencies. Further, the median for the OIRA agencies is large and exceeds the mean (4.00 and 2.91, respectively). Thus, at least half the OIRA rules monetize some benefits; the average is pulled down by a minority of rules that do not.

Figure Eleven presents box plots for the highest benefit quantification score for the full sample and five subsamples. The box plots illustrate the above results but show somewhat more. The position of the box for the CFPB is fully above that for the other independent agencies. This is consistent with the higher median and mean for the CFPB reported above. On the other hand, the size of the box—the interquartile range—is the same for both and relatively small. Thus, the distribution of scores is similar and rela-

tively tight for the CFPB and the other independent agencies, but the distribution for the CFPB is “stepped up” a bit. In contrast, the box plot for the OIRA agencies shows a much larger interquartile range and higher median. There is significant dispersion in the highest benefit quantification scores for the OIRA agencies, notwithstanding the fact that the median is high. Further, the box for the CFPB subsample overlaps with the lower part of the box for the OIRA subsample. This is not the case for the other independent agencies, for which the box falls entirely below the OIRA box. These results suggest that, roughly speaking, the quantification effort for benefits in most of the CFPB subsample would be recognizable to OIRA, while this might not be true for the quantification effort for benefits by other independent agencies.

FIGURE ELEVEN – HIGHEST BENEFIT QUANTIFICATION

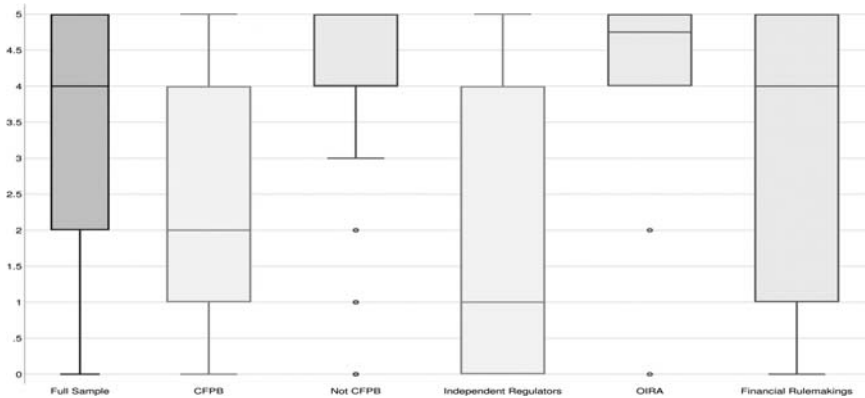


Regarding costs, the highest cost quantification scores differ from those for benefits, but certain patterns are the same. The overall mean and median (3.36 and 4.00, respectively) suggest that there is generally a substantial amount of quantification and some monetization. The mean and the median of the quantification scores are highest for the OIRA agencies, then the CFPB, and then the other independent agencies. Unlike the case for benefits, however, the median and the mean of the quantification scores for the OIRA agencies are similar and both are over 4. Thus, at least half the OIRA rules monetize at least some of the costs, and quantification effort for costs is symmetric around the mean.

Figure Twelve presents box plots for the highest cost quantification score for the full sample and five subsamples. As with benefits, the box plots visually illustrate the mean and median but offer additional results. The box for the CFPB shows that the first quartile is higher for the CFPB subsample than for the other independent agencies subsample. Thus, for a small but important minority of rules, other independent agencies offer only a qualitative discussion of costs and offer no explanation for why there is no quantification or monetization. This occurs less frequently in the CFPB subsample.

The interquartile range for both of these subsamples is relatively large (although smaller for the CFPB subsample). In contrast, the box plot for the OIRA subsample shows a much smaller interquartile range and much higher median. There is less variation in cost analysis in the OIRA subsample and the level of analysis is relatively high.

FIGURE TWELVE – HIGHEST COST QUANTIFICATION



It is also interesting to compare benefit analysis and cost analysis on the basis of Quantification Scores. Table Six shows that for the full sample and all principal subsamples, the highest cost Quantification Scores exceed the highest benefit Quantification Scores whether measured by the median or the mean. Further, the box plots for both the CFPB and independent agency subsamples show less dispersion in benefit analysis than in cost analysis. For the OIRA subsample, however, there is more dispersion in benefit analysis than in cost analysis. These patterns in the data could result from many factors, including differences in the relative availability of data for benefit and cost analysis. For example, suppose that the dispersion in quantification effort is high when data availability is inconsistent across rulemakings. Thus, the dispersion in quantification effort is low both when data is generally unavailable (because quantification effort is uniformly low) and when data is generally available (because quantification effort is uniformly high). These assumptions about data availability and dispersion would generate the observed pattern in quantification, in which dispersion is low for benefits in the CFPB subsample and for costs in the OIRA subsample; and dispersion is high for benefits in the OIRA subsample and for costs in the CFPB subsample. We can only speculate on this, and OIRA standards and the enforcement of those standards would also be a contributing factor. It is useful, however, to consider how the results described above may not be driven entirely by OIRA. The availability of data—as well as the sophistication of the underlying economic models being used in the analyses—could also be important drivers of these results.

Finally, Table Seven reports the estimated word counts of the amount of text devoted to benefit analysis as opposed to cost analysis. For the full sample and all subsamples, the average number of words dedicated to cost analysis in Federal Register releases exceeds the average number of words dedicated to benefit analysis. In most, but not all cases, the median word counts had the same relationship. These word counts, however, should be regarded as noisy proxies for effort, as our research assistants had difficulty agreeing on word count totals, as the allocation of text proved to be more subjective than we had originally anticipated. In addition, as discussed earlier, some agencies, particularly agencies in the OIRA subsample, cross reference other documents with additional cost-benefit analysis. These ancillary documents were not included in our word counts.¹⁰⁶

TABLE SEVEN – WORD COUNTS: BENEFIT VERSUS COST ANALYSIS

	Median of Benefit Word Counts	Median of Cost Word Counts	Average of Benefit Word Counts	Average of Cost Word Counts
CFPB	1354	1388	2116	2467
Other Agencies	581	916	1381	1534
Independent Agencies	1456	1291	1331	1661
OIRA Agencies	550	833	1401	1483
Financial Rulemakings	1015	1075	1313	1536
Full Sample	883	1256	1575	1780

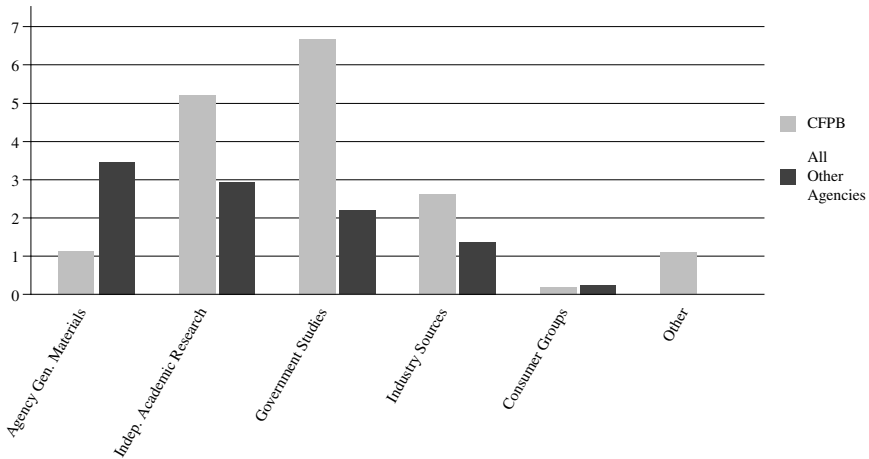
D. Additional Investigations of Survey Dataset

To give a flavor of additional variables included in our dataset and available for future investigation, we conclude this section with several additional figures and tables of potential interest. Figure Thirteen below, for example, reports on the average number of studies relied on by the rulemakings, distinguishing the CFPB subsample from all other agencies in the rulemakings. The Figure indicates that other agencies relied to a greater degree on agency generated materials (3.5 studies on average) than did the CFPB (1.1 studies on average). The CFPB, on the other hand, made greater use of independent academic research and government studies (5.2 and 6.9 studies on average) than did the other agencies (3.0 and 2.2 studies on aver-

¹⁰⁶ See *supra* Part II.E.

age). For both subsamples, there was greater reliance on industry studies than on studies provided by consumer groups.¹⁰⁷

FIGURE THIRTEEN - AVERAGE RELIANCE ON STUDIES
(CFPB VERSUS ALL OTHER AGENCIES)



Another possible extension of previous results is to explore the relationship between the different benefit categories. Table Eight offers a simple correlation matrix of Qualitative Scores for each benefit category, with statistically significant correlation coefficients highlighted. This matrix suggests which benefit categories commonly appear together in the same regulation. For example, market power is fairly highly correlated with information failures, principal-agent issues and limited financial capabilities. Arguably, this result suggests that many of the regulatory interventions combine information problems with some sort of market power, perhaps in the form of search costs that inhibit competitive pricing. Perhaps not surprisingly, our two benefit categories grounded in behavioral economics (cognitive biases and limited financial capabilities) are also highly correlated, and market efficiencies are also commonly associated with regulations that reduce compliance costs and increase self-regulation.

To the extent our survey might suggest future avenues of research regarding the estimation of regulatory benefits in consumer finance, correlated benefit categories might offer an especially fruitful line of investigation.¹⁰⁸

¹⁰⁷ For additional insights into the use of studies in benefit analysis, see *infra* Part IV, where we review twenty exemplars of benefit analysis and highlight key studies cited for each example.

¹⁰⁸ Note that with 78 (= (13)*(12)/2) distinct correlations, it is possible by chance to find seven or eight that are strictly positive at the ten percent significance level. The correlations and statistical tests are useful for identifying patterns in the data and suggesting directions for further research.

TABLE EIGHT – CORRELATION MATRIX OF BENEFITS
(MEASURED BY QUALITATIVE SCORES)

	Information Failures	Principal-Agent Issues	Market Power	Negative Externalities	Public Goods	Unfair Outcomes	Cognitive Biases	Limited Financial Capabilities	Clarity etc	Increased Compliance	International Cooperation	Consumer Welfare	Market Efficiency
Information Failures	1												
Principal-Agent Issues	0.3536*	1											
Market Power	0.4363*	0.3526*	1										
Negative Externalities	-0.1082	-0.125	-0.1278	1									
Public Goods	0.0597	-0.1404	-0.0882	0.1291	1								
Unfair Outcomes	0.3837*	0.3533*	0.251	-0.0397	-0.1095	1							
Cognitive Biases	0.4235*	-0.0071	0.0876	0.0683	-0.2556	0.1423	1						
Limited Financial Capabilities	0.2948	0.2671	0.379*	-0.0031	-0.2467	0.1591	0.4135*	1					
Clarity etc	0.132	0.0548	-0.0049	-0.002	-0.0397	0.0657	0.104	-0.0426	1				
Increased Compliance	-0.2481	-0.1591	-0.0731	0.0566	0.0915	0.1097	-0.1323	-0.1293	0.1132	1			
International Cooperation	-0.1806	-0.1444	-0.0662	0.1488	0.1392	-0.1516	-0.0447	-0.0687	0.0513	0.2365	1		
Consumer Welfare	0.0886	0.0297	0.2179	-0.1536	-0.2781	0.1692	0.1546	0.1175	-0.0305	-0.0771	-0.152	1	
Market Efficiency	-0.2265	0.0893	0.0708	-0.1247	-0.1289	0.0057	-0.2406	0.0778	0.0316	0.3354*	0.1553	0.1004	1

* = coefficients different than zero at the 10 percent significance level.

Finally, Table Nine segments the sample based on criteria provided by the Regulatory Flexibility Act (RFA) and the Congressional Review Act (CRA). Under the RFA, an agency must either certify that a final rule will not have a “significant economic impact on a substantial number of small entities” or provide a Final Regulatory Flexibility Act (FRFA) analysis of the impact.¹⁰⁹ In the analysis below, we distinguish, on the one hand, between rules that were exempt from the RFA or for which there is a cursory certification; and rules for which there is a detailed certification or a FRFA. Under the CRA, the Office of Information and Regulatory Affairs, with input from the issuing agency, will find that a final rule is “major” if the rule is likely to have an annual effect on the economy of \$100 million or more, or meets one of two other tests; otherwise the rule is non-major.¹¹⁰

We find that the inclusion of either a detailed certification or a FRFA is associated with higher Quantification Scores (as measured by average highest benefit Quantification Score) and Total Effort Scores and higher Average Qualitative Scores (when positive). The same is true if the rule is “major” under the CRA. Whether the RFA and CRA requirements have a causal connection to the quality of benefit analysis remains to be proven. The RFA focuses on the costs of regulation, but information about costs may inform benefit analysis through, for example, the analysis of pass-through and other market-wide effects. If so, the need to provide a detailed certification or a FRFA could prompt an agency to collect information relevant to benefit analysis that it otherwise might not collect. Alternatively, agency sensitivity

¹⁰⁹ See Regulatory Flexibility Act, 5 U.S.C. § 602 (2010). For a discussion of rulemaking requirements under the Regulatory Flexibility Act, see *supra* Box 2.

¹¹⁰ Congressional Review Act, 5 U.S.C. § 804 (2018).

ties regarding regulations that may impose a significant economic impact on a substantial number of small entities or an annual effect on the economy of \$100 million or more might prompt greater attention to benefit analysis. The data presented in Table Nine, below, are consistent with both interpretations. Similarly, an agency might conduct additional quantification in anticipation of a CRA “major” designation, but it might also undertake this effort because the agency expects the rule to have large effects that industry and others will scrutinize.

TABLE NINE – VARIATIONS IN BENEFIT SCORES WITH RESPECT TO LEGAL CONTEXTS

	Regulatory Flexibility Act Analysis		Congressional Review Act Determination	
	Detailed Certification or FRFA (28)	Other Analysis or Exempt (44)	Major (34)	Non-Major (35)
Average of Count of Benefits Scored	5.37	4.27	4.71	4.81
Average Qualitative Benefit Score (if positive)	2.58	2.49	2.55	2.46
Average Total Effort Score	13.85	9.92	12.18	11.08
Average High-Benefit Quantification Score	2.57	1.70	3.22	1.04

BOX FIVE – ARE AGENCIES QUANTIFYING THE RIGHT BENEFITS?

Our survey includes information about both the intensity of benefit analysis (the Qualitative Score) as well as the quantification of benefit analysis (the Quantification Score, proxied by the highest Quantification Score for each regulation). These two independent variables allow us to explore the question whether agencies in our survey quantify what seems to be the more important benefit of the rulemaking in question or simply the benefit that is easiest to quantify. We explored this question in two separate ways, drawing on eighteen of the twenty regulatory exemplars explored in Part IV. (One rulemaking provided two exemplars, and one rulemaking with an entirely qualitative benefit analysis was excluded.)

First, using a subjective approach, we asked the research assistant who helped us draft the Part IV exemplar analysis to review the benefit analysis of the eighteen regulations and ascertain whether, in his view, the benefit analysis of each regulation addressed the most important asserted benefit for the regulation or some other benefit. The researcher reported that in twelve of the eighteen cases the most quantified benefit was clearly the most important benefit and in another three cases the most quantified benefit was arguably the most important benefit. Therefore, in only three of the eighteen exemplars—or 16.7% of the cases—was the most quantified benefit not at least arguably the most important benefit.

Our second approach was more objective, simply asking whether the most quantified benefit identified by our research assistant earned the highest Qualitative Score in our survey. Here, for eight of the eighteen exemplars, the most quantified benefit also had the highest Qualitative Score and in another four cases, the most quantified benefit was tied for the highest Qualitative Score. For six of the exemplars (that is, one third of the cases), the most quantified benefit did not receive the highest Qualitative Score. But in many of the cases, the benefit with the highest Qualitative Score was conceptually similar to the most quantified benefit. For example, in one case, Unfair Outcomes received the highest Qualitative Score but Information Failures was the most quantified. In another case, Limited Financial Capabilities received the highest Qualitative Score, but Cognitive Biases was the most quantified.

While it is possible that agencies adjusted their qualitative discussions to reflect their quantitative efforts, our data on its face does not suggest that agencies systemically quantified benefits that were not important grounds for adopting the regulations surveyed.

IV. EXEMPLARS OF BENEFIT ANALYSIS

This section reviews twenty exemplars of benefit analysis from nineteen rulemakings. Each exemplar is a brief case study in the analysis of

a regulatory benefit. For the most part, the exemplars received the highest Quantification Scores for the type of benefit considered. We discuss the selection of the exemplars in detail below.

Our review shows the strengths and limitations of existing methodologies in the analysis of benefits of consumer financial protection regulations. Even among exemplars of benefit analysis, important behavioral responses by consumers, or bounds on those responses, are sometimes assumed instead of derived from basic research or findings from analogous cases. Consumer benefits are sometimes reduced to expected impacts that can be readily defined, and for which there are plausible estimates, but which are only weakly related to changes in consumer welfare. These results indicate directions for future research that would improve the ability to quantify and monetize the benefits from consumer financial protection regulations. Finally, these results offer insights into the investments that would be required to improve the analysis of regulatory benefits and the possible implications of requiring additional quantification in the near term.¹¹¹

A. *Methodology of Benefit Analysis in Consumer Financial Protection Regulation*

To better understand the strengths and limitations of the exemplars, we first consider the methodology of cost-benefit analysis as applied to consumer financial protection. The basic methodology of cost-benefit analysis is easy to describe.¹¹² Applying it to any given project—a public investment or regulation—is an entirely different matter. The application of cost-benefit analysis to a particular project can only be as good as the economic models and data on which the methodology relies.¹¹³ It is fair to say that the market-wide effects of public investments in the natural environment (bridges, roads, dams, power plants, etc.) and the regulation of transportation services and power generation are better understood than the market-wide effects of

¹¹¹ We note at the outset that we are not suggesting that the exemplars failed to meet established standards. We do not know, for example, if there was any practical way to address the limitations we discuss. We also do not know whether the additional costs and delay of greater quantification would have been justified by the benefits to agency decision-making. For references to the literature on evaluating regulatory cost-benefit analysis, see *supra* Part I.B. A more detailed discussion of these exemplars appears in an unpublished Appendix Three, which is available on-line at https://www.hblr.org/wp-content/uploads/sites/18/2019/12/Jackson_Appendix-Three.pdf.

¹¹² See BOARDMAN et al., *supra* note 37, at 5–15.

¹¹³ The practical problems of defining and measuring the aggregate benefits of a particular project are one part of the larger problem of defining a measure that will consistently identify and select the best alternative (or set of best alternatives) from a set of feasible options. The technical issues are well known and we do not revisit them here. See RICHARD E. JUST, DARRELL L. HUETH, AND ANDREW SCHMITZ, *THE WELFARE ECONOMICS OF PUBLIC POLICY* 32–48, 311–74 (2004); see generally Matthew D. Adler & Eric A. Posner, *Rethinking Cost-Benefit Analysis*, 109 *YALE L.J.* 165 (1999).

consumer financial protection or social regulation generally.¹¹⁴ The models and data for studying the demand and supply of transportation services and power generation are more developed than those for studying health, safety, the environment, or household finance. These differences account for some of the differences in benefit analysis in consumer financial protection relative to benefit analysis in other contexts. We illustrate here the challenges more explicitly for consumer credit, but a similar analysis would hold for personal investment, insurance, and other consumer financial products.¹¹⁵

As a general matter, modeling the demand and supply for consumer credit requires taking into account both time and risk.¹¹⁶ Credit is originated and then repaid over time. In doing so, the consumer is attempting to smooth consumption, generally by moving income from the future to the present.¹¹⁷ Future income, however, is generally uncertain at the time the consumer borrows, and in some cases the amount that must be repaid in future periods may also be uncertain. Absent any risks, consumers will always succeed in reducing future consumption by the intended amount and in achieving greater welfare. Once risk is taken into account, consumers will still succeed in increasing current consumption, but this benefit may be reduced (and perhaps more than offset) by large reductions in future consumption.¹¹⁸ Other things equal, consumers would benefit from a reduction in the risk of such

¹¹⁴ “Social regulation” is generally defined as addressing externalities and information asymmetries, and risk is a central concept. Social regulation is distinguished from “economic regulation,” which is motivated by natural monopoly, and tends to control price, quantity, service quality and the number of firms. See SUSAN E. DUDLEY & JERRY BRITO, *REGULATION: A PRIMER* 8–9 (2nd ed. 2012). It is outside the scope of this research to place consumer financial protection in this taxonomy. We simply note that consumer financial protection often addresses information asymmetry and risk, like social regulation; there are returns to scale and competitive advantages in having large databases of consumer information; and some regulations, in effect, establish standards for the quality of consumer financial services.

¹¹⁵ The discussion that follows presents a highly stylized model of the supply and demand for consumer credit. In reality, credit products (and creditors) operate within a larger system of consumer financial products and services (and providers of those products and services) that includes credit reporting agencies, real estate appraisers, loan servicers, debt collectors, and money services businesses that provide access to funds and means of repayment. Title X of the Dodd-Frank Act establishes a comprehensive regulatory regime for consumer credit that includes many of the entities that provide these services, through broad definitions of “financial product or service,” “consumer financial product or service,” and “covered person.” See Dodd-Frank Act § 1002, 12 U.S.C. § 5481 (2018).

¹¹⁶ For further discussion of the points made here, see GIUSEPPE BERTOLA, RICHARD DISNEY & CHARLES GRANT, *THE ECONOMICS OF CONSUMER CREDIT* 1–23 (Giuseppe Bertola, Richard Disney & Charles Grant ed., 2006); John Y. Campbell and Joao F. Cocco, Household Risk Management and Optimal Mortgage Choice, 118 *Quarterly Journal of Economics*, 1449–94 (2003) (noting that “mortgage choice should not be left to specialists in real estate but should be treated as an aspect of household risk management, a topic that lies at the heart of finance.”).

¹¹⁷ Nothing precludes the reverse or more complicated transfers across time.

¹¹⁸ See Campbell and Cocco, *supra* note 116, at 1473 (noting that “the chief disadvantage of an ARM [adjustable rate mortgage] [is] the cash-flow risk that ARM payments will rise suddenly, exhausting buffer-stock savings and forcing an unpleasant cutback in consumption. This risk is important when the mortgage is large relative to income.”).

consumption shocks, whether caused by fluctuations in income or fluctuations in the costs of repaying credit.

Turning to the supply side, providers of consumer credit are similarly concerned about the ability and also the willingness of consumers to repay. Providers use consumer-specific information (for example, income, wealth, credit scores) and other information to evaluate the profitability of extending credit. Creditors consider the probability of repayment according to the original terms and conditions, but also on the fees and charges and changes in terms that might result in case of delinquency, as well as the amount that might be recovered (net of any cost of recovery) in the case of default. The important outcome of this process is not all borrowers are eligible for loans with the same terms and conditions, even for a loan of a given size. Credit is effectively rationed.¹¹⁹

Now consider the potential effects of consumer financial protection law—statutes and regulations but, for simplicity, “regulations.” These regulations may affect many aspects of the transaction, including how the creditor is compensated and what the creditor must disclose as well as the required or prohibited features of credit products. The motivation for many of these regulations is reducing risks to consumers or helping consumers manage risks.¹²⁰ However, these requirements will also affect how credit is rationed—which segments of potential borrowers are offered which terms and conditions. Providers may also experience additional (or indirect) effects as consumers adjust to the changes in the features, risks, availability, and cost of consumer financial products and services.

¹¹⁹ See Bertola et al., *supra* note 116, at 12–17. There is a vast literature on credit rationing, much of it relying on models of asymmetric information in which the borrower has superior information about the propensity to repay to that of the potential creditor. Researchers in household finance were questioning the foundations of these models even before the financial crisis. See John Y. Campbell, *Household Finance*, 51 J. FINANCE 1553, 1585–90 (2006). The emergence of subprime lending and the subsequent wave of defaults created additional interest in alternative models, including those in which the potential creditor has superior information about the propensity to repay. See generally Oren Bar-Gill & Elizabeth Warren, *Making Credit Safer*, 157 U. PENN. L. REV. 1 (2008). However, subprime lending might also have been driven largely by expectations of future price increases. See generally Jan K. Brueckner, Paul S. Calom & Leonard I. Nakamura, *Subprime Mortgages and the Housing Bubble*, 71 J. URB. ECON. 230 (2012).

¹²⁰ See, e.g., the Dodd-Frank Act, 15 U.S.C. §1022(c)(1) (2010) (“In order to support its rulemaking and other functions, the Bureau shall monitor for risks to consumers in the offering or provision of consumer financial products or services, including developments in markets for such products or services.”); *id.* at §1022(c)(2) (“In allocating its resources to perform the monitoring required by this section, the Bureau may consider, among other factors—(A) likely risks and costs to consumers associated with buying or using a type of consumer financial product or service; (B) understanding by consumers of the risks of a type of consumer financial product or service.”); *id.* at §1024(b)(2) (the Bureau is mandated to exercise supervisory authority “based on the assessment by the Bureau of the risks posed to consumers in the relevant product markets and geographic markets”); *id.* at §1032(a) (noting that “the Bureau may prescribe rules to ensure that the features of any consumer financial product or service, both initially and over the term of the product or service, are fully, accurately, and effectively disclosed to consumers in a manner that permits consumers to understand the costs, benefits, and risks associated with the product or service, in light of the facts and circumstances.”).

It should be clear that quantifying the benefits of these changes is difficult at best. Ideally, one would begin by measuring how the products available to different segments of the population change. This requires a fully developed and estimated model of creditor behavior. One would then measure, for each segment, changes in current consumption relative to the baseline, and changes in the ability to plan future consumption.¹²¹ This requires a fully developed and estimated model of consumer preferences and constraints in each segment, taking into account some model of shocks to their income. This is possible to do in principle, but it would require a great deal of data and a computational framework.¹²² As a practical matter, benefit analysis must rely on heuristics. The exemplars present measures of benefits—“benefit metrics”—that decompose the benefit of the rule into reductions in the number of individuals exposed to the risk of some harm, reductions in the probability of harm by those consumers at risk, and reductions in the magnitude of the harm by those who incur it, all relative to the baseline. The reduction in the magnitude of harm is quantified intuitively, but it is not clear what resemblance it bears to reductions in inability to plan future consumption.

The above discussion assumed that there was a potential benefit to allocative efficiency from government intervention in the market (specifically, to help consumers manage risks). This raises the question of why the market for consumer financial products and services does not achieve efficiency absent government intervention. Here we consider the two primary rationales. The first, information failures, is longstanding. The second, behavioral biases, is more recent.

Information failures provide a very common rationale for consumer protection regulations.¹²³ This is true both in our sample¹²⁴ and historically.¹²⁵

¹²¹ More precisely, one would define the willingness to pay for these changes using indirect utility and a specific compensation equation.

¹²² There are models for measuring the benefits of consumption smoothing, for example through unemployment insurance. In these models, however, the government controls the policy (so the “supply” side is simple) and the policy is funded by taxes (so there is no concept of repayment). See generally Raj Chetty, *A General Formula for the Optimal Level of Social Insurance*, 90 J. PUB. ECON. 1879 (2006).

¹²³ See WEIMER & VINING, *supra* note 37, at 104–12. As these authors note, it is sometimes useful to distinguish information undersupply (valuable information is not collected) from information asymmetry (valuable information is collected and known by some parties but not others). The presence of asymmetric information, however, somewhat begs the question of why a market for trading the information does not develop. This failure to trade may reflect the same concerns about receiving payment that prevent other types of information from being collected in the first place.

¹²⁴ Sixty percent of the entire sample and seventy percent of the exemplars at least mention information failures as a benefit category.

¹²⁵ See Alan Schwartz & Louis L. Wilde, *Competitive Equilibria in Markets for Heterogeneous Goods Under Imperfect Information: A Theoretical Analysis with Policy Implications*, 13 BELL J. ECON. 181(1982) (noting that “[f]or over a decade, the federal government has responded aggressively to apparent information imperfections in consumer markets. Examples of such responses include the Truth in Lending Law, the Magnusson-Moss Warranty-Federal Trade Commission Improvement Act, the Consumer Leasing Act, and the Real Estate Settle-

Further, the economics of information has informed the analysis of consumer protection regulations almost since its inception.¹²⁶ Early contributions include general guidance for information policy,¹²⁷ detailed analysis of the potential benefits and unintended consequences of requiring or prohibiting disclosures,¹²⁸ and a standard model of welfare losses due to “uninformed demand” (and thus the benefits of better-informed demand).¹²⁹

If information were provided efficiently, the benefit to consumers from additional information would exactly equal the additional cost of collecting and providing it. The reasons that information may not be provided efficiently by sellers or third parties are well known: once collected, information sold to one individual may become available to many others who do not compensate the provider. This reduces the incentive for the good seller or a third party to collect the information at all. Personalized after-market information (for example, regarding the actual or likely cost-of-use of a product) is somewhat different since it may not be useful to multiple individuals. However, this type of information may also not be provided efficiently if the goods provider controls the information and the revenue received from selling the information (plus the revenue gained from any new customers) is less than the revenue lost due to changes in how customers use the product (along with revenue lost from any departing customers). At least one early

ment Procedures Act”); the authors also opine, “Congress has passed almost all of this regulation with no clear idea of what purposes it wanted to achieve, or could in fact achieve, or of the relation between various intervention strategies and the possible goals of government action.”); Aidan R. Vining & David L. Weimer, *Information Asymmetry Favoring Sellers: A Policy Framework*, 21 POL’Y SCI. 281, 281–82 (1988) (noting that “[m]ost of the programs of the Consumer Product Safety Commission and the Food and Drug Administration, for instance, seem to be responses to the perception that consumers suffer in various ways because manufacturers have greater information about the true characteristics of their products. But examples can be found in almost all areas of public policy: labelling requirements (such as energy efficiency ratings for appliances and mileage ratings for automobiles), mandatory disclosure rules (as applied to insurance and real estate contracts), minimum quality standards for inputs (specification of materials in building codes and certification requirements for health professionals) and outputs (crash standards for automobile bumpers), limitations on buyers (drugs by prescription and minimum age of legal purchase for alcohol), and outright prohibitions (bans on substances such as Laetrite)”).

¹²⁶ See, e.g., FEDERAL TRADE COMM’N, BUREAU OF ECONOMICS, EMPIRICAL APPROACHES TO CONSUMER PROTECTION ECONOMICS 1 (1984), <https://www.ftc.gov/sites/default/files/documents/reports/empirical-approaches-consumer-protection-economics/198404consumer-economics.pdf> (noting that “the economics of consumer protection regulation is essentially contained in the economics of information”).

¹²⁷ See, e.g., Michael R. Darby & Edi Karni, *Free Competition and the Optimal Amount of Fraud*, 16 J. L. ECON., 67, 6788 (1973) (noting that the risks to consumers due to information failures depend on whether a good is a “search good,” “experience good,” or “credence good”).

¹²⁸ See generally Howard Beales, Richard Craswell & Steven C. Salop, *The Efficient Regulation of Consumer Information*, 24 J. L. ECON. 491 (1981); Vining & Weimer, *supra* note 125; Paul H. Rubin, *The Economics of Regulating Deception*, 10 CATO J. 667 (1991).

¹²⁹ See Vining & Weimer, *supra* note 125, at 282–84. A thorough and more recent treatment is in Chapter 11 of JUST ET AL., *supra* note 113.

consumer financial protection rulemaking justified prescriptive requirements over information disclosures in terms that are still relevant today.¹³⁰

Eight of the twenty exemplars at least mention cognitive biases.¹³¹ Methods for evaluating regulatory benefits when consumers have a behavioral bias are not well known. It is therefore useful to briefly review the applied work in behavioral economics that is directly relevant to the benefit analyses in these exemplars.

As an initial matter, it is useful to distinguish the small body of research on identifying the “true” (or unbiased) preferences of behavioral consumers from the much larger body of work that provides general policy guidance when consumers have behavioral biases.¹³² While general guidance may be useful for rule development, it is not precise enough to allow for careful comparisons of alternative regulatory requirements. Unbiased preferences, in contrast, provide the information needed to measure, and therefore compare, the welfare of behavioral consumers under alternative requirements.

Chetty, Loony and Kroft (2009) study the effects of the salience of commodity taxes on consumer behavior and welfare.¹³³ They establish, through field tests, that consumers misperceive the total prices of commodities when sales taxes are not included in posted prices. This misperception of the total price creates an optimization error.¹³⁴ By varying the salience of the taxes, and thus the magnitude of the error, they can derive consumers’ “true

¹³⁰ In 1984, the FTC issued a rule that prohibited the inclusion of certain collection remedies in consumer credit contracts issued by the non-bank entities over which the Commission had jurisdiction (the bank regulators subsequently issued substantially similar rules.). See FTC Credit Practices Rule, 16 C.F.R. § 444 (2000). The Commission found that the prohibited collection remedies imposed substantial injury on consumers, and the Commission considered why competition and consumer search would not create contracts without these terms. In summarizing its analysis, the Commission stated, “Because remedies are relevant only in the event of default, and default is relatively infrequent, consumers reasonably concentrate their search on such factors as interest rates and payment terms. Searching for credit contracts is also difficult, because contracts are written in obscure technical language, do not use standardized terminology, and may not be provided before the transaction is consummated. Individual creditors have little incentive to provide better terms and explain their benefits to consumers because a costly education effort would be required with all creditors sharing the benefits. Moreover, such a campaign might differentially attract relatively high-risk borrowers.” Trade Regulation Rule; Credit Practices, 49 Fed. Reg. 7,740, 7,744–45 (Mar. 1, 1984) (codified at 16 C.F.R. pt. 444).

¹³¹ A smaller fraction of the benefit analyses in the overall sample (twenty-four percent) at least mention cognitive biases.

¹³² Regarding consumer financial protection policy in particular, see the surveys by MICHAEL BARR ET AL., BEHAVIORALLY INFORMED FINANCIAL SERVICES REGULATION (2008) (regarding mortgages, credit cards and bank savings products); Campbell et al., *Consumer Financial Protection*, *supra* note 1 (regarding mortgages, payday lending, and retirement savings products); and Roman Inderst & Marco Ottaviani, *Financial Advice*, 50 J. ECON. LITERATURE, no. 2, 494–512 (2012) (on savings and retirement plans offered by conflicted financial advisors). See generally Paul Heidhues & Botond Koszegi, *Exploiting Naivete about Self-Control in the Credit Market*, 100 AM. ECON. REV. 2279 (2010) (regarding the recent extension of models on contracting and time inconsistency with application to the credit card market.).

¹³³ See generally Raj Chetty, Adam Looney, and Kory Kroft, *Salience and Taxation: Theory and Evidence*, 99 AM. ECON. REV. 1145 (2009).

¹³⁴ *Id.* at 1146.

preferences.”¹³⁵ Thus, there are two demand curves in the model, one describing behavior given the behavioral bias (and therefore relevant to predicting behavior and market outcomes) and one describing behavior absent the bias (and therefore relevant to measuring consumer welfare).¹³⁶ Train (2015) provides a useful review of the methodology and many of the recent papers that use this approach.¹³⁷

Chetty et al. (2009) use their empirical results to study tax incidence, deadweight loss and the general consequences of taxation on consumer welfare when agents do not optimize perfectly. They also argue that their framework is not limited to tax policy or tax salience. Specifically, they state that their framework is applicable whenever a behavioral bias affects consumer choices and, through these choices, consumer welfare; and these choices would be optimal absent the bias.¹³⁸ An additional assumption, however, is that the policy under consideration must have a simple effect on the supply side of the model. The “wedge” created by a tax is one example. As discussed above, consumer financial protection policies will not generally fit into this framework, with the notable exception of a limit on interest rates.¹³⁹

Recovering true preferences may present practical challenges, but, once this is done, the results can be used in theoretical formulas for benefit analysis that are natural extensions of well-known formulas.¹⁴⁰ The authors conclude that their general approach of estimating consumer responses when prices, and thus incentives, are not fully transparent should be useful in a

¹³⁵ *Id.* at 1173.

¹³⁶ A closely related formulation based on utility functions distinguishes “decision utility” from “experienced utility.” Sendhil Mullainathan, Joshua Schwartzstein & William J. Congdon, *A Reduced-Form Approach to Behavioral Public Finance*, 4 ANN. REV. ECON. 511, 516 (2012). Maximizing decision utility subject to constraints would give the “tax demand” (observed demand) curve in the Chetty model, while maximizing experienced utility subject to constraints would give the “price demand” (welfare-relevant demand) curve. The additional structure on utility in Mullainathan et al. allows them to more explicitly model biases and the effects on policy (for example, nonsalient components of price, and present bias and overconfidence are captured by different constraints on utility parameters). The two types of utility are discussed in detail in Daniel Kahneman, Peter P. Wakker, and Rakesh Sarin, *Back to Bentham? Explorations of Experienced Utility*, 112 Q. J. ECON. 375 (1997).

¹³⁷ See generally Kenneth Train, *Welfare Calculations in Discrete Choice Models When Anticipated and Experienced Attributes Differ: A Guide with Examples*, 16 J. CHOICE MODELING 15 (2015).

¹³⁸ See Chetty et al., *supra* note 133, at 1170.

¹³⁹ However, the CFPB is explicitly prohibited from establishing a usury limit applicable to an extension of credit. 15 U.S.C. §1027(o) (2018).

¹⁴⁰ Chetty et al. also briefly consider the impact of a pre-existing market distortion (pre-existing taxes) on their results. Chetty et al., *supra* note 133, at 1170–75. This important extension is addressed more thoroughly in Raj Chetty, *The Simple Economics of Salience and Taxation* (Nat'l Bureau of Econ. Research Working Paper 15246, 2009); Mullainathan et al., *supra* note 136, at 524 (emphasizing the general result that, “in the presence of other market failures, even nudges that would improve private welfare may not be socially optimal” and therefore “it may be socially optimal to allow errors to persist . . .”); see generally Hunt Allcott et al., *Energy Policy with Externalities and Internalities*, 112 J. PUB. ECON., 72 (2014) (deriving the impact on consumer welfare from energy policy, taking into account both standard externalities and the cost of being inattentive to energy efficiency when purchasing energy-using goods (“internalities”)).

number of contexts, including the analysis of the benefits of consumer protection regulation.¹⁴¹

Allcott and Sunstein survey recent work on energy policy and cognitive biases. Similar to Chetty et al. (2009), Allcott and Sunstein emphasize that, “the challenge is to determine in a principled way which choices reflect true preferences and which reflect mistakes.”¹⁴² They offer four principles for identifying true preferences.¹⁴³ They also discuss recent research that implements at least some of these ideal practices and consider the policy implications of this work.¹⁴⁴ Allcott and Sunstein emphasize that cognitive biases do not overturn the standard result that taxes and subsidies are generally superior to regulation (which in the cases they consider are energy standards).¹⁴⁵ Regardless of the policy conclusion, however, the research they discuss ad-

¹⁴¹ Chetty et al., *supra* note 133, at 1176 (“[T]he approach to welfare analysis proposed here—using a domain where incentives are fully salient to characterize the welfare consequences of policies that are not salient—can be applied in other contexts. Many social insurance and transfer programs (like Medicare and Social Security) have complex features and may induce suboptimal behaviors. One can characterize the welfare consequences of these programs more accurately by estimating behavioral responses to analogous programs whose incentives are more salient. Another potential application is to optimal regulation (such as consumer protection laws and financial market regulations). By identifying ‘suboptimal’ transactions using data on consumer’s choices in domains where incentives are more salient, one could develop rules to maximize consumer welfare that do not rely on paternalistic judgments.”).

¹⁴² See generally Hunt Allcott & Cass R. Sunstein, *Regulating Internalities*, 34 J. POL’Y ANALYSIS MGMT. 698 (2015).

¹⁴³ *Id.* at 702 (“1. Use well-informed choices. 2. Use considered choices. Here, ‘considered’ means choices where the individual evaluates all relevant facets of a product or activity. 3. Use active choices. Such choices reflect the agent’s own values and tastes, whereas passive choices (such as failing to opt in or opt out of a default setting) may not. 4. If individuals are present-biased, use long-run instead of present-biased (impulsive) choices.”).

¹⁴⁴ Allcott and Sunstein state that “Kling et al. (2012) [Jeffrey Kling et al., *Comparison Friction: Experimental Evidence from Medicare Drug Plans*, 127 Q. J. ECON. 199 (2012)] show that people are more likely to choose a lower-cost health insurance plan when given simplified comparison information; Carroll et al. (2009) [Gabriel Carroll et al., *Optimal Defaults and Active Decisions*, 124 Q. J. ECON. 1639 (2009)] show that more people enroll in 401k savings plans when making active choices instead of passive ‘opt-in’ choices; and Hossain and Morgan (2006) [Tanjim Hossain & John Morgan, *Plus Shipping and Handling: Revenue (Non)Equivalence in Field Experiments on eBay*, 6 ADVANCES IN ECON. ANALYSIS AND POL’Y, no.2, 2006] show that consumers are less likely to buy a product when more of the cost is included in the base price instead of ‘shrouded’ as part of shipping and handling charges. In all three examples, people’s choices differ between two contexts (informed vs. uninformed, active vs. passive choice, clearly-presented vs. shrouded costs), and the first of the two contexts more plausibly reflects true preferences.” Allcott & Sunstein, *supra* note 142, at 698. Allcott and Sunstein also note recent research on uncovering the true preferences of consumers for car fuel efficiency. See generally Hunt Allcott & Nathan Wozny, *Gasoline Prices, Fuel Economy, and the Energy Paradox*, 96 REV. ECON. & STAT. 779 (2014); Meghan Busse et al., *Are Consumers Myopic? Evidence from New and Used Car Purchases*, 103 AM. ECON. REV. 220 (2013); James Sallee et al., *Do Consumers Recognize the Value of Fuel Economy? Evidence from Used Car Prices and Gasoline Price Fluctuations*, 135 J. PUB. ECON. 61 (2016).

¹⁴⁵ See Allcott & Sunstein, *supra* note 142, at 700–01. Of course, regulation can be superior to the status quo even if welfare would be higher-still under a different policy. Further, when consumer choice is demonstrably biased and difficult to influence through the combined effects of nudges, taxes, and subsidies, then the case for regulation may be strong. O’Donoghue and Rabin note that over-consumption may be driven by “visceral motivations” or addiction

vances methodologies for measuring the benefits of policy interventions, including regulation, in the presence of behavioral biases.

Finally, research by Weimer, Vining, and Thomas (2009) and Jin, Kenkel, Liu, and Wang (2015) measure the benefits of regulations directed at reducing the consumption of an addictive good (cigarettes).¹⁴⁶ Weimer et al. define the welfare-relevant demand curve for cigarettes to be consumer demand without the addictive component.¹⁴⁷ They conduct a contingent valuation survey to directly estimate consumer willingness to pay to eliminate the addiction.¹⁴⁸ Addiction causes over-consumption relative to the welfare-relevant demand curve, and in general there could be negative consumer surplus at the actual (observed) level of consumption.¹⁴⁹ In other words, a ban on an addictive good could increase consumer welfare.¹⁵⁰ The authors conclude, based on true consumer preferences, that the actual reduction in consumer surplus from a twenty-five percent increase in price is just seventy-five percent of what the market demand curve would imply.¹⁵¹

Jin et al. (2015) build on Chetty et al. (2009), Mullainathan et al. (2012), and Weimer et al. (2009), as well as the conceptual framework in Ashley, Nardinelli, and Lavaty (2015)¹⁵² to estimate consumer benefits from U.S. anti-smoking policies from 1964 to 2010. Jin et al. begin by estimating the impact of anti-smoking policies on consumer demand.¹⁵³ This requires simulating what market demand would have been in each year absent these policies, and computing the difference from between the simulated market demand and the observed demand.¹⁵⁴ To measure the benefit to consumers,

and thus may not be very price-sensitive. See Ted O'Donoghue & Matthew Rabin, *Optimal Sin Taxes*, 90 J. PUB. ECON. 1825, 1839–40 (2006).

¹⁴⁶ See David L. Weimer, Aidan R. Vining & Randall K. Thomas, *Cost-Benefit Analysis Involving Addictive Goods: Contingent Valuation to Estimate Willingness to Pay for Smoking Cessation*, 18 HEALTH ECON. 181 (2009); Jin et al., *supra* note 34. The literature on smoking and behavioral bias (time-inconsistent preferences) begins with Jonathan Gruber & Botond Köszegi, *Is Addiction "Rational"? Theory and Evidence*, 116 Q. J. ECON. 1261 (2001).

¹⁴⁷ Weimer et al., *supra* note 146, at 184.

¹⁴⁸ See *id.* at 184, 186.

¹⁴⁹ See *id.* at 186.

¹⁵⁰ If consumer surplus is negative at the market outcome, then a ban on the good would increase consumer welfare, but a less extreme policy would generally provide even greater consumer welfare than a ban. For the case where consumer surplus is positive at the market outcome, and therefore a ban would reduce consumer welfare, see Allcott & Sunstein, *supra* note 142, at 700.

¹⁵¹ See Weimer et al., *supra* note 146, at 197. These findings are obviously sensitive to whether demand without the addictive component considers all of the effects that cigarette consumption imposes on one's future self. Given the breadth of the long-term health impacts from smoking, there is skepticism among some researchers about whether it is possible to measure a fully-informed demand curve for cigarettes (and presumably other addictive goods). See Chaloupka et al., *supra* note 34.

¹⁵² See Elizabeth M. Ashley, Clark Nardinelli & Rosemarie A. Lavaty, *Estimating the Benefits of Health Policies That Reduce Harmful Consumption*, 24 HEALTH ECON. 617 (2015); Chetty et al., *supra* note 133; Jin et al., *supra* note 34; Mullainathan et al., *supra* note 136; Weimer et al., *supra* note 146.

¹⁵³ See Jin et al., *supra* note 34, at 156.

¹⁵⁴ See *id.* at 156.

they estimate the welfare-relevant demand curve in each year, which is the demand for cigarettes by a “fully informed rational decision-making” smoker.¹⁵⁵ They then estimate a standard measure of welfare change, the compensating variation, but using the welfare-relevant demand curve.¹⁵⁶ Roughly speaking, this compensating variation is the amount of money the rational smoker would need to be given to be indifferent between her actual consumption and (higher) consumption defined by non-rational smokers absent the anti-smoking policies.¹⁵⁷ They then sum up the benefits of the anti-smoking policies for each year from 1964 to 2010.¹⁵⁸ At a discount rate of three percent, the present value of the benefits was about \$573 billion in 2010 dollars, or \$369 to each smoker for each year of smoking.¹⁵⁹

In summary, there have been important advances in measuring the benefits of policies that alter consumption choices that have been influenced by behavioral biases. This work is still developing, however, and applying it to the markets for consumer financial products and services is still in the early stages. The influence of behavioral biases on consumption and consumption smoothing present distinct and challenging measurement problems. In addition, as a practical matter, agencies will need standards for incorporating the effects of behavioral biases into regulatory benefit analyses.¹⁶⁰

B. *Selection and Characteristics of the Exemplars*

We selected the twenty exemplars primarily on the basis of the scores discussed in Part II as follows. We first identified all of the rules for which the benefit of some requirement was partially or fully monetized (that is, the benefit analysis received a Quantification Score of four or five). We selected fifteen benefit analyses from fourteen different rulemakings on this basis, favoring those with higher Qualitative Scores, but also taking into account breadth across agencies and subject matter.

We then selected an additional five benefit analyses with lower Quantification Scores in order to broaden the analysis. Three of these analyses are the only exemplars in the Limited Financial Capabilities category. One is the only exemplar in the Clarity/Reducing Litigation category. The fifth added a second exemplar to the Unfair Outcomes category. An asterisk in the tables in Part IV.C identifies these five additional exemplars, which also came from five different rulemakings.

¹⁵⁵ See *id.* at 171.

¹⁵⁶ See *id.* at 157.

¹⁵⁷ More precisely, this is the compensating variation from the policy change using “experienced utility.” See Jin et al., *supra* note 34, at 157; see also Mullainathan et al., *supra* note 136.

¹⁵⁸ See Jin et al., *supra* note 34, at 165.

¹⁵⁹ See *id.* at 174.

¹⁶⁰ This point is emphasized in W. Kip Viscusi & Ted Gayer, *Rational Benefit Assessment for an Irrational World: Toward a Behavioral Transfer Test*, 7 J. BENEFIT COST ANALYSIS 69, 77 (2016).

TABLE TEN – DISTRIBUTION OF EXEMPLARS

Benefit Category	Count	Average Qualitative Score of Exemplars	Average Quantification Effort Score of Exemplars
Information Failures	3	3.67	4.33
Externalities	3	3.33	4.33
Market Power	1	4.00	4.00
Public Goods	1	4.00	4.00
Principal/Agent Issues	1	3.00	4.00
Cognitive Biases	2	2.50	5.00
Limited Financial Capabilities	3	3.33	1.67
Unfair Outcomes	2	3.50	2.50
Consumer Welfare	2	2.50	4.00
Clarity/Reducing Litigation	1	2.00	3.00
Increased Compliance/Self-Regulation	1	4.00	4.00

Each of the twenty exemplars belongs to one of eleven benefit categories. The first nine exemplars belong to five benefit categories that are associated with neo-classical economic justifications for regulation: information failures, externalities, market power, public goods, and principal-agent problems. The remaining exemplars belong to six benefit categories that are associated with other justifications for regulation. These justifications include benefit categories associated with behavioral economics, such as cognitive biases and limited financial capabilities; unfairness; and benefits not clearly associated with any of the above categories, which we designate as “consumer welfare.”¹⁶¹ We also discuss a rule that may reduce litigation by extending a presumption of compliance and a rule that may increase substantive compliance by facilitating certain new business practices for self-regulation.

¹⁶¹ Stefano DellaVigna provides a taxonomy of behavioral deviations from the standard model. His three classes of deviations are: nonstandard preferences, including hyperbolic discounting; nonstandard beliefs, including “overconfidence about . . . [one’s] own future self-control”; and nonstandard decision making, including limited attention, heuristics, and confusion. See Stefano DellaVigna, *Psychology and Economics: Evidence from the Field*, 47 J. ECON. LITERATURE 315, 315, 319 (2009). Our cognitive biases benefit category falls within his first two classes, while the limited financial capabilities category falls within his third.

C. *Neo-Classical Market Failures*

1. Information Failures

Rule	Agency	Information Failures Qualitative Score	Requirements associated with benefit	Quantification Effort Score	Benefit Metric	Key empirical assumption or estimate
Fiduciary Requirements for Disclosure in Participant-Directed Individual Account Plans	DOL	4: Key benefit cited	Disclosure of comparative performance information and fees	5: Fully monetized	Time saved	Assumed 60-90 minute reduction in search time
Enhancing Airline Passenger Protections	DOT	3: Discussed in detail	Disclosure of full fares in advertising	4: Some monetization	Time saved	Assumed 2 percent of online purchasers search multiple websites
Tire Fuel Efficiency Consumer Information Program	DOT	4: Key benefit cited	Disclosure of replacement tire ratings for fuel efficiency, safety and durability	4: Some monetization	Fuel saved and reduced greenhouse gas emissions	Assumed 1 percent of targeted tires would have 5% improved rolling resistance

The three rules in this section address information failures¹⁶² in the markets for retirement investments, airline tickets, and replacement tires for automobiles. The regulatory impact analyses for retirement investments and airline tickets measure the benefit of additional information by the value of the time consumers are expected to save in finding the products they want. These analyses note that additional information may also lead consumers to make better or more personally satisfying choices; however, neither attempts to measure this effect. In contrast, the benefit of additional information regarding automobile replacement tires is measured by the value of fuel consumers would save from finding and selecting tires they preferred.

In a rulemaking on retirement plans,¹⁶³ the Employee Benefits Security Administration (EBSA) of the Department of Labor issued a final rule establishing a uniform, basic disclosure regime for participant-directed individual

¹⁶² Memorandum from Howell Jackson, Paul Rothstein & Kelley O'Mara to Harv. L. Student Research Team (Jan. 29, 2014) (appended as Appendix Two) ("Information failures: Present if regulation addresses information asymmetries or other information problems that existed during the baseline period. Usually found in disclosure regulations. Be careful to distinguish from cognitive biases and limited financial capabilities. The focus here should be on whether or not there was a lack of information available, not whether the information was easily or properly understood.").

¹⁶³ See *Fiduciary Requirements for Disclosure in Participant-Directed Individual Account Plans*, 75 Fed. Reg. 64,909 (Oct. 20, 2010) (codified at 29 C.F.R. pt. 2550).

retirement account plans such as 401(k) plans. Plan providers must provide upfront and annual disclosures about expenses and returns.¹⁶⁴ They must also provide quarterly disclosures showing the dollar amount of the administrative or individual plan-related fees and expenses actually charged to, or deducted from, the individual accounts.¹⁶⁵ The information must be provided in a chart or similar format designed to facilitate a comparison of each investment option available under the plan.¹⁶⁶ Thus, the disclosure regime for investment products involves a mix of uniform and personalized disclosures that are broadly intended to facilitate initial consumer choices and the monitoring and review of those choices.

To measure the benefit of the disclosure regime, EBSA first estimates the number of people who participate in individual investment accounts and the number likely to be already receiving the required disclosures; this analysis draws on both administrative data and research conducted by the Employee Benefits Retirement Institute.¹⁶⁷ However, EBSA states that it “does not have empirical evidence” on the amount of time each participant may save because of the new content and formatting requirements.¹⁶⁸ To complete the analysis, EBSA assumes that participants in covered plans that currently provide disclosures similar to the ones required by the new rule would save sixty minutes, while participants in other covered plans would save ninety minutes.¹⁶⁹

In a rulemaking on airline safety standards,¹⁷⁰ DOT issued a final rule establishing requirements on airline contingency plans, disclosures, and customer refunds in order to improve “the air travel environment for consumers.”¹⁷¹ In particular, the rule has a number of provisions for “full-fare advertising,” which, among other things, require that all advertised fares incorporate government-imposed taxes and fees as well as mandatory carrier-imposed fees (like booking charges); require the clear and conspicuous disclosure of any round-trip purchase requirement when advertising each-way fares; and prohibit the automatic inclusion of fees for optional services so that consumers would no longer need to opt out of the service to avoid the fee.¹⁷²

The analysis of benefits from full-fare advertising (and the rule overall) depends on the time consumers would save from no longer having to search

¹⁶⁴ See *id.* at 64,911.

¹⁶⁵ See *id.* at 64,913.

¹⁶⁶ See *id.* at 64,921.

¹⁶⁷ See *id.* at 64,911.

¹⁶⁸ *Id.* at 64,929.

¹⁶⁹ See *id.* at 64,929.

¹⁷⁰ See *Enhancing Airline Passenger Protections*, 76 Fed. Reg. 23,109 (Apr. 25, 2011) (codified at 14 C.F.R. pts. 244, 250, 253, 259, and 399).

¹⁷¹ *Id.* at 23,110.

¹⁷² See *id.* at 23,166–67.

across multiple websites for fares that include all fees and charges.¹⁷³ DOT uses a range of administrative data to estimate the number of air passengers who purchase tickets online. DOT simply assumes, however, that two percent of online purchasers search and examine multiple websites to compare fares and would therefore benefit from full-fare advertising.¹⁷⁴ DOT then estimates that each of these consumers would save three minutes on average, “based on a series of user time trials.”¹⁷⁵ The agency does not say anything about the methodology used for the time trials or report the sample size, in contrast to the extensive discussion of the data used to estimate the number of air passengers who purchase tickets online. The agency does acknowledge that the sample was not representative of all ticket purchasers.¹⁷⁶

In a rulemaking on tire standards,¹⁷⁷ the National Highway Traffic Safety Administration (NHTSA), an agency housed within DOT, issued a final rule pursuant to the Energy Independence and Security Act of 2007 (EISA). EISA required the NHTSA to establish a new consumer information program about the comparative performance of replacement passenger car tires in terms of fuel efficiency, safety, and durability.¹⁷⁸ The rule defines test procedures for tire ratings and requires manufacturers to submit these ratings to the NHTSA. These testing and reporting requirements are the first step in the development of a database of comparative performance information on tire fuel efficiency, safety, and durability.¹⁷⁹

The analysis of benefits from establishing a database of comparative tire performance focuses on the savings both to individual consumers from using more fuel-efficient tires and to society through reductions in carbon dioxide emissions.¹⁸⁰ The NHTSA argues that consumers would purchase more fuel-efficient replacement tires if they could more easily compare performance characteristics and price.¹⁸¹ The NHTSA has extensive information

¹⁷³ See ECONOMETRICA, INC, FINAL REGULATORY ANALYSIS (FRA) FOR CONSUMER RULEMAKING: ENHANCING AIRLINE PASSENGER PROTECTIONS II 54–59 (2011), <https://www.regulations.gov/contentStreamer?documentId=DOT-OST-2010-0140-2046&contentType=pdf> [hereinafter FRA].

¹⁷⁴ See *id.* at 57.

¹⁷⁵ *Id.* at n.49.

¹⁷⁶ See ECONOMETRICA, INC, *supra* note 173, at 57. DOT also presents a brief quantitative analysis of the possibility that consumers purchase tickets that they would prefer to avoid because they “anchor” on lower, incomplete fares and then fail to fully consider the full fare when it is revealed during the purchase process. DOT states that “the main analysis” does not include the analysis of “suboptimal purchasing decisions” and refers readers to Appendix 2. *Id.* at 56–57. There, DOT notes that, “industry commenters to the rule strongly disagreed with this theoretical assumption” that consumers might anchor on the lower, incomplete fares that they see while searching. *Id.* at B-1.

¹⁷⁷ See Tire Fuel Efficiency Consumer Information Program, 75 Fed. Reg. 15,893 (Mar. 30, 2010) (codified at 49 C.F.R. pt. 575).

¹⁷⁸ See *id.* at 15,895.

¹⁷⁹ See *id.*

¹⁸⁰ See generally U.S. DEP’T OF TRANSP., FINAL REGULATORY IMPACT ANALYSIS FOR THE REPLACEMENT TIRE CONSUMER INFORMATION PROGRAM (2010), <https://www.nhtsa.gov/document/final-regulatory-impact-analysis-replacement-tire-consumer-information-program>.

¹⁸¹ See Tire Fuel Efficiency Consumer Information Program, 75 Fed. Reg. 15,935.

on how frequently tires are replaced, and it can therefore estimate how many improved tires would be on the road for any given number of annual purchases of improved tires.¹⁸² However, the NHTSA does not have information about how providing comparative performance information in a database would change consumer purchase behavior. Thus, the Final Regulatory Impact Analysis estimates benefits “using a range of hypothetical assumptions.”¹⁸³ The main estimate of benefits assumes that, because of the database, one percent of tires that consumers purchase have a five percent reduction in rolling resistance, which translates into a 0.65% improvement in fuel efficiency.¹⁸⁴

2. Externalities

Rule	Agency	Externalities Qualitative Score	Requirements associated with benefit	Quantification Effort Score	Benefit Metric	Key empirical assumption or estimate
Energy Conservation Standards for Residential Refrigerators, Refrigerator-Freezers, and Freezers	DOE	4: Key benefit cited	Requirements for energy efficiency	4: Some monetization	Reduced greenhouse gas emissions	Estimated reduction in demand for refrigerators using price elasticity of demand
Emergency Homeowners' Loan Program	HUD	2: Mentioned as a benefit	Framework for providing emergency financial assistance to homeowners	4: Some monetization	Value of foreclosures avoided	Assumed 75%-85% of participants avoid foreclosure
Examinations of Work Areas in Underground Coal Mines for Violations of Mandatory Health or Safety Standards	DOL	4: Key benefit cited	Additional examinations for specific risks; disclosures	5: Fully monetized	Mineworker injuries and fatalities avoided	Assumed examinations would eliminate 100% of violations and associated injuries and fatalities

The three rules in this section address externalities¹⁸⁵ in the markets for refrigerators and housing, and also in regard to workplace safety. The regu-

¹⁸² See *id.* at 15,903–04.

¹⁸³ See *id.* at 15,933.

¹⁸⁴ See *supra* note 180, at 83–95.

¹⁸⁵ Memorandum from Howell Jackson, Paul Rothstein & Kelley O’Mara to Harv. L. Student Research Team (Jan. 29, 2014) (appended as Appendix Two) (“Externalities: Present if the benefit limits negative externalities that existed in the market during the baseline period. Score here if a transaction between two parties in the pre-regulatory period had negative external effects on others or society as a whole, *and* the regulation attempts to address the issue. For example, a regulation that limits foreclosures will limit the negative externalities that foreclosures trigger on communities.”); see also WEIMER & VINING, *supra* note 37, at 93–98.

latory impact analyses measure reductions in external harms through the value of reduced greenhouse gas emissions, the value of reduced foreclosures, and (as explained below) reduced mineworker injuries and fatalities. Other benefits are also measured as part of a broader analysis of the impact of the rules.

In a rulemaking on refrigerator standards,¹⁸⁶ the Department of Energy (DOE) issued a final rule pursuant to the Energy Policy and Conservation Act (EPCA) that prescribes energy conservation standards for refrigerators, refrigerator-freezers, and freezers.¹⁸⁷ Under the regulatory regime established by EPCA, DOE prescribes test procedures that manufacturers must use as the basis for certifying to DOE that their products meet the prescribed standards.¹⁸⁸ DOE must also use these test procedures to determine compliance with the standards.¹⁸⁹ EPCA also requires DOE to consider whether an amended standard is economically justified using seven specific factors, and DOE may not prescribe an amended standard if it determines that the amended standard is not economically justified.¹⁹⁰ The actual standards in this rule are statements of maximum annual energy use by the products covered by the rule, which are different types of refrigerators, refrigerator-freezers, and freezers.¹⁹¹

DOE's estimates of energy savings take into account the full chain of effects that begins with more restrictive energy standards, and subsequently leads to higher manufacturing costs, higher consumer prices, and reduced market demand.¹⁹² Since all new appliances will have to comply with the standards, DOE essentially estimates the rate at which new appliances will diffuse into consumer households and computes the energy savings based on the difference in energy consumption between new and old appliances.¹⁹³ DOE repeats the analysis for all of the different types of covered products as well as for different sub-groups of consumers.¹⁹⁴ DOE then uses an existing computer model to convert the estimated energy savings into reduced power sector emissions of carbon dioxide¹⁹⁵ and monetizes the reduction using a model for the social cost of carbon.¹⁹⁶

¹⁸⁶ See Energy Conservation Program: Energy Conservation Standards for Residential Refrigerators, Refrigerator-Freezers, and Freezers, 76 Fed. Reg. 57,516 (Sept. 15, 2011) (codified at 10 C.F.R. pt. 430). The Quantification Scores assigned by the research assistants were 4 and 5; the table reports 4 for simplicity.

¹⁸⁷ See *id.* at 57,516.

¹⁸⁸ See *id.* at 57,521.

¹⁸⁹ See *id.*

¹⁹⁰ See *id.*

¹⁹¹ *Id.* at 57, 599.

¹⁹² *Id.* at 57,545.

¹⁹³ *Id.* at 57,551.

¹⁹⁴ *Id.* at 57,555.

¹⁹⁵ See *id.* at 57,558.

¹⁹⁶ See *id.* at 57,518.

DOE also projects the economic impacts on individual consumers using a product life-cycle model.¹⁹⁷ Interestingly, DOE reports that these impacts are generally positive: consumers pay more initially for appliances that meet the new standards, but the lower cost-of-use more than offsets the additional cost.¹⁹⁸ This raises the obvious question of why consumer demand does not lead the market to produce more energy efficient products in the first place. DOE notes that “the economics literature provides a wide-ranging discussion of how consumers trade off upfront costs and energy savings . . . [and] attempts to explain why consumers appear to undervalue energy efficiency improvements,” and then provides a list of possible reasons, including “excessive focus on the short term.”¹⁹⁹ Note that, while the bias, and thus the rate at which new appliances are purchased, might be sensitive to information about energy savings (for example, as provided on product labels²⁰⁰), simply de-biasing consumers would not in itself lead to an efficient market outcome in the presence of an externality.²⁰¹

In a rulemaking on a mortgage assistance program,²⁰² HUD issued a final rule that reinstates a framework for providing emergency relief to financially distressed and underemployed homeowners who are temporarily unable to make their mortgage payments.²⁰³ The Emergency Homeowners’ Loan Program (EHLPP) allows HUD to provide a maximum of \$50,000, disbursed over at most two years and then repaid over the subsequent five years, at zero interest to eligible homeowners.²⁰⁴ Homeowners must be at least ninety days delinquent on their mortgages due to a reduction in household income, as well as face the threat of foreclosure.²⁰⁵ Reasons for the reduction of income are limited to involuntary unemployment, involuntary under-employment, and medical conditions.²⁰⁶ Current household income must be less than eighty-five percent of the household’s previous income and previous income must have been no more than 120 percent of Area Median Income (AMI).²⁰⁷ Homeowners must also meet certain conditions to demonstrate that they have a “reasonable likelihood [of] resum[ing] full monthly mortgage payments, and repay[ing]” the loan.²⁰⁸

¹⁹⁷ *Id.* at 57,532.

¹⁹⁸ *Id.* at 57,518.

¹⁹⁹ *Id.* at 57,593.

²⁰⁰ *See id.* at 57,521 (noting that the FTC is generally responsible for labeling issues on consumer products).

²⁰¹ For a discussion of optimal policy in this context, see Allcott et al., *supra* note 140.

²⁰² Emergency Homeowners’ Loan Program, 76 Fed. Reg. 11,946 (Mar. 4, 2011) (codified at 24 C.F.R. pt. XV). The Quantification Scores assigned by the research assistants were 4 and 5; the table reports 4 for simplicity.

²⁰³ *Id.* at 11,946.

²⁰⁴ *Id.* at 11,948.

²⁰⁵ *Id.* at 11,949.

²⁰⁶ *Id.* at 11,950.

²⁰⁷ *Id.* at 11,951, 11,953.

²⁰⁸ *Id.* at 11,951–52.

HUD first estimates the number of program participants using the program budget and the expected average loan size.²⁰⁹ HUD then estimates the benefits of preventing a single foreclosure to four groups: homeowners, lenders, neighbors, and local governments. The external benefit of preventing a single foreclosure accrues to neighbors and to some extent local governments. The benefit to neighbors is from avoiding the negative effects on quality of life from unoccupied and potentially damaged property.²¹⁰ These negative effects include additional crime and reduced visual attractiveness of the neighborhood.²¹¹ Some, but perhaps not all, of these negative effects would be capitalized into lower housing prices.²¹² To the extent local governments work to maintain property values through programs and policing, those expenses attenuate the reduction in quality of life that would otherwise occur, as well as the associated decline in housing prices.²¹³ Thus, these expenses may also provide an external benefit. HUD draws on its own data and published work to estimate these benefits per prevented foreclosure.²¹⁴

While HUD is able to estimate the number of program participants and the benefit of preventing an individual homeowner's foreclosure, HUD does not have the data with which to estimate the reduction in the probability of foreclosure that the program may cause. This data is needed, along with the previous information, to compute the per-participant and total benefit of the program. To complete the analysis, HUD assumes a program foreclosure rate of fifteen percent, so a program participant has an eighty-five percent reduction in the probability of foreclosure.²¹⁵ While HUD notes that fifteen percent is twice the national rate of homeowners seriously delinquent or in foreclosure,²¹⁶ there is no analysis to explain why a randomly drawn program participant (that is, a homeowner who is distressed but has a high potential for recovery) would have twice the foreclosure rate of a homeowner drawn randomly from the population.

In a rulemaking on mine safety standards,²¹⁷ the Mine Safety and Health Administration (MSHA), an agency housed within the Department of Labor, promulgated a final rule that revises the requirements for mine operators' examinations of underground coal mines and identification of health and safety violations. Under the new requirements, mine examiners must not only examine for hazardous conditions, but also identify, record, and correct

²⁰⁹ See DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT, REGULATORY IMPACT ANALYSIS: EMERGENCY HOMEOWNERS' LOAN PROGRAM, 1-2 (2011) <http://portal.hud.gov/hudportal/documents/huddoc?id=ia-emrgncyhownerslp.pdf>.

²¹⁰ *Id.* at 4.

²¹¹ *Id.*

²¹² *Id.*

²¹³ *Id.*

²¹⁴ *Id.*

²¹⁵ *Id.*

²¹⁶ *Id.* at 5.

²¹⁷ Examinations of Work Areas in Underground Coal Mines for Violations of Mandatory Health or Safety Standards, 77 Fed. Reg. 20,700 (Apr. 6, 2012) (codified at 30 C.F.R. pt. 75).

violations of nine health or safety standards that are known to quickly create hazardous conditions.²¹⁸ MSHA review of accident investigation reports and enforcement data showed repeated violations of these standards and that “these violations present some of the most unsafe conditions in underground coal mines.”²¹⁹

It is conventional in this scenario to focus on the information asymmetry, but there is also an externality that the rule mitigates. In a workplace that has multiple sources of risk, employers can unilaterally, or with parties other than workers, reduce precaution and increase risk without the workers necessarily observing the change. From this perspective, these decisions create an (after-market) external harm.²²⁰ In the long run, absent the rule, the additional risk may be recognized and either removed or priced into wages. This is true for any externality where rights in the underlying transaction—in this case, employment—are clear and parties can bargain.²²¹

To quantify the benefits of the inspection program, MSHA reviewed mine inspection reports to identify injuries and deaths that were attributable to the health and safety violations that the rule requires examiners to identify, record, and correct.²²² However, the MSHA analysis does not attempt to predict the effectiveness of the inspection program. Instead, the analysis implicitly assumes that all such violations would have been corrected and that, as a result, none of the injuries or deaths attributable to those violations would have occurred.²²³ Thus, having identified twelve fatalities attributable to these violations in five years of data, MSHA estimates that the rule will prevent $(12/5 =)$ 2.4 fatalities per year.²²⁴ A similar analysis leads MSHA to conclude that the rule will prevent 6.4 lost-time injuries per year.²²⁵ While it may be reasonable to assume that all violations will be identified and corrected, the analysis of benefits provides no discussion of this issue.

²¹⁸ *Id.* at 20,701.

²¹⁹ *Id.* at 20,702.

²²⁰ See WEIMER & VINING, *supra* note 37, at 105 (“[T]here may be differences in the amount of information relating to the attributes of an externality between the generator of the externality and the affected party. Workers, for instance, may not be as well informed about the health risks of industrial chemicals as their employers.”). The information asymmetry also limits the feasibility of taxes or subsidies instead of regulation to reduce workplace safety risks.

²²¹ WEIMER & VINING, *supra* note 37, at 97. The rule also requires the examiner to post a conspicuous danger sign in the area where any hazardous condition (not presenting an “imminent danger”) is found. These disclosures would then inform workers that working conditions were more dangerous than they realized. In principle this could facilitate bargaining that would proactively enhance workplace safety and reduce the externality. The efficiency rationale for mandating additional examinations, as opposed to simply posting disclosures or doing nothing, rests on how well the additional examinations are tailored to the problem, the relative speed of risk and wage adjustment under the different alternatives, and the ability (or tendency) of employers to increase and then reduce precaution when workers cannot readily observe these changes in workplace safety.

²²² 77 Fed. Reg. 20,706.

²²³ *Id.* at 20,706–08.

²²⁴ *Id.* at 20,707.

²²⁵ *Id.* at 20,706–07.

3. Market Power

Rule	Agency	Market Power Qualitative Score	Requirements associated with benefit	Quantification Effort Score	Benefit Metric	Key empirical assumption or estimate
Health Insurance Issuers Implementing Medical Loss Ratio (MLR) Requirements Under the Patient Protection and Affordable Care Act	HHS	4: Key benefit cited	Rebates to consumers if the ratio of claims to premiums is too low.	4: Some monetization	[None: "unable to quantify benefits"] Increase in MLRs; rebates	Estimated impact on MLRs in range of 1%-7% compared to 2009, based on discussions with industry

In a rulemaking on health insurance premium standards,²²⁶ HHS issued an interim final rule that establishes disclosure requirements and medical loss ratio (MLR) requirements for health insurance issuers.²²⁷ In particular, the rule provides an annual rebate to enrollees if the issuer's MLR—in essence, the ratio of claims to premiums—is below a critical threshold.²²⁸ The thresholds are generally eighty-five percent in the large group market and eighty percent in the small group or individual market.²²⁹

This rule primarily addresses market power in the market for health insurance.²³⁰ According to HHS, this market power results from both a lack of price transparency as well as from the absence of multiple competing plans in some locations.²³¹ The emphasis on price transparency to some extent echoes the statutory mandate, which calls for greater transparency and accountability around the expenditures of health insurance issuers.²³² HHS emphasizes in the burden analysis that a lack of price transparency may limit competition over the value of the product.²³³

²²⁶ Health Insurance Issuers Implementing Medical Loss Ratio (MLR) Requirements Under the Patient Protection and Affordable Care Act, 75 Fed. Reg. 74,864 (Dec. 1, 2010) (codified at 45 C.F.R. pt. 158).

²²⁷ As defined by the rule, MLR is "an accounting statistic that . . . measures the percentage of total premiums that insurance companies spend on health care and quality initiatives, versus what they spend on administration, marketing and profit." *Id.* at 74,895.

²²⁸ *Id.* at 74,865.

²²⁹ *Id.*

²³⁰ See Memorandum from Howell Jackson, Paul Rothstein & Kelley O'Mara to Harv. L. Student Research Team (Jan. 29, 2014) (appended as Appendix Two) ("Market power: Present if the regulation talks about market participants having power to raise prices without market feedback mechanisms, or if the regulation points to the fact that consumer could not accurately comparison-shop for the best price during the baseline period."); see also WEIMER & VINING, *supra* note 37, at 98–104, 114–15.

²³¹ 75 Fed. Reg. 74,895.

²³² *Id.* at 74,865.

²³³ *Id.* at 74,895 ("Even in markets with multiple competing plans, lack of transparency in pricing may prevent adequate competition based on the value of product, since it is difficult to ascertain if a low premium is due to high efficiency, low coverage of medical claims, or a

The rule has a disclosure requirement that addresses the lack of price transparency and potential market power.²³⁴ Issuers are required to send certain revenue and expense information to HHS, and HHS posts this information on its website.²³⁵ The MLR rebate requirement provides an incentive for issuers with an MLR that would not otherwise reach the threshold, to increase spending on “quality-promoting activities.”²³⁶ Issuers who pay the rebates may be transferring back to consumers some of the surplus earned when competitive pressures do not align prices and costs. However, the impact analysis does not claim that rebates (when triggered) leave consumers as well off as they would be absent market power, or that rebates (when not triggered) imply that prices are competitive.²³⁷ Indeed, HHS states explicitly, “we are unable to quantify benefits,”²³⁸ presumably because of the difficulty in fully accounting for how the MLR requirement affects pricing and how additional quality-promoting activities and changes in pricing affect consumer welfare.

Although HHS cannot quantify benefits, it does estimate changes in the MLRs and rebates.²³⁹ HHS has a great deal of data with which to estimate MLRs prior to the rule.²⁴⁰ To estimate how the MLRs may change because of the rule, HHS spoke with industry experts.²⁴¹ Based on these discussions, HHS developed an initial estimate that additional expenditures on quality improving activities would increase MLRs by three percentage points, which is equivalent to three percent of premium, with a range of one to five percentage points (and percent of premium).²⁴² After incorporating other uncertainties, the agency concluded that MLRs would increase at most seven percentage points.²⁴³ HHS was then able to compute a range of values for the

healthy underlying population of enrollees. As a result, insurers can provide an inefficient, low-value product without consumers being fully aware of what they are purchasing.”)

²³⁴ *Id.* at 74,885.

²³⁵ Public Health Service Act, § 2718(a), *amended by* Patient Protection and Affordable Care Act (current version at 42 U.S.C. § 300gg—18(a)) (providing the posting requirement).

²³⁶ *Id.* at 74,895.

²³⁷ *Id.* at 74,893–94.

²³⁸ *Id.* at 74,893.

²³⁹ See OFFICE OF CONSUMER INFORMATION & INSURANCE OVERSIGHT, DEP’T OF HEALTH & HUMAN SERVICES, INTERIM FINAL RULE FOR HEALTH ISSUERS IMPLEMENTING MEDICAL LOSS RATIO (MLR) REQUIREMENTS UNDER THE PATIENT PROTECTION AND AFFORDABLE CARE ACT (OCIO-9998-IFC): REGULATORY IMPACT ANALYSIS, TECHNICAL APPENDIX (2010), https://www.cms.gov/CCIIO/Resources/Files/Downloads/mlr_20101122_technical_appendix.pdf.

²⁴⁰ *Id.* at 2–7.

²⁴¹ *Id.* at 16.

²⁴² See *id.* at 16–17 (“Discussions with industry experts suggest that quality improving activities are likely to account for an average of approximately 3 percent of premium, but there is substantial uncertainty concerning this estimate. Few observers think that quality improving activities will be greater than 5 percent of premium, and few expect that they will be less than 1 percent of premium. In the mid-range estimate, the Department assumes that quality improving activities will account for 3 percent of premium, and uses the 1 percent and 5 percent estimates as the range in a sensitivity analysis.”); see also *id.* at tbl. 10.

²⁴³ *Id.* at 16–17, tbl. 10.

rebates, which would be paid by issuers whose MLRs would still not reach the threshold.²⁴⁴

4. Public Goods

Rule	Agency	Public Goods Qualitative Score	Requirements associated with benefit	Quantification Effort Score	Benefit Metric	Key empirical assumption or estimate
Patient Safety and Quality Improvement	HHS	4: Key benefit cited	Framework to encourage health care providers to voluntarily report information on adverse events.	4: Some monetization	Cost savings from adverse events prevented	Assumed reduction in preventable adverse events by 1% to 3% in the first five years

In a rulemaking on health care reporting standards,²⁴⁵ the Agency for Healthcare Research and Quality (AHRQ), an agency housed within HHS, issued a final rule that establishes a framework by which health care providers may voluntarily report information to Patient Safety Organizations (PSOs) for the aggregation and analysis of patient safety events. The rule establishes the requirements that entities must meet to become PSOs and provides privilege and confidentiality protections for the information that providers and PSOs assemble and develop.²⁴⁶

This rule furthers the overall goal of the Patient Safety and Quality Improvement Act of 2005 to “develop a national system for analyzing and learning from patient safety events.”²⁴⁷ The PSOs promote the collection and analysis of information that may reduce the risk of adverse outcomes to patients receiving health care.²⁴⁸ Since the information is costly to collect and analyze but equally available to (qualified) users once produced, the PSOs may be regarded as providing a public good.²⁴⁹

Regarding the benefits of the rule, the legal framework removes barriers to voluntary information sharing that existed in the pre-rule (or baseline) regulatory regime. The rule therefore promotes the voluntary provision of a public good relative to the baseline. AHRQ’s analysis of benefits does not explicitly address the general inefficiency associated with the voluntary (or private) provision of public goods. The analysis does, however, estimate

²⁴⁴ *Id.* at 18.

²⁴⁵ Patient Safety and Quality Improvement, 73 Fed. Reg. 70,732 (Nov. 21, 2008) (codified at 42 C.F.R. pt. 3).

²⁴⁶ *Id.* at 70,732.

²⁴⁷ *Id.* at 70,741; *see also* 42 U.S.C. 299b-21–b-26 (2018).

²⁴⁸ 73 Fed. Reg. 70,732.

²⁴⁹ Memorandum from Howell Jackson, Paul Rothstein & Kelley O’Mara to Harv. L. Student Research Team (Jan. 29, 2014) (appended as Appendix Two) (“Public goods: In addition to including tragedies of the commons, a public goods benefit is present if the regulation creates new public information. This would include, for example, a new *public* data source as a result of new data collection.”); *see also* WEIMER & VINING, *supra* note 37, at 74–93.

benefits under different levels of voluntary participation. The analysis notes that hospitals and many other health care providers already have adverse event reporting systems and a safety-quality function.²⁵⁰ Providing information to PSOs would therefore not require significant additional expense for these providers, and so presumably they would participate.

Regarding the reduction in adverse patient outcomes that PSOs might achieve, AHRQ draws on research by the Institute of Medicine and reports that the total national costs of preventable adverse events lies between \$17 and \$29 billion.²⁵¹ Direct health care costs comprise at least half of these amounts, so at least \$8.5 to \$14.5 billion.²⁵² AHRQ then develops estimates of cost savings using the midpoint of this range (*that is* \$11.5 billion) and assumes both that, over the first five years, the fraction of hospitals benefiting from PSOs grows from ten percent to eighty-five percent and that the reduction in adverse events to these hospitals grows from one percent to three percent.²⁵³ These assumptions appear to be for purposes of illustration, since no empirical foundation or source is offered. As a result, the cost savings increase from \$11.5 million in the first year to \$293.25 million in the fifth year.²⁵⁴

5. Principal-Agent Issues

Rule	Agency	Principal/ Agent Issues Qualitative Score	Requirements associated with benefit	Quantification Effort Score	Benefit Metric	Key empirical assumption or estimate
2013 Real Estate Settlement Procedures Act (Regulation X)	CFPB	3: Discussed in detail	Disclosures; servicer must renew homeowner's insurance instead of obtaining force-placed insurance in certain cases	4: Some monetization	Cost savings from force-placed insurance avoided	Assumed 10% reduction in force-placed insurance

²⁵⁰ 73 Fed. Reg. 70,793.

²⁵¹ To view the analysis of benefits in the proposed rule, see Patient Safety and Quality Improvement, 73 Fed. Reg. 8,112, at 8,169 (proposed Feb. 12, 2008) (to be codified at 42 C.F.R. pt. 3). The analysis of benefits in the final rule incorporates by reference and summarizes the analysis from the proposed rule. 73 Fed. Reg. 70,732, at 70,793. The analysis in the proposed rule notes certain challenges in measuring the impacts, benefits and costs, including the lack of baseline data on patient safety events, and concludes that it is possible only to make "general estimates" of the savings to the healthcare system. 73 Fed. Reg. 8,112, at 8169.

²⁵² Table 4 of the final rule states the range of \$8.5 to \$14.5 billion from the proposed rule. 73 Fed. Reg. at 70,794, tbl. 4.

²⁵³ AHRQ states in the proposed rule that it expects only hospitals to participate in the first five years. 73 Fed. Reg. 8,112, at 8,167.

²⁵⁴ \$11.5 million is \$11.5 billion x 10 percent x 1 percent and \$293.25 million is \$11.5 billion x 85 percent x 3 percent. 73 Fed. Reg. at 70,794, tbl. 4.

In a rulemaking on mortgage loan servicing standards,²⁵⁵ the Consumer Financial Protection Bureau (CFPB) issued a final rule that implements provisions of the Dodd-Frank Wall Street Reform and Protection Act regarding mortgage loan servicing.²⁵⁶ In particular, the rule provides protections to borrowers with respect to the use of force-placed (that is, lender-placed) insurance by servicers.²⁵⁷

This rule addresses an agency issue in the servicing of mortgage loans.²⁵⁸ For unsecuritized mortgages (known as “whole loans”), servicers are the agents of the owners of the loans; for securitized loans, however, servicers are the agents of the trustee of a mortgage pool. The owners of whole loans and the investors in mortgage pools have a direct financial interest in loan performance. Servicers who are agents of the owners of whole loans, and especially servicers who are employed by trustees of servicing pools, face complicated and often weak incentives to work with homeowners once loans are in default.²⁵⁹ Individual investors and trustees have in practice limited incentives or ability to discipline servicers;²⁶⁰ borrowers have essentially none.²⁶¹ As a result, servicers may pursue their self-interest to the detriment of both borrowers and investors. In regards to force-placed insurance, the CFPB provides citations to federal complaints and comments at public

²⁵⁵ Mortgage Servicing Rules under the Real Estate Settlement Procedures Act (Regulation X), 78 Fed. Reg. 10,696 (Feb. 14, 2013) (codified at 12 C.F.R. pt. 1024).

²⁵⁶ *Id.* at 10,696.

²⁵⁷ *Id.* at 10,722 (“The statute [i.e., the Dodd-Frank Act] generally defines ‘force-placed insurance’ as hazard insurance coverage obtained by a servicer of a federally related mortgage loan when the borrower has failed to maintain or renew hazard insurance on such property as required of the borrower under the terms of the mortgage.”).

²⁵⁸ Memorandum from Howell Jackson, Paul Rothstein & Kelley O’Mara to Harv. L. Student Research Team (Jan. 29, 2014) (appended as Appendix Two) (“Principal/agent issues: Centers around misalignment of incentives between a principal and someone acting on her behalf. This does not concern corporate governance issues, but it is implicated when a hired agent does not act fully on behalf of the principal (e.g., real estate agents not acting purely on behalf of their client). When appropriate, you may include a non-traditional principal-agent relationship (e.g., mortgage brokers and their customers), if the regulation indicates that principal-agent misalignments are at issue.”). Weimer & Vining provide a brief discussion, *supra* note 37, at 169–72. A formal analysis is in HAL R. VARIAN, MICROECONOMIC ANALYSIS 440–54 (3d ed. 1992).

²⁵⁹ 78 Fed. Reg. 10,699–700, 10,818, 10,853; *see also* Adam J. Levitin & Tara Twomey, *Mortgage Servicing*, 28 YALE J. ON REG. 1, 37 (2011) (“Servicers are compensated in four ways: a servicing fee, float income, ancillary fees, and a retained interest in the securitization. The values of three of the four types of compensation—servicing fees, float, and retained interests—vary based on factors beyond the servicer’s control, particularly mortgage prepayment speeds, which are largely a function of interest rates. Accordingly, a servicer’s ability to influence its net servicing income depends on its ability to levy ancillary fees and to control servicing costs. This compensation structure incentivizes servicers to aggressively pursue ancillary fees and to pursue loss mitigation strategies that minimize costs, even if they fail to maximize returns to investors.”); *see generally* Diane E. Thompson, *Foreclosing Modifications: How Servicer Incentives Discourage Loan Modifications*, 86 WASHINGTON L. REV. 755 (2011).

²⁶⁰ *See* Levitin & Twomey, *supra* note 259, at 57–69.

²⁶¹ 78 Fed. Reg. at 10,843 (“A borrower cannot readily leave a servicer if the quality of servicing proves to be unsatisfactory, and the borrower [who refinances] cannot control the selection of the new servicer.”).

hearings regarding payments made to servicers, and services offered to servicers, by providers of force-placed insurance.²⁶² These payments may induce some servicers to impose force-placed insurance unnecessarily and may drive up the cost of force-placed insurance.²⁶³

The rule imposes a number of requirements on mortgage loan servicers with respect to the use of force-placed insurance. Servicers must, among other requirements, provide two written notices to a borrower over at least forty-five days before imposing a charge for force-placed insurance on the borrower.²⁶⁴ The notices generally warn the borrower that hazard insurance is required, that the servicer needs proof that the borrower has hazard insurance, and that the servicer will obtain hazard insurance at the borrower's expense without this proof.²⁶⁵ All charges "must bear a reasonable relationship to the servicer's cost of providing the service."²⁶⁶ Significantly, for borrowers who pay for hazard insurance through an escrow account, the rule will generally cause servicers to advance funds to the escrow account and pay the premium rather than allow the insurance to lapse and acquire force-placed insurance.²⁶⁷ The goal is to reduce instances in which a servicer might force-place insurance when there is a better alternative for the consumer.²⁶⁸

The CFPB uses data from a range of sources to estimate the number of homeowners that incur force-placement each year, the number of months they pay for force-placed insurance, and the difference between the average homeowner's monthly insurance premium and the average force-placed insurance premium. The CFPB does not, however, have data with which to estimate the fraction of these individuals who would no longer pay for force-placed insurance because of the rule. For purpose of illustration, the CFPB considered a scenario in which the rule would reduce the incidence of force-placed insurance by ten percent.²⁶⁹ This implied 104,000 fewer homeowners would incur force-placement each year. The CFPB then multiplied this fig-

²⁶² *Id.* at 10,762.

²⁶³ *Id.*

²⁶⁴ *Id.* at 10,703.

²⁶⁵ *Id.* at 10,702.

²⁶⁶ *Id.* at 10,697.

²⁶⁷ Under the rule, a servicer may not purchase force-placed insurance unless, "the servicer has a reasonable basis to believe either that the borrower's hazard insurance has been canceled (or was not renewed) for reasons other than nonpayment of premium charges or that the borrower's property is vacant." *Id.* at 10,875. Servicers by contract generally must maintain hazard insurance on the property, which is collateral for the mortgage loan. Thus, if nonpayment of the premium by the servicer would cause the insurance to lapse, and the property is not vacant, then the servicer could not acquire force-placed insurance without violating the rule, leaving the property uninsured and putting the servicer in violation of the contract.

²⁶⁸ *Id.* at 10,714 ("As set forth above, unless a policy has been cancelled for reasons other than nonpayment, a borrower's delinquency should not cause a servicer to take actions (or make omissions) that would lead to the cancellation of the borrower's voluntary insurance policy and the potential replacement of that policy with a more expensive (and less protective) force-placed insurance policy.")

²⁶⁹ *Id.* at 10,850.

ure by the estimated annual savings in premiums (\$73 to \$440) to obtain total savings of \$7.6 million to \$45.8 million per year.

D. Behavioral Economic and Other Benefits

1. Cognitive Biases

Rule	Agency	Cognitive Biases Qualitative Score	Requirements associated with benefit	Quantification Effort Score	Benefit Metric	Key empirical assumption or estimate
Investment Advice—Participants and Beneficiaries	DOL	2: Mentioned as a benefit	Under limited circumstances, allows a fiduciary advisor to offer investment advice for a fee.	5: Fully monetized	Investment losses avoided due to fewer investment mistakes by participants	Assumed that advised participants make investment errors at one-half the rate of unadvised participants
Required Warnings for Cigarette Packages and Advertisements	HHS	3: Discussed in detail	Mandatory display of health warnings on cigarette packages and advertisements.	5: Fully monetized	Value of smoking ceased or avoided to the affected individuals	Estimated the number of people who cease or avoid smoking and the value to them

The two rules in this section address cognitive biases²⁷⁰ that may affect such diverse consumer decisions as the selection of retirement investments and the use of cigarettes. EBSA argues that cognitive biases can produce myopia and overconfidence, which in turn can cause participants in retirement plans to make poor investment decisions.²⁷¹ The impact analysis measures the benefit of the rule by the investment losses that are avoided due to the additional investment advice that the rule makes available. HHS argues that the same cognitive biases play a role in smoking initiation and continuation by some consumers.²⁷² The impact analysis measures the benefit of the rule primarily by the health benefits to the people who cease or avoid smoking because of the rule.

In a rulemaking on investment advice standards,²⁷³ EBSA issued a final rule that in limited circumstances allows a fiduciary advisor to offer invest-

²⁷⁰ Memorandum from Howell Jackson, Paul Rothstein & Kelley O'Mara to Harv. L. Student Research Team (Jan. 29, 2014) (appended as Appendix Two) (“Cognitive biases: Present if the market failure is a result of the flawed way people process information. This would include, for example, a bias for short-term benefits over greater long-term benefits.”); *see also supra* Part IV.A (discussing behavioral economics and benefit analysis).

²⁷¹ 76 Fed. Reg. at 66,153.

²⁷² *Id.* at 36,719.

²⁷³ Investment Advice—Participants and Beneficiaries, 76 Fed. Reg. 66,135 (Oct. 25, 2011) (codified at 29 C.F.R. pt. 2550).

ment advice for a fee to individuals in participant-directed individual account plans. Fiduciaries are generally prohibited from rendering investment advice to plan participants and receiving fees.²⁷⁴ The rule implements two statutory exceptions to this prohibition. Under the first exception, advice is exempt if it meets a “fee-leveling” requirement.²⁷⁵ This requirement proscribes the receipt of fees or compensation that varies based on investment options selected.²⁷⁶ Under the second exception, advice is exempt if it meets a “computer-model” requirement.²⁷⁷ Under this requirement, the investment advice must be generated by a computer model that takes into account historic risks and returns, avoids inappropriately favoring investment options offered by the fiduciary advisor, and meets other conditions.²⁷⁸

EBSA estimates the cost of investment mistakes to participants and the reduction in these costs due to the rule. Using a wide range of government, academic, and industry sources, EBSA estimates that mistakes cost investors about \$114 billion annually.²⁷⁹ EBSA then estimates percentages of plan participants that will use the advice made available by the rule, under varying assumptions.²⁸⁰ Using these percentages and information on numbers of plan participants, EBSA estimates that an additional 3 to 5 million defined-contribution plan participants and 8 to 24 million IRA plan participants will use investment advice that is available because of the rule.²⁸¹ To complete the analysis, EBSA assumes that advised participants make investment errors at one-half the rate of unadvised participants.²⁸² Relying on this assumption, the above information, and data on retirement assets, EBSA estimates that the reduction in investment errors by advised participants would save plan participants \$7 billion to \$18 billion annually.²⁸³

²⁷⁴ A similar conflict-of-interest in mortgage lending was addressed by the mortgage loan originator rules issued by the Board of Governors. *See* Truth in Lending, 75 Fed. Reg. at 58,509 (Sept. 24, 2010) (codified at 12 C.F.R. pt. 226); Loan Originator Compensation Requirements under the Truth in Lending Act (Regulation Z), 78 Fed. Reg. 11,280 (Feb. 15, 2013) (codified at C.F.R. pt. 1026). The Board rule, in particular prohibited, among other things, loan originators from steering consumers to consummate a loan not in their interest because of greater compensation for the loan originator. *See* 78 Fed. Reg. 11,287.

²⁷⁵ 76 Fed. Reg. 66,136.

²⁷⁶ *Id.* at 66,139.

²⁷⁷ *Id.* at 66,136.

²⁷⁸ *Id.* at 66,141.

²⁷⁹ *See id.* at 66,152 tbl.2, n.45 (referencing the 2008 proposed rule). The academic and industry sources are provided in the regulatory impact analysis for the 2008 proposed rule. In that analysis, EBSA estimates that \$109 billion in investment losses occur from unnecessary fees and expenses, poor trading strategies, inadequate diversification, inappropriate risk, and excess taxes. *See* Investment Advice—Participants and Beneficiaries, 73 Fed. Reg. 49,896, 49,903–05 (Aug. 22, 2008) (codified at 29 C.F.R. pt. 2550).

²⁸⁰ *See* 76 Fed. Reg. at 66,155, tbl.4, n.67.

²⁸¹ *See id.* at 66,156, tbl.5.

²⁸² *See id.* at 66,156

²⁸³ *See id.* at 66,152–53, tbl.2.

In a rulemaking on cigarette health warnings,²⁸⁴ HHS issued a final rule that added a new requirement for the display of graphic health warnings on cigarette packages and in advertisements. HHS estimates the likely impact of graphic warning labels on U.S. smoking rates by comparing trends in U.S. and Canadian smoking rates from 1995 to 2009 and using the fact that Canada required the use of warning labels in December 2000.²⁸⁵ HHS runs a simple regression on Canadian smoking rates in order to estimate “unexplained” smoking rates that depend only on random factors and (after 2000) the graphic warning labels.²⁸⁶ Subtracting the average unexplained smoking rates for 1995 to 2000 from the average unexplained smoking rates for 2001 to 2009 provides one estimate of the impact of the graphic warning labels. This estimate, however, assumes that random factors on average have the same impact on smoking rates in both time intervals. A potentially superior estimate allows the impact to change over time and assumes instead that the change in impact is the same in the United States and Canada.²⁸⁷ HHS estimates this change by running the above regression on smoking rates in the United States and subtracting the average unexplained smoking rates for 1995 to 2000 from the average unexplained smoking rates for 2001 to 2009. HHS concludes that graphic warning labels would reduce smoking rates in the United States by .088 percentage points, or 213,000 people in 2013.²⁸⁸

HHS then quantifies the benefits that accrue to dissuaded smokers.²⁸⁹ In the primary analysis, HHS states that time inconsistency causes consumers to incompletely recognize the full costs of smoking.²⁹⁰ As a result, cigarettes are over-consumed, and the rule benefits consumers by mitigating this outcome. HHS measures the benefits of the rule as the difference in the value of health improvements to dissuaded smokers, less the value that they give up from not engaging in the activity of smoking (that is, the lost consumer surplus).²⁹¹ HHS finds that ninety-three percent of the value of the rule-in-

²⁸⁴ Required Warnings for Cigarette Packages and Advertisements, 76 Fed. Reg. 36,627 (June 22, 2011) (codified at 21 C.F.R. pt. 1141).

²⁸⁵ See generally *id.* at 36,719–21, 36,755–56.

²⁸⁶ *Id.* at 36,755.

²⁸⁷ *Id.* at 36,756 (“In our preferred estimation method. . . we use the U.S. experience as an additional control.”).

²⁸⁸ *Id.* at 36,721. In 2012, the U.S. Court of Appeals for the District of Columbia ruled that these estimates did not provide “substantial evidence” that the rule’s requirements “directly advance the asserted [governmental] interest” (that is reducing smoking rates) and vacated the rule. The Court argued HHS did not adequately address the full range of confounding variables in the Canadian data and thus HHS did not establish that the warning labels caused a reduction in Canadian smoking rates. Further, even setting aside this issue, the reported impact on U.S. smoking rates based on the Canadian data was not statistically distinguishable from zero. See *R.J. Reynolds Tobacco Co. v. FDA*, 696 F.3d 1205, 1219–22 (D.C. Cir. 2012).

²⁸⁹ See 76 Fed. Reg. 36,721–22, 36,772–74.

²⁹⁰ *Id.* at 36,721. HHS also considers data on willingness-to-pay to participate in smoking cessation programs to estimate the benefits of the rule. HHS provides several reasons that this data likely underestimates the benefits of the rule, including the fact that smokers who are willing to participate in smoking cessation programs are a select group who have recognized the benefits of cessation and are acting on this realization. *Id.*

²⁹¹ *Id.* at 36,714.

duced health benefits is offset by lost consumer surplus.²⁹² The remaining seven percent, however, nevertheless provides a substantial benefit to dissuaded smokers. HHS estimates that benefits, annualized over twenty years, are \$630.5 million at a three percent discount rate.²⁹³

We note in closing that a number of the papers discussed in Part IV. B. address addiction and cigarette smoking. HHS notes that their methodology for measuring the benefits of reduced cigarette consumption is equivalent to that in Weimer, Vining and Thomas (2009).²⁹⁴ Conversely, Jin, Kenkel, Liu and Wang (2015) discuss the “health benefit” methodology in this exemplar and demonstrate that it is consistent with their own, arguably more standard, methodology based on the compensating variation for the change in cigarette consumption.²⁹⁵ They also implement the HHS health benefit methodology using their own data and find, similar to HHS, that net benefits are only about 6 percent of gross health benefits.

²⁹² *Id.* at 36,722, 36,774.

²⁹³ *See id.* at 36,708, tbl.2.

²⁹⁴ *Id.* at 36,773 (noting that “[t]he two analytic methods will produce equivalent results, as we illustrate below”); *see also* Weimer et al., *supra* note 146.

²⁹⁵ Jin et al. state, “In contrast to the market-based approach. . .several recent BCAs of health-related regulation use what we term the health benefits approach. Although the approaches are not necessarily inconsistent. . .the approaches implicitly frame the policy problem quite differently.” *See* Jin et al., *supra* note 34, at 163. They also note, “An offset ratio of zero is inconsistent with the compensating variation (CV) measure of consumer welfare in both standard and behavioral welfare economics.” *Id.* at 180.

2. Limited Financial Capabilities

Rule	Agency	Limited Financial Capabilities Qualitative Score	Requirements associated with benefit	Quantification Effort Score	Benefit Metric	Key empirical assumption or estimate
Investment Adviser Performance Compensation*	SEC	4: Key benefit cited	Effectively removes home equity from net worth calculation for "qualified clients"	3: Impact quantified, not monetized	Number of households affected by the rule (positively and negatively).	Estimated 1.3 million households can no longer enter into performance fee contracts unless they meet another test of the rule
High-Cost Mortgage and Homeownership Counseling Amendments to Regulation Z and Homeownership Counseling Amendment*	CFPB	3: Discussed in detail	Pre-loan counseling prior to origination for "high-cost" and negative amortizing loans	1: Qualitative, explanation for why not quantified	NA	NA
Escrow Requirements under the Truth in Lending Act*	CFPB	3: Discussed in detail	Escrow accounts must be maintained for at least 5 years for "higher-priced" mortgage loans	1: Qualitative, explanation for why not quantified	NA	NA

The three rules in this section address the effects of limited financial capabilities²⁹⁶ on investors and consumers obtaining mortgages. The SEC rule strengthens existing restrictions on access to less sophisticated investors by advisors who may have a conflict-of-interest. The regulatory impact analysis measures the benefit of the rule by the reduction in the number of investors with an advisor who may offer conflicted advice. The two CFPB rules respectively ensure that consumers who are considering certain mortgages receive counseling and increase the length of time that some of them have escrow accounts. Counseling may help these consumers understand the terms of these mortgages so they can better evaluate both affordability and whether they should continue searching for alternatives. Escrow accounts

²⁹⁶ Memorandum from Howell Jackson, Paul Rothstein & Kelley O'Mara to Harv. L. Student Research Team (Jan. 29, 2014) (appended as Appendix Two) ("Limited financial capabilities: Present if failure to process mathematical or financial information enables a market failure. This may be particularly common if adequate disclosures present information that requires a high degree of mathematical acuity to process or digest.").

provide both convenience and budgeting benefits. The regulatory impact analyses provide mostly qualitative discussions of these benefits.²⁹⁷

The SEC rule is closely related to the EBSA rule on investment advisors discussed above. While the SEC rule strengthens existing restrictions on potentially conflicted advisors, the EBSA rule allows potentially conflicted advisors to begin offering a limited set of products. Both regulatory regimes balance the need for advice against the risks associated with conflicts-of-interest, but the two rules happen to move the respective regulatory regimes in opposite directions. The two CFPB rules on expensive mortgages facilitate informed consumer choice and reduce risks subsequent to that choice, respectively. Counseling is similar to mandatory disclosure in facilitating choice without restricting alternatives. Counseling, however, may be more useful than disclosure to consumers with limited financial capabilities. In contrast, the escrow account requirement amounts to a design standard on expensive mortgages. This requirement reduces risks to consumers who may have particular difficulty keeping track of scheduled payments, accumulating the funds needed to make payments, or managing an increase in payments from an increase in hazard insurance or property tax rates.

In a rulemaking on investment adviser performance compensation,²⁹⁸ the Securities and Exchange Commission (SEC) issued a final rule that revises the net worth test for “qualified clients” to exclude home equity. This change decreases the number of investors whose computed net worth is large enough that they may be charged performance-based compensation by an investment advisor.²⁹⁹ In its discussion of the rule, the SEC states, “We believe that the value of an individual’s primary residence may bear little or no relationship to that person’s financial experience or ability to bear the risks of performance fee arrangements.”³⁰⁰

To measure the benefit of the rule, the SEC estimated the difference between the total number of households with a net worth above the \$2 million threshold when respectively including and excluding home equity.³⁰¹ By definition, this difference is the number of households that are now protected by the performance fee restriction. The expected number of households who benefit from the rule, however, is the number now protected who, absent the rule, would have also incurred losses because of performance based compensation. The expected monetized benefit of the rule depends on this number

²⁹⁷ Note that, as indicated by the asterisks, the three rules in this section have quantification effort scores below 4.

²⁹⁸ Investment Adviser Performance Compensation, 77 Fed. Reg. 10358 (Feb. 22, 2012) (codified at 17 C.F.R. pt. 275).

²⁹⁹ *Id.* at 10,358.

³⁰⁰ *Id.* at 10,364. The Commission adds that “[i]n addition, because of the generally illiquid nature of residential assets, the value of an individual’s home equity may not help the investor to bear the risks of loss that are inherent in performance fee arrangements.” *Id.*; see also *id.* at 10,361, n.41.

³⁰¹ *Id.* at 10,360.

and the average size of the losses. The analysis does not provide these numbers.

In a rulemaking on home mortgage counseling standards,³⁰² the CFPB issued a final rule that imposed a pre-loan counseling requirement on high-cost mortgages covered by the Home Ownership Equity Protections Act of 1994 (HOEPA). A similar requirement was imposed for negative amortizing loans made to first-time borrowers. The rule also imposed a broad requirement to provide loan applicants with a list of housing counselors.³⁰³

The CFPB provided several paragraphs of qualitative discussion on the potential benefits of counseling described above, with references to various sources. Counseling might improve the consumer's assessment of his or her "ability to meet the scheduled loan payments and by making the consumer aware of other alternatives (such as purchasing a different home or different mortgage product)."³⁰⁴ Counseling might also "counteract any tendency among consumers to consider only loan features that are most certain, most easily understood, most immediately relevant, or most clearly highlighted by the creditor."³⁰⁵ Thus, counseling might cause some consumers to identify preferable alternatives to a high-cost or negative amortizing mortgage and thus reduce the risk of unnecessarily incurring costs that are unique to these mortgages.

In a rulemaking on escrow requirements,³⁰⁶ the CFPB issued a final rule that implements the Dodd-Frank Act's escrow-related amendments to the Truth in Lending Act (TILA).³⁰⁷ The rule increases to five years the period of time in which an escrow account is mandatory for a higher-priced mortgage loan, with an exemption for small creditors.³⁰⁸

The CFPB considered both budgeting and convenience benefits from escrow accounts. Absent uniform mandatory escrow payments, some consumers would fail to save adequately for property taxes and home insurance and face higher risks of default.³⁰⁹ The CFPB approximated this benefit by drawing on a Federal Reserve Board study on the value to taxpayers of over-withholding (and subsequent refunds) of personal income taxes.³¹⁰ Based on this study, the CFPB estimated that the average value of over-withholding due to incremental mortgage payments was 2.65 percent of the yearly

³⁰² High-Cost Mortgage and Homeownership Counseling Amendments to the Truth in Lending Act (Regulation Z) and Homeownership Counseling Amendments to the Real Estate Settlement Procedures Act (Regulation X), 78 Fed. Reg. 6856 (Jan. 31, 2013) (codified at 12 C.F.R. pts. 1024 and 1026).

³⁰³ *Id.* at 6,857.

³⁰⁴ *Id.* at 6,949.

³⁰⁵ *Id.* at 6,950.

³⁰⁶ Escrow Requirements under the Truth in Lending Act (Regulation Z), 78 Fed. Reg. 4,726 (Jan. 22, 2013) (codified at 12 C.F.R. pt. 1026).

³⁰⁷ *Id.* at 4,726.

³⁰⁸ *Id.*

³⁰⁹ *Id.* at 4,745.

³¹⁰ Michael Barr & Jane Dokko, *Paying to Save: Tax Withholding and Asset Allocation Among Low- and Moderate-Income Taxpayers* (Fed. Reserve Bd., Working Paper, 2007).

amount paid for property taxes and insurance.³¹¹ The CFPB acknowledged that the mortgage and tax analogy is not exact since a tax refund can be used for any purpose.³¹² However, the CFPB also pointed out that tax refunds would likely be used on the most pressing needs first just as escrow surpluses would be used on the pressing need to prevent foreclosure.³¹³

Regarding the convenience benefits from escrow accounts, the CFPB noted that consumers may prefer to pay a single bill instead of separately paying a mortgage bill, insurance bill, and tax bill. The servicer in effect takes on this burden.³¹⁴ Noting the lack of current research on convenience benefits, the CFPB found an approximation in a study of home internet services.³¹⁵ This study estimated a benefit of around \$20 per month per customer from the value of paying the same bill for phone, cable television, and internet services.³¹⁶ In addition, the CFPB noted that 217,260 loans would have been covered by the rule if it had been in effect in 2011.³¹⁷ This is suggestive of the number of consumers who might benefit from the rule, at least initially.

3. Unfair Outcomes

Rule	Agency	Unfair Outcomes Qualitative Score	Requirements associated with benefit	Quantification Effort Score	Benefit Metric	Key empirical assumption or estimate
Nondiscrimination on the Basis of Disability by Public Accommodations and in Commercial Facilities	DOJ	4: Key benefit cited	Requires enough space in single-user toilet rooms for side method of transferring from a wheelchair to a toilet	4: Some monetization	Value of time saved; changes in consumer surplus	Assumed that the rule would entirely eliminate differences in ease of access
Interim Final Rules Prohibiting Discrimination Based on Genetic Information*	DOL	3: Discussed in detail	Prohibition on discrimination in health insurance coverage and group health plans based on genetic information	1: Qualitative, explanation for why not quantified	NA (CBO predicted the bill would increase health insurance coverage by 600 people per year)	NA

³¹¹ 78 Fed. Reg. 4,745.

³¹² *Id.*

³¹³ *Id.*

³¹⁴ *Id.* at 4,744.

³¹⁵ Hongju Liu, Pradeep Chintagunta & Ting Zhu, *Complementarities and the Demand for Home Broadband Internet Services*, 29 *MARKETING SCI.* 701, 701–20 (2010).

³¹⁶ 78 Fed. Reg. 4,745.

³¹⁷ *Id.* at 4,744.

The two rules in this section address unfair outcomes.³¹⁸ The Department of Justice (DOJ) rule requires larger handicapped toilet rooms in public accommodations (that is, businesses that are generally open to the public and fall into one of twelve categories in the ADA and commercial facilities like office buildings).³¹⁹ This rule, like others implementing the ADA, enhances the accessibility of different types of facilities to individuals with disabilities. The HHS rule concerns discrimination based on genetic information. The rule is intended to prohibit discrimination based on genetic information in health insurance coverage and group health plans.³²⁰

In a rulemaking on accessibility standards,³²¹ the DOJ issued a final rule that adopts accessibility standards under the ADA. In particular, the rule's water closet clearance standards require that "single-user toilet rooms with in-swinging and out-swinging doors . . . allow sufficient room for 'side' or 'parallel' methods of transferring from a wheelchair to a toilet."³²² The general discussion by the DOJ explains that "side or parallel transfers are used by large numbers of persons who use wheelchairs and are regularly taught in rehabilitation and occupational therapy."³²³ The revised regulations made single-user toilet rooms accessible to persons who use wheelchairs beyond those with the ability to use a front transfer method.³²⁴

DOJ first assessed the time savings per use of a toilet room that complied with the standards by individuals with various disabilities.³²⁵ DOJ then created estimates for the number of visits to toilet rooms in public accommodations, accounting for the different types of disabilities, facilities, and income levels, to develop aggregate time savings and the value of this savings.³²⁶ For example, DOJ concluded that the total monetary benefits of water clearance standards for toilet rooms with out-swinging doors was "approximately \$900 million over the life of these regulations."³²⁷ Importantly, in the Final Regulatory Impact Analysis, the DOJ also estimated the impact of the requirements on toilet rooms on the demand for visits to different types of public accommodations and the associated increase in the welfare

³¹⁸ Memorandum from Howell Jackson, Paul Rothstein & Kelley O'Mara to Harv. L. Student Research Team (Jan. 29, 2014) (appended as Appendix Two) ("Unfair outcomes: Includes fair access to goods, services, and credit if not tied to some other identified benefit . . . [f]ocus is on justice . . . [r]egulations addressing discrimination or abusive practices will be scored under unfair outcomes.").

³¹⁹ Nondiscrimination on the Basis of Disability by Public Accommodations and in Commercial Facilities, 75 Fed. Reg. 56,236 (Sept. 15, 2010) (codified at 28 C.F.R. pt. 36).

³²⁰ Interim Final Rules Prohibiting Discrimination Based on Genetic Information in Health Insurance Coverage and Group Health Plans, 74 Fed. Reg. 51,664 (Oct. 7, 2009) (codified at 26 C.F.R. pt. 54).

³²¹ 75 Fed. Reg. 56,236.

³²² *Id.* at 56,242.

³²³ *Id.* at 56,242.

³²⁴ *Id.* at 56,241–42.

³²⁵ *Id.* at 56,242.

³²⁶ *Id.*

³²⁷ *Id.*

(consumer surplus) of handicapped individuals.³²⁸ Thus, the DOJ analysis of benefits provides a thorough discussion of the change in welfare of handicapped individuals and draws on vast amounts of data. However, data was not available to estimate all of the parameters in these demand curves. Notably, DOJ simply assumed that the standards would entirely eliminate the difference in “ease of access” in the use of toilet rooms between handicapped and non-handicapped individuals.³²⁹

In a rulemaking on genetic information standards,³³⁰ the Departments of Labor, Treasury, and Health and Human Services (in this sub-section, “the Departments”) issued a final rule that prohibits discrimination based on genetic information in health insurance coverage and group health plans. In particular, the rule aims to decrease the number of individuals that are denied coverage due to genetic predispositions for diseases.³³¹

Comments received in response to the Departments’ Request for Information (RFI) indicate that genetic testing and research are currently underutilized.³³² Commenters expressed concern that participating in a genetic test or in research that examines genetic information could have negative effects on employment or healthcare coverage.³³³ Thus, one potential benefit associated with Genetic Information Nondiscrimination Act (GINA) is that genetic testing and research may increase if the protections provided under GINA allay these concerns. The Departments stated that the benefits of additional genetic testing and research could be significant.³³⁴

The Departments declined to quantify the benefits of the prohibitions in the rule, stating that “relatively few genetic tests and research studies are performed in the private sector and a limited number of genetic tests are available.”³³⁵ The Departments noted that, when scoring the GINA bill, the Congressional Budget Office estimated that the bill would increase health insurance coverage by about 600 people a year, with most of the increase in the individual market.³³⁶

³²⁸ See DEP’T OF JUSTICE: DISABILITY RIGHTS SECTION OF THE CIVIL RIGHTS DIV., FINAL REGULATORY IMPACT ANALYSIS OF THE FINAL REVISED REGULATIONS IMPLEMENTING TITLES II AND III OF THE ADA, INCLUDING REVISED ADA STANDARDS FOR ACCESSIBLE DESIGN 24–32, 353–56 (2010) [hereinafter FRIA].

³²⁹ See FRIA, *supra* note 328, at 29.

³³⁰ Interim Final Rules Prohibiting Discrimination Based on Genetic Information in Health Insurance Coverage and Group Health Plans, 74 Fed. Reg. 51,664 (Oct. 7, 2009) (codified at 26 C.F.R. pt. 54).

³³¹ *Id.* at 51,671.

³³² *Id.*

³³³ 74 Fed. Reg. 51,671.

³³⁴ *Id.* (noting that “[r]emoving barriers that impede the growth of genetic testing and research has the potential to improve health and save lives by providing patients and physicians with critical knowledge to facilitate early intervention often before disease symptoms are manifested [. . .] it also could expand the development of scientific research, which could result in the development of new medicines, therapies, and treatments for diseases and disorders.”).

³³⁵ *Id.*

³³⁶ *Id.* at n.16.

4. Consumer Welfare

Rule	Agency	Consumer Welfare Qualitative Score	Requirements associated with benefit	Quantification Effort Score	Benefit Metric	Key empirical assumption or estimate
Electronic Prescriptions for Controlled Substances	DOJ	3: Discussed in detail	Requirements that would allow electronic prescriptions for controlled substances	4: Some monetization	Value of reduced time in pharmacies waiting for prescriptions to be filled	Assumed a 15 year phase-in and 15 minutes saved per electronic prescription
Adoption of Standards for Health Care Electronic Funds Transfers (EFTs) and Remittance Advice	HHS	2: Mentioned as a benefit	Standards to promote electronic funds transfers (EFT) from health care insurers to providers	4: Some monetization	Administrative costs saved; value of reduced time in payment and posting activities at physician practices	Estimated additional EFT share of transactions

The two rules in this section provide certain consumer welfare³³⁷ benefits that do not fit easily into the other categories of benefits. Both rules promote the use of technology to potentially improve certain outcomes for consumers.

In a rulemaking on electronic prescription standards,³³⁸ the Drug Enforcement Administration (DEA), an agency housed within DOJ, issued a final rule that provides medical practitioners with the option of writing prescriptions for controlled substances electronically. One of the benefits of this rule is the reduction in wait time for patients picking up prescriptions.³³⁹ The DEA monetized the benefit of the option by the value of the potential reduction in wait time.

The DEA drew on extensive resources to estimate the number of original controlled substance prescriptions that could require public wait time. The rule could potentially eliminate waiting for all of these prescriptions, but DEA did not have data on how long patients were currently waiting.³⁴⁰ To complete the analysis, DEA assumed that the average wait time was fifteen minutes for the relevant prescriptions.³⁴¹ Using BLS's measure of the current

³³⁷ Memorandum from Howell Jackson, Paul Rothstein & Kelley O'Mara to Harv. L. Student Research Team (Jan. 29, 2014) (appended as Appendix Two) ("Consumer welfare: Present if the benefit language is not tied explicitly or implicitly to one of the benefits identified above, but still indicates that consumers will benefit. Increased consumer confidentiality or lower consumer prices are examples of consumer welfare benefits.").

³³⁸ Electronic Prescriptions for Controlled Substances, 75 Fed. Reg. 16,235 (June 1, 2010) (codified at 21 C.F.R. pt. 1300, 1304, 1306, and 1311).

³³⁹ *Id.* at 16,299.

³⁴⁰ *Id.*

³⁴¹ *Id.*

United States average hourly wage, the DEA obtained estimates of hours-saved and cost-savings for each year.

Notwithstanding this analysis, DEA reported its “primary estimate” for reduction in public wait time to be *zero*.³⁴² This conclusion was based on concerns over whether pharmacies would actually be willing to fill electronic prescriptions for controlled substances without the patient present.³⁴³ The Department cited research showing that twenty-eight percent of electronic prescriptions transmitted were never picked up by patients; for painkillers, more than fifty percent were never picked up.³⁴⁴ The Department noted that filling these prescriptions caused the pharmacy to spend time for which it would not be reimbursed.³⁴⁵ The pharmacy would then spend further time returning the drugs to stock and correcting records. The risk of incurring these costs may be sufficient to deter pharmacies from filling electronic prescriptions for controlled substances prior to the arrival of the patient.³⁴⁶

In a rulemaking on electronic funds transfers,³⁴⁷ HHS issued a final rule that requires the adoption of a standard for business-to-business “health care electronic funds transfers” (health care EFT). A health care EFT conveys both billing information and payments from health plans to providers. HHS argued that the adoption of this standard was necessary to promote the growth of health care EFT by plans and providers.³⁴⁸ The growth of health care EFT would promote the streamlining of health care administrative tasks, including billing and insurance related tasks (BIR tasks), thereby generating cost savings for health plans and time savings for physician practices and hospitals. The cost savings would ultimately benefit patients.³⁴⁹

HHS estimated reductions in health plan administrative costs as well as the amount (and value) of time that hospitals and physician practices need to spend in billing and insurance related tasks. HHS suggests that at least some of these savings could reduce costs to patients and increase time spent caring for patients, but HHS did not monetize that benefit.³⁵⁰

³⁴² *Id.*

³⁴³ *Id.*

³⁴⁴ *Id.* at n.57.

³⁴⁵ *Id.* at 16,299.

³⁴⁶ *Id.*

³⁴⁷ Administrative Simplification: Adoption of Standards for Health Care Electronic Funds Transfers (EFTs) and Remittance Advice, 77 Fed. Reg. 1,555 (Jan. 10, 2012) (codified at 45 C.F.R. pt. 160 and 162).

³⁴⁸ *Id.* at 1,574.

³⁴⁹ *Id.* at 1,574, 1,581.

³⁵⁰ *Id.*

5. Clarity/Reducing Litigation

Rule	Agency	Clarity/Reducing Litigation Qualitative Score	Requirements associated with benefit	Quantification Effort Score	Benefit Metric	Key empirical assumption or estimate
Ability-to-Repay and Qualified Mortgage (QM) Under the Truth in Lending Act (Regulation Z)*	CFPB	2: Mentioned as a benefit	New type of QM loan for small creditor portfolio loans	3: Impact quantified, not monetized	Additional QM loans, number of small creditors with additional QM loans	Estimated loan counts, loan features and Debt-to-Income ratios when data for small entities was missing

In a rulemaking on ability-to-repay requirements,³⁵¹ CFPB promulgated a final rule that creates “certain exemptions, modifications, and clarifications to TILA’s ability-to-repay requirements.”³⁵² In particular, the rule grants creditors that meet the new qualified mortgage definition “a conclusive or rebuttable presumption of compliance with the ability-to-repay provisions.”³⁵³ The CFPB quantified the potential reduction in litigation by estimating the number of institutions and loans that would enjoy this presumption of compliance because of the rule.³⁵⁴

Not all of the institutions and loans that enjoy a presumption of compliance actually benefit from the rule, however, since few would have been subject to litigation absent the rule. That is to say, the expected number of institutions and loans that benefit from the rule is the number that would have experienced litigation and therefore incurred a cost absent the rule. The expected monetized benefit of the rule depends on this number and the average size of the loss that would have occurred. The analysis does not provide these numbers.

³⁵¹ Ability-to-Repay and Qualified Mortgage Standards under the Truth in Lending Act (Regulation Z), 78 Fed. Reg. 35,430 (June 12, 2013) (codified at 12 C.F.R. pt. 1026).

³⁵² *Id.* at 35,430.

³⁵³ *Id.* at 35,496.

³⁵⁴ *Id.*

6. Increased Compliance/Self-Regulation

Rule	Agency	Increased Compliance/ Self-Regulation Qualitative Score	Requirements associated with benefit	Quantification Effort Score	Benefit Metric	Key empirical assumption or estimate
Electronic Prescriptions for Controlled Substances	DOJ	4: Key benefit cited	Requirements that would allow electronic prescriptions for controlled substances	4: Some monetization	Value of lives saved from reduced diversion of controlled substance	Reduced diversion would save an unknown fraction of the lives that were lost to diversion in 2003

In a rulemaking on electronic prescription standards,³⁵⁵ the DEA issued a final rule that “provide[s] [medical] practitioners with the option of writing prescriptions for controlled substances electronically.”³⁵⁶ One of the benefits of this rule is a reduction in the diversion of controlled substances, which would result from having fewer forged and altered prescriptions.³⁵⁷ The DEA partially quantified this benefit by providing estimates of (a) the value of lives lost and the cost of emergency room visits due to prescription drug misuse and (b) the agency’s own legal costs due to diversion cases.³⁵⁸

DEA provides data on deaths and emergency room visits due to the misuse of prescription controlled drugs.³⁵⁹ People who misuse prescription drugs, however, can obtain the drugs through many channels. The DEA does not have data on the number of people who die or visit emergency rooms because they misuse drugs that they obtained through forged or altered prescriptions.³⁶⁰ Further, this data would provide just an upper bound on the benefit, since the rule would not prevent all forged and altered prescriptions. Thus, the DEA states that it “has no basis for estimating” this benefit.³⁶¹ The agency notes, however, that only “a small fraction of . . . deaths and emergency care” need to be prevented for the benefits of the rule to exceed the costs.³⁶²

³⁵⁵ Electronic Prescriptions for Controlled Substances, 75 Fed. Reg. 16,236 (March 31, 2010) (codified at 21 C.F.R. pt. 1,300, 1,304, 1,306, and 1,311). Note that this rule was also discussed in Part IV.D.4.

³⁵⁶ *Id.*

³⁵⁷ *Id.* at 16,300.

³⁵⁸ *Id.*

³⁵⁹ *Id.*

³⁶⁰ *Id.*

³⁶¹ *Id.*

³⁶² *Id.*

E. Summary

This review of twenty exemplars of benefit analysis describes the benefit metrics that the issuing agencies use and the range of impacts that the agencies must measure in order to implement the benefit metrics. Sixteen of the exemplars define a measure of benefits and have Quantification scores of three, four or five. In this summary, we condense the previous discussion to highlight a few core findings. One key finding is that eleven of the sixteen highly-quantitative benefit analyses rely on quantitative assumptions over data-driven estimates. Further, three of the exemplars come closest to fully quantifying regulatory benefits by defining broad benefit metrics and estimating all key parameters. Two of the sixteen define narrow benefit metrics and also estimate all key parameters. Thus, of sixteen highly-quantitative benefit analyses, there is a relatively greater reliance on assumptions when the benefit metric is broad (nine of twelve) rather than narrow (two of four), but the overall reliance on assumptions (eleven of sixteen) is large. We note again that our exemplars may not be representative of highly-quantitative benefit analyses for consumer protection (and related) regulations. Nevertheless, there are a number of implications for regulatory impact analysis, and for research on the quality of regulatory impact analysis, from our finding that many highly-quantitative benefit analyses rely on quantitative assumptions. We discuss these implications in Part V.

Four of the exemplars do not quantify benefits at all. These exemplars had strong Qualitative Scores in the three benefit categories where the Quantification Scores were generally low: market power, limited financial capabilities, and unfairness. The exemplars in this category address the rules for rebates under the MLR requirement in the Affordable Care Act (HHS),³⁶³ the homeownership counseling requirements and escrow requirements in the Dodd-Frank Act (CFPB),³⁶⁴ and the prohibition on discrimination based on genetic information in the Genetic Information Nondiscrimination Act (DOL).³⁶⁵ The HHS exemplar addresses market power and quantifies the expected rebates to consumers under the MLR rule.³⁶⁶ There is no connection, however, between rebates paid and either a reduction in market power (the ratio would have to be carefully tailored to the degree of market power) or an increase in quality-promoting expenditures.³⁶⁷ The two CFPB exemplars address limited financial capabilities.³⁶⁸ These exemplars provide detailed qualitative analyses but little or no quantitative analysis. The DOL exemplar addresses unfairness in a market that has not yet developed and which may

³⁶³ *Supra* Part IV.C.3.

³⁶⁴ *Supra* Part IV.D.2; *supra* notes 302–309 and accompanying text.

³⁶⁵ *Supra* notes 330–336 and accompanying text.

³⁶⁶ *Supra* notes 226–244 and accompanying text.

³⁶⁷ *Supra* Part IV.C.3.

³⁶⁸ *Supra* Part IV.D.2; *supra* notes 302–309 and accompanying text.

be constrained by concerns about fairness.³⁶⁹ An examination of the reasons that these exemplars are so limited in estimating benefits is outside the scope of the research here. These agencies were, however, dealing with new statutory regimes and somewhat idiosyncratic issues and these factors may have shaped the benefit analyses.

Three of the exemplars use broad measures of regulatory benefits and quantify all of the critical impacts needed to measure benefits. These exemplars address the rules for energy conservation standards (DOE),³⁷⁰ required warnings for cigarette packages (HHS),³⁷¹ and standards for health care electronic funds transfers (HHS).³⁷² The benefits are respectively quantified or monetized by reduced greenhouse gas emissions,³⁷³ the value of smoking ceased or avoided,³⁷⁴ and savings in administrative costs.³⁷⁵ An examination of the reasons that these exemplars go so far in estimating benefits comprehensively is outside the scope of the research here. It may be, however, that these benefit analyses drew on investments in research and analysis that support, or could support, multiple rulemakings and other basic activities of the agencies.

Four of the sixteen define narrow benefit metrics. Two of these four estimate all key parameters. These two rules respectively change the computation of investor net worth so fewer investors can be charged performance-based compensation by an advisor (SEC)³⁷⁶ and define an additional type of “qualified mortgage” (CFPB).³⁷⁷ The SEC rule estimates the number of investors who can no longer be charged performance-based compensation.³⁷⁸ The benefit metric, however, does not account for the expected reduction in investment losses due to this change. The CFPB rule computes the number of institutions and loans that benefit from the enhanced protections against litigation on qualified mortgages.³⁷⁹ The benefit metric, however, does not consider the expected reduction in losses due to this change.

The other two exemplars with narrow benefit metrics rely on quantitative assumptions. These are the rule prescribing fiduciary requirements for disclosures (DOL)³⁸⁰ and the rule for enhancing airline passenger protections (DOT).³⁸¹ Both of these rules measure benefits by the time individuals may save because of the mandated disclosures.³⁸² This benefit metric does not

³⁶⁹ *Supra* notes 330–336 and accompanying text.

³⁷⁰ *Supra* notes 186–200 and accompanying text.

³⁷¹ *Supra* notes 284–295 and accompanying text.

³⁷² *Supra* notes 347–350 and accompanying text.

³⁷³ *Supra* notes 192–196 and accompanying text.

³⁷⁴ *Supra* note 293 and accompanying text.

³⁷⁵ *Supra* note 350 and accompanying text.

³⁷⁶ *Supra* notes 298–301 and accompanying text.

³⁷⁷ *Supra* Part IV.D.5.

³⁷⁸ *Supra* note 301 and accompanying text.

³⁷⁹ *Supra* note 354 and accompanying text.

³⁸⁰ *Supra* notes 163–169 and accompanying text.

³⁸¹ *Supra* notes 170–176 and accompanying text.

³⁸² *Supra* notes 167–169 and 173–176 and accompanying text.

account for the fact that individuals with clearer information may also make better choices. In addition, the DOL rule assumes the amount of time that plan participants may save while the DOT rule makes a key assumption regarding the number of online purchasers who search multiple websites.

In the remaining nine exemplars, the agencies use broad measure of benefits and relied on quantitative assumptions rather than observations or inferences from data in order to complete the analyses. These rules are described above, but by way of illustration, the rule on tire fuel efficiency (DOT)³⁸³ measures benefits by fuel saved and reduced greenhouse gas emissions but assumes increased number of tires that would be purchased with reduced rolling resistance. The rule reestablishing the emergency homeowners' loan program (HUD)³⁸⁴ measures benefits by the value of foreclosures avoided but assumes the reduction in the probability of foreclosure. The rule on mortgage loan servicing (CFPB)³⁸⁵ measures benefits by the cost savings from reduced force-placed insurance but assumes the extent to which force-placed insurance is reduced.

Overall, we find that our exemplars use broad benefit metrics over narrow ones (twelve compared to four) and rely relatively more on quantitative assumptions with broad benefit metrics (nine of twelve compared to two of four). While we can only speculate on these patterns, it is perhaps reasonable to suppose that they reflect a basic dilemma. Agencies might generally prefer to use a broad benefit metric over a narrow one. It is more challenging, however, to quantify benefits with a broad metric. Further, in balancing breadth and quantification, agencies may face different constraints in their willingness or ability to utilize quantitative assumptions. At least with our selected group of exemplars, the balance favors broad benefit metrics and quantitative assumptions.

V. PRELIMINARY CONCLUSIONS AND PATHS FOR FUTURE RESEARCH

We began by presenting an operationally useful and (relatively) parsimonious taxonomy for regulatory benefit analysis. The taxonomy is grounded in the traditional sources of market failure, but is expanded to allow for benefits based on behavioral biases, problems of fairness and inequality, and the practical needs of agencies to clarify statutory mandates or develop business-to-business standards with fairly direct benefits to consumers. We established that independent researchers, reading the same benefit analyses across seventy-two selected regulations, generally identified the same type of benefit (that is, component of the taxonomy) and that all significant benefits asserted by agencies could be classified.

³⁸³ *Supra* notes 177–184 and accompanying text.

³⁸⁴ *Supra* notes 202–216 and accompanying text.

³⁸⁵ *Supra* Part IV.C.5.

The regulations selected for study address challenges to consumer decision-making and welfare, including tradeoffs in benefits and risks to consumers, that generally motivate the regulations issued by agencies with a formal consumer protection mandate. By controlling for subject matter, our expectation was that these analyses would face analogous challenges and might therefore be informative in regards to the potential characteristics of the impact analyses for consumer protection and consumer financial protection regulations generally. The shared characteristics of the exemplars include an emphasis on a particular benefit and high quantification effort. Exemplars also tend to rely on expert sources and have high word counts. These features of regulatory impact analyses have typically not been tracked in other studies.

Our quantitative findings reveal certain similarities and differences between the benefit analyses performed by the Executive Branch agencies subject to OIRA review and the independent agencies (and sometimes in contrast to those of the CFPB). Given the basis on which we selected rules, it is reassuring that all agencies cite addressing information problems as the most common benefit. Among the more prominent differences, the OIRA agencies (along with the CFPB) cite the reduction of cognitive biases as a benefit more frequently than do the other agencies.³⁸⁶ Conversely, regulations intended to facilitate adjustments to existing legal baselines (for example, to promote clarity and facilitate compliance) figure more prominently for the independent agencies (including the CFPB) than for the OIRA agencies.³⁸⁷ Negative externalities are infrequently cited by the CFPB compared to all the other agencies,³⁸⁸ and the precise reason for this difference requires further study.

As expected, the benefits analyses by the OIRA agencies showed greater quantification effort than did those by the independent agencies.³⁸⁹ For example, both the median and mean quantification effort scores of the highest scoring benefit in each rulemaking by the OIRA agencies and the independent agencies were higher for the OIRA agencies.³⁹⁰ The scores were also high in absolute terms, 2.91 out of 5 for the mean and 4 out of 5 for the median.³⁹¹ While this may not be surprising given the emphasis on quantification and monetization in Executive Order 12866 and Circular A-4, it does point toward the need for deeper examination of the differences and what, exactly, the OIRA agencies are measuring.

³⁸⁶ See *supra* Figure 4.

³⁸⁷ *Id.*

³⁸⁸ See *supra* Figure 7.

³⁸⁹ To a lesser degree, but also notably, where regulations in the sample were subject to certain heightened procedural requirements of the Congressional Review Act or Regulatory Flexibility Act, the benefit analysis for those regulations received higher scores. See *supra* notes 109–110 and accompanying text.

³⁹⁰ See *supra* Table 6.

³⁹¹ *Id.*

The analysis of twenty exemplars of benefits analysis takes an initial step toward this more granular analysis. As discussed above, the exemplars were chosen largely on the basis of the Quantification Scores.³⁹² Consistent with the previous results, fifteen of the twenty are the work of OIRA agencies, and only one of the twenty is by an independent agency and has a high Quantification Score. However, while the OIRA agencies undertake great efforts to measure the difference in the number of entities or transactions covered by current practices and proposed requirements, and trace the impact of narrowing the difference on measures correlated with consumer welfare, the actual impact of the proposed requirements on the gap is often the subject of speculation. Further, while we do not view this result to be surprising, we do believe it is worth considering carefully the fact that the highest scoring analyses according to our objective measures are nevertheless limited in this way. We also find that the missing information is frequently in regards to the direct impact of the new requirements, such as how consumers will respond to additional information, a subsidy, or advice; or how businesses will respond to a new opportunity for which a legal framework is being established. Thus, the estimated benefit often incorporates an upper bound, a scenario, or the midpoint of a range for which the empirical foundation is largely if not entirely hypothetical.³⁹³

These preliminary comments are in no way intended to minimize the accomplishments in measurement demonstrated by the exemplars or the value of these efforts. We recognize that breakeven analyses, using ranges of benefits, can sometimes show that the benefits exceed the cost. Where the missing information is largely if not entirely hypothetical, however, this conclusion rests on the same foundation as the missing information itself and is equally speculative. The conclusion therefore needs to be interpreted in this light. We also find that while the exemplars generally use broad and intuitive measures of benefits, there are exceptions, and in any case a more formal derivation of these measures might reveal strengths and limitations that are not immediately apparent. We encourage others to review the exemplars carefully, consider the current limits in the abilities of most agencies to measure the benefits of consumer protection rulemakings, and assess the policymaking value of advancing the frontier in measuring these benefits.

In terms of sketching out a path forward, we offer the following preliminary thoughts on practical steps that will improve benefits analysis in consumer financial regulation.

³⁹² *Supra* Part IV.B.

³⁹³ While our primary focus in this article is on regulatory practice and potential improvements thereof, the analysis does suggest that when courts are called upon to review the quality of benefits analysis of consumer protection regulations under the Administrative Procedure Act or otherwise, *see supra* notes 13–14, 71 and accompanying text, an appreciation of the limitations of current best practices may be helpful.

A. Best Practices for Articulating Benefits of Financial CBA

Our first set of recommendations concerns the manner in which regulatory officials articulate expected benefits in financial CBA. We focus here solely on the communication of benefit analysis in public documents and not on internal procedures and practices.

While our survey design was reasonably successful in placing asserted benefits into our taxonomy of expanded Campbell factors, the textual discussions of benefits were in some cases ambiguous. Going forward, it would be preferable, when feasible, if agencies were to specify more clearly and consistently the channel of market correction through which it envisions each asserted benefit will operate. This practice would be especially useful where benefits are now simply characterized as improving consumer welfare or market efficiency. To the extent that agencies could also be more parsimonious in identifying benefits or at least distinguish what are thought to be the more economically significant benefits, this would also be helpful in identifying the most significant expected effects of new regulations and also suggest where further quantification and monetization of benefits would be most valuable.

In cases where regulations are envisioned as having measurable effects on specific endpoints—like the number of foreclosures or dispersion of fees—offering either a point estimate of the predicted effect or, if appropriate, providing a range of possible effects, could be extremely helpful for several reasons. Offering such endpoint estimates would both more clearly communicate to the general public the intended impact of new regulations and also offer a standard against which retrospective analysis of the regulation might be measured.³⁹⁴ This would provide a feedback mechanism for improvements in benefits analyses going forward.

Finally, on a more technical level, where agencies produce regulatory impact analyses in documents separate from their Federal Register releases (as is often the case with agencies subject to OIRA review) or in other background documentation, it would be useful to clarify which benefits asserted in a Federal Register notice were supported by quantitative analysis in the regulatory impact analysis or other documents and which were not. Additionally, to the extent possible, including direct links to underlying documents would facilitate independent reviews of financial CBA, such as this current study.

³⁹⁴ A separate issue—for future consideration—is whether when a new regulation is part of a suite of related initiatives—as was true of the handful of new mortgage regulations that CFPB adopted in early 2013—such endpoint projections might best be articulated as the result of a combination of agency actions. Though estimating cumulative effects would raise complicated legal and technical issues, the approach would be better suited to retrospective analysis when effects of individual regulations may be difficult to detect. *See supra* note 41 and accompanying text.

B. *Addressing the Centrality of Disclosure Strategies*

Given the prominence of disclosure strategies in consumer protection efforts at both the CFPB and other agencies charged with consumer protection responsibilities, we believe that disclosure is a logical target for additional research and analysis.³⁹⁵

Comprehension versus Changes in Behavior. Benefit analysis for disclosure regulations is often ambiguous as to whether the goal of the intervention is simply to increase consumer comprehension or rather to change behavior by eliminating the mistaken or otherwise inappropriate choices. The latter course is, no doubt, more problematic because it requires regulatory officials to have a normative framework to define which choices are correct for which consumers. But improved comprehension without accompanying changes in behavior does not necessarily generate personal or social benefits. Additional research into the conditions under which improved comprehension might appropriately be deemed beneficial—either as an independent value or as a reliable proxy for desirable changes in behavior—would be extremely useful. Even more useful—though likely a good deal more challenging to produce—would be models identifying correct and incorrect consumer choices.

Heterogeneity of Consumers. Perhaps more tractable in the short-term would be an investigation into the heterogeneity of consumers. Many regulations covered in our survey noted the cognitive limitations of some consumers;³⁹⁶ others identified information asymmetries increasing search costs for other populations.³⁹⁷ Additional research into the heterogeneity of consumers and consumer responses in at least some consumer financial markets could provide valuable inputs to benefits analyses in other areas. While research of this sort could be undertaken in a number of different ways, more empirical results drawn from surveys, testing, observational studies, and pilot programs would be most welcome.

Role of Supplier Responses and Third Party Reactions. A number of benefit analyses speculated as to supplier responses and third-party interactions to disclosure. For example, the mechanism whereby some disclosures are supposed to be effective is not through direct consumer responses, but rather through supplier adjustments in anticipation of consumer reactions (or possibly fear of regulatory sanction). In other situations, disclosure requirements are not intended for direct consumer use, but rather for consumer use through the filter of third-party information intermediaries (such as iPhone

³⁹⁵ In some of this research, it may be useful to distinguish among disclosure strategies based on the channel of market correction. As reflected above in Table 8, some information asymmetries are associated with problems of market power, while others are associated with public goods and yet others associated with cognitive biases. Conceivably, research useful for benefit analyses of disclosure strategies might also differ along these lines.

³⁹⁶ *Supra* Part IV.D.1.

³⁹⁷ *Supra* Part IV.C.1.

apps and other validation systems). Research defining the conditions under which these supplier responses and third-party effects are most likely to be effective (and the extent of their effects) could also be useful.

Impact of Disclosure on Prices. A number of disclosure strategies are premised on their predicted effects on consumer prices, either due to reduced search costs or the compression of price dispersion through a reduction in price discrimination. Documenting the extent of such price changes from past improvements in disclosure could provide useful inputs for benefit analyses of future disclosure strategies with similar goals.

Relative Merits of Alternative Strategies. For the most part, the benefit analyses in our survey focus on disclosure in isolation,³⁹⁸ but in practice disclosure typically is just one of several possible policy options. Other commonly considered alternatives include default rules, prescriptive regulations, or enforcement strategies. Research designed to offer a rough handle on the relative efficacy of these alternative approaches in certain areas of consumer protection could enhance regulatory analysis, especially where the costs of different alternatives vary considerably but the likely benefits are less sensitive to the choice of approaches.

C. *Development of New Metrics for Consumer Financial Protection*

In investigating the current state of benefits analyses in financial CBA, one cannot but cast an envious eye on the environmental arena, where CBA experts have developed consensus (if not wholly uncontroversial) views on the statistical value of lives or the social cost of carbon. One could imagine the development of a similar new metric for consumer financial protection. We conclude with two possible lines of investigation.

Value of Bankruptcy Avoidance/Foreclosure Avoidance/Reduced Financial Stress. Many consumer financial protection regulations are designed to avoid financially adverse consequences, such as bankruptcy, foreclosure, or some sort of financial distress that falls short of bankruptcy. Though not the equivalent of financial death, these conditions might be considered analogous to financial morbidity, and it is conceivable that careful research might produce estimates of the value of their avoidance, perhaps even producing benefit estimates that vary with the age of the individual in question. While it is conceivable that any agency could undertake such an investigation in the context of a single regulatory initiative, one could imagine that—were consensus estimates to be produced—those estimates would be useful in the evaluation of numerous different regulatory initiatives.

Valuing Certain Transfers. Many consumer financial protection regulations include benefits that consist of reducing prices paid by consumers to producers. While these benefits may be entirely appropriate considerations for an agency such as the CFPB with a specific mandate to protect consum-

³⁹⁸ *Supra* Part IV.C.1.

ers, transfers from consumers to producers, in and of themselves, are typically not understood to produce economic benefits—although sometimes such transfers are classified as benefits in benefit analyses in our surveyed regulations. Additional research into when and how such transfers should qualify as economic benefits would be another fruitful research project and one that could also have application in benefit analyses in the future. There is, for example, literature on valuing theft reduction and charitable contributions, both of which may provide helpful analogies. Alternately, to the extent transfers move certain individuals away from financial distress, the value of this reduction might be utilized. Lastly, the insurance value of risk reduction might also be estimated in certain contexts.

D. Incentivizing Estimates over Quantitative Assumptions When Justified

In our summary of findings from the analysis of exemplars, we noted that many of the most quantitative analyses achieved this outcome via important quantitative assumptions.³⁹⁹ We offer two tentative conclusions from this finding. First, notwithstanding the challenges to quantifying the benefits of consumer protection regulations—which may be especially great for consumer financial protection regulation—agencies will likely find a way to assign numbers to regulatory outcomes if required to do so. We suggest, however, that improvements in benefit analysis require appropriate investments in data and modeling. These investments, which could include randomized controlled trials and field experiments where the key uncertainty is about direct responses to new disclosures or requirements, would lead to data-driven estimates of key impacts instead of quantitative assumptions. These investments, however, would only be justified when the costs or other stakes in the rulemaking were sufficiently great. Both quantitative assumptions and estimates have an important place in quantified benefit analysis. The incentives for greater quantification should not be so broad that they generally incentivize one over the other but should incentivize the one that is more justified in any given regulatory analysis.

Finally, our finding on the use of quantitative assumptions over estimates provides a suggestion to other researchers on the quality of analysis of regulatory benefits. When scoring these analysis, it is useful—even if challenging—to consider how the quantification is achieved and not only whether there is more or less of it. This data would be generally useful, and essential in the long run for understanding whether the relative use of quantitative assumptions and estimates advances the purposes of regulatory impact analysis.

³⁹⁹ *Supra* Part IV.E.

E. Institutional Innovations to Promote Better Benefit Analysis

As our survey reveals, regulatory agencies already rely on academic and government studies to a considerable degree in producing regulatory impact analyses for consumer protection regulations.⁴⁰⁰ More attention could, however, be given to encouraging prospectively the development of new studies designed to generate estimates of parameters of particular interest, such as issues highlighted in sections B and C of this Part V. Targeted research projects for internal research staff or external academics are one possibility as are academic conferences or prizes focused on topics of particular interest.⁴⁰¹ In certain areas with overlapping interests, inter-agency collaborations across research departments could also be productive. No doubt other approaches are possible. But as this Article demonstrates, the benefit analysis in the field of consumer protection is a complicated exercise that ideally incorporates a number of estimates of consumer and market responses to public interventions. In many instances, the work required to produce these estimates depends upon independent research that is best pursued outside of the regulatory process itself.

⁴⁰⁰ See *supra* note 107 and Part IV and accompanying text (discussing numerous studies cited in exemplars).

⁴⁰¹ Another complementary approach, available to external scholars and students, would be to undertake detailed evaluations and critical assessments of recent regulatory impact analyses involving consumer protection issues. The *Harvard Business Law Review* recently published online a pair of student-written pieces illustrative of this kind of work. See Marlan Golden, *Health Insurance Plan Regulation after the Affordable Care Act: A Cost-Benefit Analysis Comparison*, 9 HARV. BUS. L. REV. ONLINE (2018–19), <https://www.hblr.org/wp-content/uploads/sites/18/2019/05/Golden-Formatted.pdf> (offering a critical assessment of regulatory impact analyses for two regulations promulgated under the Affordable Care Act: the first an ACA-mandated rulemaking under the Obama Administration and the second a deregulatory rulemaking under the Trump Administration); Andrew Palmer, *The CFPB Arbitration Rule*, 9 HARV. BUS. L. REV. ONLINE (2018–19), https://www.hblr.org/wp-content/uploads/sites/18/2019/05/HBLR-Online_Palmer.pdf (presenting a largely positive assessment of the CFPB's regulatory impact analysis but also offering suggestions as to how the Bureau's analysis could have been better communicated to the public).

APPENDIX ONE: LIST OF REGULATIONS SURVEYED

Entry	File Name	Agency	Mandate Category	Date (FR)	Fed Reg
1	CFPB - 20120207 - OriginalRemittanceRule - FINAL	CFPB	CFPB Mandate	2/7/2012	77 Fed. Reg. 6,194 - 6,309
2	CFPB - 20120720 - DefiningConsumerReporting - FINAL	CFPB	CFPB Mandate	7/20/2012	77 Fed. Reg. 42,874-42,900
3	CFPB - 20120820 - SafeHarborRemittance - FINAL	CFPB	CFPB Mandate	8/20/2012	77 Fed. Reg. 50,244- 50,279
4	CFPB - 20121031 - DefiningConsumerDebtCollection - FINAL	CFPB	CFPB Mandate	10/31/2012	77 Fed. Reg. 65,775- 65,799
5	CFPB - 20130122 - EscrowRequirements - FINAL	CFPB	CFPB Mandate	1/22/2013	78 Fed. Reg. 4,726-4,757
6	CFPB - 20130130 - AbilitytoRepayTILA - FINAL	CFPB	CFPB Mandate	1/30/2013	78 Fed. Reg. 6,048-6,620
7	CFPB - 20130131 - HighCostMortgageCounseling - FINAL	CFPB	CFPB Mandate	1/31/2013	78 Fed. Reg. 6,856-6,975
8	CFPB - 20130131 - RegBAAppraisalsandValuations - FINAL	CFPB	CFPB Mandate	1/31/2013	78 Fed. Reg. 7,216-7,247
9	CFPB - 20130213 - TILAAppraisals - FINAL	CFPB	CFPB Mandate	2/13/2013	78 Fed. Reg. 10,368 - 10,447
10	CFPB - 20130214 - RESPA RegX - FINAL	CFPB	CFPB Mandate	2/14/2013	78 Fed. Reg. 10,696 - 10,899
11	CFPB - 20130214 - TILA Mortgage Servicing - FINAL	CFPB	CFPB Mandate	2/14/2013	78 Fed. Reg. 11,902 - 11,021
12	CFPB - 20130215 - FOIA Disclosures - FINAL	CFPB	CFPB Mandate	2/15/2013	78 Fed. Reg. 11,484 - 11,520
13	CFPB - 20130215 - LoanOrigComp - FINAL	CFPB	CFPB Mandate	2/15/2013	78 Fed. Reg. 11,280 - 11,427
14	CFPB - 20130321 - ATM Disclosures - FINAL	CFPB	CFPB Mandate	3/21/2013	78 Fed. Reg. 18,221-18,224
15	CFPB - 20130322 - TILARegZ (CreditCard) - FINAL	CFPB	CFPB Mandate	3/22/2013	78 Fed. Reg. 18,795-18,798
16	CFPB - 20130522 - ElectronicFundTransfers - FINAL	CFPB	CFPB Mandate	5/22/2013	78 Fed. Reg. 30,662-30,721
17	CFPB - 20130612 - AbilitytoRepayRegZ - FINAL	CFPB	CFPB Mandate	6/12/2013	78 Fed. Reg. 35,430-35,506
18	CFPB - 20131001 - ECOAMortgageRulesRESPATILA - FINAL	CFPB	CFPB Mandate	10/1/2013	78 Fed. Reg. 60,382-60,451
19	CFPB - 20131231 - Integrated Mortgage Disclosures - FINAL	CFPB	CFPB Mandate	12/31/2013	78 Fed. Reg. 79,730-80,365
20	CFTC - 20111118 - PositionLimits - FINAL	CFTC	Statutory Mandate	11/18/2011	76 Fed. Reg. 71,625 - 71,706
21	CFTC - 20120224 - CPO CTA Regs - FINAL	CFTC	Statutory Mandate	2/24/2012	77 Fed. Reg. 11,251 - 11,344
22	CFTC - 20120612 - SDR Regs - FINAL	CFTC	Statutory Mandate	6/12/2012	77 Fed. Reg. 35,199 - 35,239
23	CFTC - 20120719 - EndUserException - FINAL	CFTC	Statutory Mandate	7/19/2012	77 Fed. Reg. 42,559 - 42,591
24	CFTC - 20120905 - CPO CTA Amendments - FINAL	CFTC	Statutory Mandate	9/5/2012	77 Fed. Reg. 54,355 - 54,360
25	CFTC - 20130117 - ExemptiveOrder - FINAL	CFTC	Statutory Mandate	1/17/2013	78 Fed. Reg. 858 - 882
26	CPSC - 20100121 - GuidelinesMandatoryRecall - FINAL	CPSC	No Mandate	1/21/2010	75 Fed. Reg. 3,558 - 3,371
27	CPSC - 20101209 - PubliclyAvailableDatabase - FINAL	CPSC	No Mandate	12/9/2010	75 Fed. Reg. 76,831-76,872
28	DOE - 20110627 - AHeatPumps - FINAL	DOE	OIRA 12866	6/27/2011	76 Fed. Reg. 37,407-37,548
29	DOE - 20100416 - WaterHeaters - FINAL	DOE	OIRA 12866	4/16/2010	75 Fed. Reg. 20,111-20,236
30	DOE - 20110915 - RefrigeratorStandards - FINAL	DOE	OIRA 12866	9/15/2011	76 Fed. Reg. 57,516-57,612
31	DOJ - 20100915 - Nondiscrimination - FINAL	DOJ	OIRA 12866	9/15/2010	75 Fed. Reg. 56,236-56,358
32	DOJ - 20101020 - Investment Advice - FINAL	DOJ	OIRA 12866	10/25/2010	75 Fed. Reg. 66,136-66,167
33	DOL - 20101025 - IndividualAccountPlans - FINAL	DOL	OIRA 12866	10/20/2010	75 Fed. Reg. 64,910-64,946
34	DOT/EPA - 20121015 - GHG and Fuel Economy - FINAL	DOT/EPA	OIRA 12866	10/15/2012	77 Fed. Reg. 62,624-63,200
35	DOT - 20081216 - NewEntrantsSafetyAssurance - FINAL	DOT	OIRA 12866	12/16/2008	73 Fed. Reg. 76,472-76,497
36	FRB - 20100924 - MortgageOrigination - FINAL	FRB	No Mandate	9/24/2010	75 Fed. Reg. 58,509 - 58,538
37	FRB - 20130405 - NonBankDefinitions - FINAL	FRB	No Mandate	4/5/2013	78 Fed. Reg. 20,755 - 20,781
38	FSOC - 20110718 - SMarketUtilities - FINAL	FSOC	OIRA 12866	7/18/2011	76 Fed. Reg. 44,763 - 44,776
39	FSOC - 20120403 - NonBankSupervision - FINAL	FSOC	OIRA 12866	4/3/2012	77 Fed. Reg. 21,637 - 21,662
40	FTC - 20110201 - MortgageAssistanceRelief - FINAL	FTC	No Mandate	12/1/2010	75 Fed. Reg. 75,092-75,144
41	OCC - 20090701 - ConsumerReportingAccuracy - FINAL	OCC	OIRA 12866	7/1/2009	74 Fed. Reg. 31,484-31,528
42	FTC - 20120612 - IdentityTheft - FINAL	FTC	No Mandate	12/6/2012	77 Fed. Reg. 72,712-72,715
43	HHS - 20081125 - PatientSafetyQuality - FINAL	HHS	OIRA 12866	11/21/2008	73 Fed. Reg. 70,732-70,814
44	HHS - 20110622 - WarningsCigarettePackages - FINAL	HHS	OIRA 12866	6/22/2011	76 Fed. Reg. 36,628-36,777
45	HUD - 20081117 - RESPA Mortgage Rule - FINAL	HUD	OIRA 12866	11/17/2008	73 Fed. Reg. 68,204-68,288
46	SEC - 20120222 - InvestmentAdvertiserPerformance - FINAL	SEC	Statutory Mandate	2/22/2012	77 Fed. Reg. 10,358-10,368
47	SEC - 20111116 - ReportingInvestmentAdvisers - FINAL	SEC/CFTC	Statutory Mandate	11/16/2011	76 Fed. Reg. 71,128-71,239
48	SEC - 20111219 - NetWorthAccreditedInvestors - FINAL	SEC	Statutory Mandate	12/19/2011	76 Fed. Reg. 81,793-81,806
49	DOJ - 20100331 - ElectronicPrescriptionsControlledSubstances - FINAL	DOJ	OIRA 12866	3/31/2010	75 Fed. Reg. 16,235 - 16,319
50	DOJ - 20090406 - OnlinePharmacy - FINAL	DOJ	OIRA 12866	4/6/2009	74 Fed. Reg. 15,596 - 15,625
51	DOJ - 20130314 - NonProfitCreditCounseling - FINAL	DOJ	OIRA 12866	3/14/2013	78 Fed. Reg. 16,138 - 16,159
52	DOL - 20081231 - CoalMinesSafety - FINAL	DOL	OIRA 12866	12/31/2008	73 Fed. Reg. 80,656 - 80,700
53	DOL - 20120214 - BenefitsCoverageUniform - FINAL	DOL/Treasury/HHS	OIRA 12866	2/14/2012	77 Fed. Reg. 8,667 - 8,706
54	DOL - 20091007 - GeneticInfoHealthInsurance - FINAL	DOL/Treasury/HHS	OIRA 12866	10/7/2009	74 Fed. Reg. 51,664 - 51,697
55	DOL - 20100406 - HighVoltageMining - FINAL	DOL	OIRA 12866	4/6/2010	75 Fed. Reg. 17,529 - 17,553
56	DOL - 20120406 - ExaminationViolationCoalMine - FINAL	DOL	OIRA 12866	4/6/2012	77 Fed. Reg. 20,700 - 20,716
57	DOT - 20110119 - VehicleStandardsEjection - FINAL	DOT	OIRA 12866	1/19/2011	76 Fed. Reg. 3,211 - 3,305
58	DOT - 20110425 - EnhancingAirlinePassenger - FINAL	DOT	OIRA 12866	4/25/2011	76 Fed. Reg. 23,109 - 23,167
59	DOT - 20100330 - TireFuelEfficiency - FINAL	DOT	OIRA 12866	3/30/2010	75 Fed. Reg. 15,893 - 15,947
60	DOT - 20090512 - RoofCrushResistance - FINAL	DOT	OIRA 12866	5/12/2009	74 Fed. Reg. 22,348 - 22,393
61	DOT - 20100706 - DisabilitiesPassengerVessels - FINAL	DOT	OIRA 12866	7/6/2010	75 Fed. Reg. 38,877 - 38,902
62	HHS - 20110617 - SunscreenOTC - FINAL	HHS	OIRA 12866	6/17/2011	76 Fed. Reg. 35,619 - 35,665
63	HHS - 20130208 - ChildrensHealthTransparency - FINAL	HHS	OIRA 12866	2/8/2013	78 Fed. Reg. 9,457 - 9,528
64	HHS - 20101201 - ACAMedicalLossRatio - FINAL	HHS	OIRA 12866	12/1/2010	75 Fed. Reg. 74,863 - 74,934
65	HHS - 20120110 - AdminSimplificationEFTS - FINAL	HHS	OIRA 12866	1/10/2012	77 Fed. Reg. 1,555 - 1,590
66	HHS - 20110523 - RateIncreaseDisclosure - FINAL	HHS	OIRA 12866	5/23/2011	76 Fed. Reg. 29,963 - 29,988
67	HUD - 20110304 - EmergencyHomeLoan - FINAL	HUD	OIRA 12866	3/4/2011	76 Fed. Reg. 11,946 - 11,956
68	OCC - 20100728 - RegMortgageLoanOrig - FINAL	OCC	OIRA 12866	7/28/2010	75 Fed. Reg. 44,655 - 44,708
69	USDA - 20120126 - NutritionStandards - FINAL	USDA	OIRA 12866	1/26/2012	77 Fed. Reg. 4,087 - 4,167
70	USDA - 20090115 - CountryOriginLabel - FINAL	USDA	OIRA 12866	1/15/2009	74 Fed. Reg. 2,658 - 2,707
71	USDA - 20110120 - Bio-based Labeling - FINAL	USDA	OIRA 12866	1/20/2011	76 Fed. Reg. 3,789 - 3,813
72	USDA - 20130405 - ObesityPreventionGrant - FINAL	USDA	OIRA 12866	4/5/2013	78 Fed. Reg. 20,411 - 20,422

APPENDIX TWO: SURVEY TEMPLATE AND INSTRUCTIONS

Agency:	<i>Name of Agency</i>	Date:	<i>Date Published in Federal Register</i>
Rulemaking:	<i>Name of Rulemaking</i>	Status:	<i>Final, Interim, Proposed, etc.</i>
Federal Register:	<i>Page</i>	RIN:	<i>Regulation Identifier Number (RIN)</i>

LINK:

I. CBA Dashboard: Identified Benefits

<i>0 = Not mentioned or implied</i>	<i>3 = Discussed in detail</i>
<i>1 = Implied, but not mentioned</i>	<i>4 = Key benefit cited</i>
<i>2 = Mentioned as a benefit</i>	<i>5 = Only benefit cited</i>

Campbell Benefits:

Externalities	Information Failures	Market Power	Public Goods	Cognitive Biases	Limited Financial Capabilities	Unfair Outcomes	Principal/Agent Issues

Additional Benefits:

Clarity; Reducing Litigation	Increased Compliance/Self-Regulation	International Coordination	Consumer Welfare (if not tied to one of the benefits above)	Market Efficiency (if not tied to one of the benefits above)

II. CBA Dashboard: Quantification Efforts

<i>0 = Qualitative, No explanation for why not quantified</i>	<i>3 = Impact Quantified, not Monetized</i>
<i>1 = Qualitative, Explanation for why not quantified</i>	<i>4 = Some Monetization</i>
<i>2 = Quantitative Data, Impact not quantified</i>	<i>5 = Fully Monetized</i>

Provision	Benefits Identified	Quantification Scoring	
		Benefits	Costs
<i>Break out provisions of the regulation</i>			

III. CBA Dashboard: Methods of Quantification

<i>0 = None</i>	<i>2 = Extensively Used</i>
<i>1 = Some Utilization</i>	<i>3 = Primary Method Used</i>

	Top-Down Estimate	Bottom-Up Summation	Focus Groups/Interviews	Quantitative Surveys	Lab Experiments	Other
Benefits						
Costs						

IV. CBA Dashboard: Sources of Data

	Agency Generated Materials	Independent Academic Research	Government Studies	Industry Sources	Consumer Groups	Other
Number of Sources						
Number of Sources Generated for Notice & Comment Process						

V. CBA Dashboard: Rulemaking Indicators

Is there a Regulatory Flexibility Analysis?	<i>Yes/No</i>
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Aggregate Word Counts: Economic Analysis Portions of the Rulemaking

Word Count for Benefits:	<i>Word Count</i>	Word Count for Costs:	<i>Word Count</i>	Word Count for Portions Not Assigned to Benefits/ Costs:	<i>Word Count</i>
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VI. Summary of Rule

Copy and Paste (with quote marks) the summary of the rule from the front of the rulemaking⁴⁰²

VII. CBA: General Commentary

- **Required Economic Analysis:** Executive Order 12,866, [Regulatory Flexibility Act?]
- **Mandatory/ Discretionary:** *Type of Rule*
- **Discussion of internal guidelines:** Yes or No
- **Background for Regulation:**
- **Extent and Detail of 1022(b)(2) Analysis:** Brief Synopsis, including page count.
- **Benefits:**
- **Costs:**
- **Consideration of Alternatives:**
- **Regulatory Flexibility Act:**
- **Paperwork Reduction Act:**

⁴⁰² Cite Rule according to bluebook

VIII. CBA: Justification Categories

Externalities:

Information Failures:

Market Power:

Public Goods:

Cognitive Biases:

Limited Financial Capabilities:

Unfair Outcomes:

Principal/ Agent Issues:

Clarity; Reducing Litigation:

Increased Compliance/ Self-Regulation:

International Coordination:

Consumer Welfare (if not tied to one of the benefits above):

Market Efficiency (if not tied to one of the benefits above):

Spring 2014 Memorandum (Version 1.1)

To: HLS Student Research Team

From: Howell Jackson (HLS)
Paul Rothstein (CFPB)
Kelley O'Mara (HLS '14)

Date: January 29, 2014

Welcome aboard!

This memorandum is designed to guide your evaluation of the economic analyses conducted by federal agencies in rulemakings. As you read these instructions, please also review the attached example documents. If you have any questions about what is needed in order to complete the assignment, please feel free to email komara@jd14.law.harvard.edu and hjackson@law.harvard.edu. Both would be happy to answer your questions.

Evaluating the Rulemakings

Over the course of the next two months, we will be reviewing 24 different rulemakings. For each regulation, two reviewers will individually populate a blank template with information from the regulation and their assessment of key metrics. After conducting individual evaluations, each student pairing will then reconcile their scoring in textual analysis utilizing procedures specified below. It is important that initial scores are not shared among reviewers to ensure that the process results in the best information possible.

The rulemakings vary greatly in length, but some are close to 100 pages. All of the regulations in our data set come from Executive Branch agencies, and have been through OIRA review under Executive Order 12,866. Additionally, the agencies may also have undertaken a Regulatory Flexibility Analysis or a Paperwork Reduction Act Analysis.

All of the relevant rulemakings can be found at federalregister.gov. PDF versions of the rulemakings will be provided via the Spring 2014 Dropbox (see below). Though you may find the online Federal Register version easiest to work with when copying and pasting text, make sure to cite text using the appropriate PDF page number according to the PDF version. Please make sure you include page number citations for all text you quote. Also, as you review your PDF versions of the regulations, please make sure you

mark all sections of the rulemaking that make reference to benefits (explained below).

Background of the Evaluation Documents

Each evaluation document should stand on its own to provide the reader with a comprehensive view of the benefits, costs, and methodology used in the economic analysis. In order to complete the evaluation, you should focus carefully on three sections of the rulemakings:

- **Summary of the Rule:** The summary section details the provisions of the rule and briefly discusses the goals of the rule. This portion of the rulemaking will denominate the different provisions of the rule, which will prove essential for the evaluation portion of the project (namely, Section II). It will also guide your evaluation of the economic analysis section, which typically contains a discussion of costs and benefits by provision.
- **Background for the Regulation:** One of the initial sections of the rulemaking details the background for the regulation. This section will include some of the justifications for regulating, as well as the statutory authority and imminent motivation for regulating.
- **Economic Analysis:** This analysis usually comes toward the end of a rulemaking and is commonly labeled “Economic Analysis” or “Executive Order 12,866.” You should also make sure you look at the Regulatory Flexibility Analysis and the Paperwork Reduction Act sections. To the extent that these analyses cross-reference other parts of the Federal Register materials, you should follow the cross-references and incorporate any relevant benefit or cost discussions from other sections of the release. In some cases, it is conceivable that agencies might refer back to cost benefit analyses done in the original proposal of the rulemaking, in which case you should also track down those references and include the PDF for the proposal in your analysis. The economic analysis section is the central focus of this study and it is where you should focus the bulk of your efforts.

Evaluation Documents - Scoring

There are five scoring dashboards in the evaluation documents: Asserted Benefits of Regulation, Quantification Efforts, Methods of Quantification, Sources of Data, and Rulemaking Indicators. Scoring is the last step, and your scores should be consistent with the analysis you provide in sections VII-VIII. Specifically, the scores in the first four dashboards should be fully substantiated by the text quoted in Section VII and the brief benefit summar-

ies in Section VIII. Before finalizing your scoring of any of the regulations, you may want to review several regulations in order to calibrate your understanding of how the rubrics should be applied.

- **Section I. CBA Dashboard: Identified Benefits**

- **Campbell Benefits:** For each of the denominated benefits, provide a score indicating how the benefit was treated in the rule-making. These benefits are explained in detail in the HBR (synopsis can be found in graphics on pages 7-8 and *Journal of Economic Perspective* articles⁴⁰³). Note that these benefits are not mutually exclusive, and thus some language may support the finding of more than one benefit. The Campbell benefits include:
 - **Externalities:** Present if the benefit limits negative externalities that existed in the market during the baseline period. Score here if a transaction between two parties in the pre-regulatory period had negative external effects on others or society as a whole, *and* the regulation attempts to address the issue. For example, a regulation that limits foreclosures will limit the negative externalities that foreclosures trigger on communities. (The creation of positive externalities is best scored under “public goods” below.)
 - **Information Failures:** Present if regulation addresses information asymmetries or other information problems that existed during the baseline period. Usually found in disclosure regulations. Be careful to distinguish from cognitive biases and limited financial capabilities. The focus here should be on whether or not there was a lack of information available, not whether the information was easily or properly understood
 - **Market Power:** Present if the regulation talks about market participants having power to raise prices without market feedback mechanisms, or if the regulation points to the fact that consumers could not accurately comparison-shop for the best price during the baseline period.
 - **Public Goods:** In addition to including tragedies of the commons, a public goods benefit is present if the regulation creates new public information. This would include, for example, a new *public* data source as a result of new data collection.
 - **Cognitive Biases:** Present if the market failure is a result of the flawed way people process information. This would include, for example, a bias for short-term benefits over greater long-term benefits.

⁴⁰³ John Campbell, Howell E. Jackson, Brigitte Madrian & Peter Tufano, *Consumer Financial Protection*, 25 J. ECON. PERSPECTIVES 91–114 (2011).

- **Limited Financial Capabilities**: Present if failure to process mathematical or financial information enables a market failure. This may be particularly common if adequate disclosures present information that requires a high degree of mathematical acuity to process or digest.
 - **Unfair Outcomes**: Includes fair access to goods, services, and credit if not tied to some other identified benefit. Focus is on justice. Regulations addressing discrimination or abusive practices will be scored under Unfair Outcomes.
 - **Principal/Agent Issues**: Note, this is not directly discussed in Campbell. Centers around misalignment of incentives between a principal and someone acting on her behalf. This does not concern corporate governance issues, but it is implicated when a hired agent does not act fully on behalf of the principal (for example, real estate agents not acting purely on behalf of their client). When appropriate, you may include a non-traditional principal-agent relationship (for example, mortgage brokers and their customers), if the regulation indicates that principal-agent misalignments are at issue.
 - **Additional Benefits**: A second scoring chart contains “additional benefits,” that should also be scored using the rubric below. These items should only be listed if they are “free standing,” (that is, not a means to a Campbell benefit you have already accounted for). These benefits include, but may not be limited to:
 - **Clarity; Reducing Litigation**: Present if the rulemaking indicates that the rule itself will clarify the existing statutory/regulatory structure so as to reduce the likelihood of litigation. Alternatively, this may be present if increased compliance is predicted to reduce errors that would result in litigation. *Only tag this if litigation or liability is explicitly mentioned. This should not be flagged if the regulation merely provides clarity regarding statutory requirements without a corresponding expectation of reducing litigation.*
 - **Increased Compliance/Self-Regulation**: Present if the regulation increases the incentives of market participants to comply with regulations or regulate themselves. *This should not include vague statements about increasing compliance with the regulation at issue. Rather, this should be scored if the rule has a self-regulatory bent or if it enables the agency to better monitor compliance with existing regulations.*
 - **International Coordination**: Present if the rulemaking indicates that the regulation will facilitate regulatory coordination among countries.

- **Consumer Welfare:** Present if the benefit language is not tied explicitly or implicitly to one of the benefits identified above, but still indicates that consumers will benefit. Increased consumer confidentiality or lower consumer prices are examples of consumer welfare benefits.
 - **Market Efficiency:** Present if the benefit language is not tied explicitly or implicitly to one of the benefits identified above, but still indicates that the efficiency of the market will improve. This does not refer to any form of increased market efficiency, but specifically refers to concerns about overregulating the market to the point of inefficiency. This will often be identified if a regulation includes a safe-harbor, exemption, or de minimis threshold regulations.
 - Each of these benefits should be scored along the following rubric, as stated in the evaluation template:
 - **0 = Not mentioned or implied:** The benefit in no way appears or is alluded to in the rulemaking.
 - **1 = Implied, but not mentioned:** The benefit is implied based on the structure of the benefits portion of the economic analysis. However, it is never explicitly mentioned. For example, if a regulation limits the occurrence of foreclosures, that would imply that the externalities that result from foreclosures (that is, the consequences for the community) will also be limited by the regulation.
 - **2 = Mentioned as a benefit:** The benefit is cited as a reason for regulating. The benefit does not have to be explicitly named (for example, “market power” does not need to appear). However, the benefit must be explicitly referred to.
 - **3 = Discussed in detail:** The benefit is discussed with some depth in the economic analysis as a reason for regulating. Some substantive foundation for asserting the benefit must be proffered.
 - **4 = Key benefit discussed:** The benefit is the primary reason for the regulation, even if other benefits are also cited as contributing factors. Not all regulations will have a key benefit as several benefits may have roughly equal prominence. There may be more than one key benefit.
 - **5 = Only benefit cited:** The benefit is the only benefit cited by the regulators to motivate regulation.
 - **Note:** In some cases, regulatory materials may make reference to a market failure identified above but not make an explicit (or implicit) claim that the regulation in question will correct that market failure. In such instances, *please add an asterisk to the scoring.*

- **Section II. CBA Dashboard: Quantification of Efforts**

- For each separate provision or section of the rulemaking that is identified in the rulemakings cost benefit analysis, create a new row in the chart. Name the provision and briefly describe it.
 - Factor in the Regulatory Flexibility Analysis and the Paperwork Reduction Act Analysis, as appropriate.
- In the second column, please list all benefits identified (whether implied, mentioned or discussed) in connection with the specific provision.
- For each provision or section, score the benefits and costs along the rubric provided. If any of the provisions are scored above a 1, briefly explain the agency's efforts to quantify that provision.
- The cost and benefit quantification for each provision should be scored along the rubric provided in the evaluation template:
 - **0 = Qualitative, No explanation for why not quantified**
 - **1 = Qualitative, Explanation for why not quantified**
 - **2 = Quantitative Data, Impact not quantified:** Numbers are provided, but there is no calculation to quantify the total impact of costs or benefits.
 - **3 = Impact Quantified, not Monetized:** There is a calculation that addresses impact (for example, number of people affected), but the impact is not monetized.
 - **4 = Some Monetization:** The impact is partially monetized, but the entire monetary impact of the regulation is not given.
 - **5 = Fully Monetized**

- **Section III. CBA Dashboard: Methods of Quantification**

- Score each regulation according to the method of quantification used, if any.
- The various types of methods are listed below. Note the first two methods – Top Down Estimates and Bottom Up Estimates – represent on dimension of analysis, whereas the remaining four methodologies for collecting information represent another.
 - **Top-Down Estimate:** This may take the aggregate size of the economy or an industry and apply estimates to quantify impact. For example, 100,000 loans were made last year and models show that roughly .3% of these loans will be impacted by this regulation. Therefore, 300 loans will be affected. This approach relies mostly on estimates or models.
 - **Bottom-Up Summation:** This method sums up impact through a series of individual factors added together. For example, eight market participants will be subject to additional examinations. A typical examination costs \$50/hour for 50 hours. Therefore, the total cost of implementing the

provision will be approximately \$20,000. This approach often relies on data from other government agencies (for example, the Bureau of Labor Statistics).

- **Focus Groups/Interviews:** Note if an agency used focus groups or interviews to ascertain the impact of a regulation. Quantitative surveys should not be noted here, as they are separated below.
- **Quantitative Surveys:** Note if the agency used survey data to ascertain the impact of the regulation.
- **Lab Experiments:** Note if an agency used laboratory experiments (including behavioral testing) to ascertain the impact of a regulation.
- **Other:** Any other method you may find for quantifying or monetizing the impact of a regulation should be briefly explained here and scored according to the rubric.
- **Note:** Bottom-Up and Top-Down methods may be used together to quantify impacts.
- The scoring rubric is as follows:
 - **0 = None:** The methodology was not found in the economic analysis.
 - **1 = Some Utilization:** The methodology was cited at least once, but it was not extensively used in quantification efforts.
 - **2 = Extensively Used:** The methodology was used in order to calculate impact, but another methodology was more central to the overall calculation.
 - **3 = Primary Method Used:** The methodology was the primary method used to calculate impact.
- **Section IV. CBA Dashboard: Sources of Data**
 - As you identify relevant sources of data, maintain a tally of where the information is coming from and whether or not it was identified as produced or generated for the notice and comment process.
 - Sources of information should be tallied and classified into six categories:
 - **Agency Generated Materials:** Any materials generated by the agency, whether or not for the rulemaking at issue. This would typically include field research (both focus groups/interviews and quantitative surveys).
 - **Independent Academic Research:** Any research conducted by academics from outside the agency, whether or not commissioned by the agency.
 - **Government Studies:** Studies published by governmental agencies other than the agency issuing the rule.

- **Industry Sources:** Information provided by the industry to which the rulemaking will apply. May be denoted in the rulemaking as received in a comment letter.
 - **Consumer Groups:** Information provided by consumer advocacy groups. May be denoted in the rulemaking as received in a comment letter.
 - **Other:** Data sources cited by the agency in the cost benefit analysis, for which there is no clear source.
- For the second row of the chart, please categorize each of the data sources the agency references in the relevant sections of the rulemaking and tally the sources accordingly.
- In the third row, please count the subset of sources identified as produced or generated for the purposes of the specific notice and comment process at issue.
- **Section V. CBA Dashboard: Rulemaking Indicators**
 - In the first box, please state whether or not there is a Regulatory Flexibility Analysis in the rulemaking. If the rulemaking has a heading for “Regulatory Flexibility Analysis,” but the text states that the agency did not conduct an analysis, you should answer “No.”
 - In the second row of boxes, please estimate the number of words from the *economic analysis (12,866)* section of the rulemaking that address (a) benefits, (b) costs, (c) neither.

Evaluation Documents – Text

The evaluation documents are intended to include the relevant language of a rulemaking, such that – standing alone – the information included in the document can provide a reader with the information needed to “score” a CBA. Section VII should provide all of the text necessary to understand the “score” in the first four dashboards. Section VIII should provide a complete explanation in your own words of the score you awarded in the first dashboard. That is, Sections VII and VIII should fully substantiate the scores awarded in Section I.

- **Section VI. Summary of the Rule**
 - This section has the “Summary” of the rule, as it appears in the Federal Register with a footnote citation to the Federal Register.
 - This is intended to give the reader a brief synopsis of the rule’s purpose.
- **Section VII. CBA: General Commentary**
 - Note: Throughout this section, please use footnotes to cite to relevant studies. This should include all studies noted and tallied for the purposes of Sections III and IV.

- **Note:** In-text source citations should be made to note the page in the Federal Register from which each quoted statement originates.
- **Required Economic Analysis:** States whether (1) the agency has to abide by a statutory CBA mandate, (2) the agency is subject to the Executive Order/OIRA CBA process, or (3) the agency is not required to conduct economic analysis.
 - This information can usually be found in the background section of the rulemaking.
- **Mandatory/ Discretionary:** States whether the rule was mandatory (one the agency must complete because of a statutory mandate) or discretionary (derivative of the agency's general rulemaking power).
 - Code this section as "mandatory" if the rulemaking is pursuant to any statutory provision apart from the agency's grant of general rulemaking authority.
 - Generally, regulations addressing self-executing provisions will be thought to be mandatory by their nature.
 - This information is usually discussed in the "background" section of the rulemaking, wherein regulators provide their statutory authority for promulgating the rule.
- **Discussion of internal guidelines:** States whether the rulemaking refers to internal agency guidelines for cost-benefit analysis. Significant mentions of Circular A-4 or other OIRA/OMB guidelines should be identified.
- **Background for Regulation:** Includes quotes describing the compelling factors motivating the rulemaking, including the problems that the agency is aiming to remedy.
- **Extent and Detail of Cost-Benefit Analysis:** States the page count (Federal Register PDF pages) of the cost-benefit analysis and states whether the rulemaking is overall more quantitative or qualitative. Quote relevant sections of the regulation that do not directly bear on costs and benefits, but serve to frame the agency's thinking. Some common areas of discussion include:
 - **Quantification:** Statements the agency has made about efforts to quantify and difficulties with quantification.
 - **Baseline:** Quotes regarding what the agency considers its baseline. Particularly interesting are statements regarding whether the baseline is prestatutory or "no action" (*that is*, existing regulations continue, absent the new rulemaking).
 - **Response to Comments:** General statements the agency has made regarding the comment letters it received and how it has taken the comments into account.
 - **Exemptions:** If the agency has exempted certain actors from the rule, it is helpful to note in this section.

- **Benefits:** As the agency lists the benefits of its new regulations for the purpose of an economic analysis, it is helpful to denominate them in the evaluation by using the benefits articulated in Section I of the template. Please flag these before quoted text using bold, underline and asterisks, as seen in the example. [Note: Not all provisions of rulemakings will have specific benefits associated with them and some identified benefits may reflect the expected impact of a combination of regulatory provisions; your summary of benefits should reflect the characterization of benefits that the agency utilized in its economic analysis.]
 - Quote statements from the rulemaking citing the proposed benefits of a regulation and *group them together* based on the justification the benefit represents.
 - When empirical evidence is used in order to support a purported benefit, create a footnote with the proper citation.
- **Costs:** The agency will also name a number of costs it anticipates as a result of the rulemaking.
 - Quote statements from the rulemakings regarding the costs, and categorize based on similar categories of costs (for example, reduction in revenue, increased recordkeeping, reduction in access to credit)
 - When quantification efforts are made, capture the relevant methodology and numbers to provide the reader of the evaluation a lens into the agency's approach to quantification.
- **Consideration of Alternatives:** The agencies may discuss alternative approaches to regulating and why they were not chosen. To the extent this discussion compares the costs or benefits of a proposed approach with the chosen approach, include the quotes that illustrate this comparison.
- **Paperwork Reduction Act Analysis:** Add this section, if relevant; summarize the appropriate provisions of the PRA analysis.
- **Regulatory Flexibility Act Analysis:** Add this section, if relevant; summarize the appropriate provisions of the RFA analysis.
 - Pay special attention to comments regarding the effect on smaller entities.
- **Section VIII. CBA: Identified Benefits**
 - For each of the benefits provide 1-5 sentences of *your own commentary* discussing how the rulemaking addresses the benefit.
 - If additional benefits came up in the course of the evaluation (for example, Clarity; Reducing Litigation, Consumer Welfare, Market Efficiency, Increased Compliance/Self-Regulation, Creation of Public Information, International Coordination) add this as a category, and provide one to two sentences of your own commentary synthesizing how the rulemaking addresses the benefit.

Dropbox

All of the relevant documents are stored in a community Dropbox entitled “CFPB CBA - Spring 2014.” If you are having trouble accessing the Dropbox, please email komara@jd14.law.harvard.edu for assistance. This Dropbox contains a subfolder for each evaluated regulation. **Please do not change or save over any of the documents in this Dropbox.**

You will also be invited to an individual Dropbox where you can save your deliverables such that they are viewable only to you and the authors of this memo. Please group the documents in subfolders by regulation, using consistent nomenclature [Agency – Date of regulation (YYYYMMDD) – Short Name of Regulation]. Please follow the nomenclature that is currently used and save all of your deliverables in your personal file as [Date of regulation (YYYYMMDD) Short name of regulation v. Your Name]

There are several sections of the community Dropbox to navigate:

- **Background Materials:** These documents may be helpful to you as you prepare to evaluate rulemakings. You may also want to refer to the HBR Letter to the CFPB Director or the longer JEP article as you conduct your evaluations; the details regarding justifications are tremendously helpful. You can also access the central assignment worksheet in this file.
- **Templates for Evaluation:** For each regulation to be assessed, a blank template is available for you to fill out. You can save your own version of these templates in your personal Dropbox after you have scored the rulemakings. Also, be sure to add your name and the date at the top of the documents.
- **Rulemaking PDFs:** Each of the evaluated rulemakings has been saved in PDF form in the community Dropbox. Please save your marked version of these PDFs in your personal Dropbox.

Process and Deliverables

Initial Process

Two research assistants (RAs) will evaluate each regulation, using the following process.

1. Each RA should mark up a version of the relevant sections of the regulation.
2. Each RA should add his or her name to the top of the evaluation template and fill out the template in accordance with the instructions of

this memo. Please work in Word. Please include page citations for all quotes in line with the text in Section VII.

3. Each RA should fill out Section VIII, summarizing how each benefit is treated in the rulemaking.
4. Each RA should independently fill out the scoring dashboards using the rubrics provided, aligning the scores with the analysis completed in Sections VII and VIII.
5. RA pairings should meet to discuss the changes to the textual analysis and the scores. The goal of this meeting is not to compromise on scores, but to highlight genuine areas of disagreement. Only change your scoring if your partner has convinced you to change your thinking, and not as a means to achieve the same score.
6. Both RAs should post final versions of their evaluations in the relevant folder of their personal Dropbox.
7. The “primary RA” should then write a brief memo (send by email) to Professor Jackson and Kelley explaining the conversation. The memo should touch on disagreements in scoring or differences of opinion, as well as areas of confusion. The primary RA should email this to Professor Jackson and save it to his or her personal Dropbox. Often times, the items you flag will belong in Section VIII of the template.
8. After the conversation, the primary RA should memorialize the markings from both RA’s PDF versions into one electronic PDF document. Please use the “highlight” and “comment” functions of Adobe PDF. The primary RA should save a final copy of the marked PDF in the relevant subfolder of his or her personal Dropbox.
 - a. Highlight all areas of text that discuss the costs and benefits of the regulation
 - b. Use the comment function to indicate which benefit is being identified in a given portion of the text.
 - c. Use the comment function to identify sources that are being counted for the purposes of Dashboard IV.
9. After the conversation, the primary RA should reconcile both evaluations feedback received in order to create one synthesized evaluation document that includes both RAs’ initial changes. Continue to keep all edits in track changes.
 - a. Put the primary RAs name first in the first page header, then the secondary RA.

Where there are disagreements in scoring or word-counts, put both scores and word-counts in the designated box, separated by a semicolon. The Primary RA’s score or estimation should come first. With respect to word counts, do not worry if there are differences between RA word counts and don’t spend time attempting to reconcile differences. Where changes to the text of the template conflict, the primary RA should use discretion, in-

formed by feedback, to make additional edits to the final document.

Whenever the RAs have arrived at different scores in Section I, Section VIII should be updated in order to explain the difference.

