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Information Failures

Fiduciary Requirements for Disclosure in Participant-Directed Individual Account Plans

*(Department of Labor)*¹

In 75 Fed. Reg. 64909,² the Department of Labor (DOL) promulgated a final rule that requires the disclosure of certain plan and investment-related information to all participants and beneficiaries in 401(k)-type plans (“participant-directed individual account plans”) (64910). The primary goal of the rule is to ensure that plan participants have the information they need to make informed decisions (64910). The benefit of the requirement to provide this information is monetized by the value of reductions in plan participant search time.

Sources. DOL relied on several sources in its analysis:

- (1) Department of Labor, [Form 5500 Data](#), 2007
- (2) Employee Benefit Research Institute (EBRI), “[The Retirement System in Transition: The 2007 Retirement Confidence Survey](#),” Issue Brief #304 (April 2007)
- (3) Census Bureau, [Survey of Income Program Participation](#) (SIPP), Panel Wave 04 (2004)
- (4) [Bureau of Labor Statistics](#), unidentified wage growth data for private-sector workers participating in pension plans with individual accounts

Background. The rule establishes a uniform, basic disclosure regime for participant-directed individual account plans. Two categories of information must be disclosed: plan-related information and investment-related information (64912-63917). Plan-related information consists of information about the investment alternatives offered, administrative expense information (fees charged to all accounts under the plan, e.g., for general plan administrative

¹ Scores: Information Failure = 4, Quantification Effort = 5.

² Fiduciary Requirements for Disclosure in Participant-Directed Individual Account Plans, 75 Fed. Reg. 64909 (Oct. 20, 2010) (29 C.F.R. pt. 2550).

services), and individual expense information (fees charged to individual accounts, e.g., for sales or investment advice).³ This information must be disclosed initially and annually. Furthermore, participants must receive statements, at least quarterly, showing the dollar amount of the administrative or individual plan-related fees and expenses actually charged to or deducted from their individual accounts, along with a description of the services for which the charge or deduction was made. Investment-related information includes performance data (e.g., historical investment performance), benchmark information (the return on an appropriate index, for options that do not have a fixed rate of return), and fee and expense information. Investment-related information must also be furnished to participants or beneficiaries on or before the date they can first direct their investments, and then again annually thereafter. The information must be furnished in a chart or similar format designed to facilitate a comparison of each investment option available under the plan.

Value of reductions in participant search time. DOL used its own 2007 Form 5500 Data to obtain an estimate of how many people participated in individual investment accounts (72 million) and thus would be affected by the rule. DOL then estimated how many of these 72 million participants would benefit from easier access to information, taking into account that some participants might already be receiving the required disclosures and would benefit less than others.⁴ Specifically, drawing on EBRI's Retirement Confidence Survey for the percentage of workers that use "written materials received at work as a source of information" for investing

³ U.S. DEPARTMENT OF LABOR EMPLOYEE BENEFITS SECURITY ADMINISTRATION, FACT SHEET: FINAL RULE TO IMPROVE TRANSPARENCY OF FEES AND EXPENSES TO WORKERS IN 401(K)-TYPE RETIREMENT PLAN, 2 (February 2012), <https://www.dol.gov/sites/dolgov/files/EBSA/about-ebsa/our-activities/resource-center/fact-sheets/final-rule-improve-transparency-of-fees-and-expenses.pdf>

⁴ "To some extent, disclosure of such [additional] information already is required by plans that elect to comply with the requirements of ERISA section 404(c). . . . However, compliance with section 404(c)'s disclosure requirements is voluntary and does not extend to participants and beneficiaries in all participant-directed individual account plans" (64910).

decisions (73%, plus or minus 3%), DOL calculated that 50 to 55 million participants would receive some benefit from the rule (64929). DOL acknowledged the assumption implicit in this estimate, i.e., that participants who “read materials provided to them most likely will experience time savings” (64929). Further, using the 2007 Form 5500 Data, DOL computed the share of participants in participant-directed individual account plans that might already be receiving the required disclosures.⁵ Participants already receiving the required disclosures were assumed to save one hour while the others were assumed to save 90 minutes.⁶

To monetize the time saved, DOL then posited “an average wage of \$37 for private sector workers participating in a pension plan” in order to estimate “how much the average participants would value the time saved” (64929). This wage figure was based on data from Panel 4 of the 2004 wave from the Survey of Income Program Participation (SIPP), along with wage growth data for private-sector workers that participate in a pension plan with individual accounts from the Bureau of Labor Statistics (64929). DOL multiplied each of these time savings figures by the number of participants expected to benefit (50 to 55 million) and the \$37 average wage figure, and then created a wider range by halving the figure at the low end and doubling the figure at the high end. This yielded an interval of 26 to 112 million hours saved, valued at \$1.0 to \$4.0 billion in 2012 dollars (64929). Lastly, using a 7% discount rate, DOL estimated the total present value of the benefit to be \$7.2 to \$29.9 billion (64929).

Unquantified benefits. In addition to search time savings, participants would also benefit from a reduction in investment fees and costs. However, DOL admitted that it “has no basis on

⁵ Table 2 (64929) reports that about 58 million of the 72 million participants in participant-directed individual account plans (81 percent) are in plans that reported compliance with ERISA 404(c).

⁶ “[T]he Department assumes that participants who are not receiving ERISA section 404(c) compliant disclosures, on average, will save one-and-a-half hours, while participants receiving such disclosures will save one hour on average” (64929).

which to quantify” such a reduction because “the available research provides an insufficient basis to confidently determine whether or to what degree participants pay inefficiently high investment prices” (64930-31).

*Enhancing Airline Passenger Protections (Department of Transportation)*⁷

In 76 Fed. Reg. 23109,⁸ the Department of Transportation (DOT) promulgated a final rule that requires airline contingency plans, disclosures, and customer refunds in order to improve “the air travel environment for consumers” (23110). In particular, the rule aims to “ensure that passengers have accurate and adequate information to make informed decisions when selecting flights” through full-fare advertising and a prohibition on opt-out provisions (23110). The benefit of the requirement on full-fare advertising is monetized by the value of time saved by consumers who would now be able to shop at fewer travel websites prior to purchasing airline tickets.

Sources. DOT relied on several of its own sources in its analysis:

- (1) Department of Transportation and Econometrica, Inc., [Final Regulatory Analysis](#) (FRA) for “Enhancing Airline Passenger Protections II,” Final Rule, April 2011
- (2) Bureau of Transportation Statistics (BTS), Department of Transportation, [T-100 Segment database](#), 2009
- (3) Federal Aviation Administration (FAA), Department of Transportation, [Aerospace Forecast Fiscal Years 2010–2030](#)
- (4) Department of Transportation, “[Revised Departmental Guidance Valuation of Travel Time in Economic Analysis](#),” 2003

⁷ Scores: Information Failure = 3, Quantification Effort = 4.

⁸ Enhancing Airline Passenger Protections, 76 Fed. Reg. 23109 (April 25, 2011) (14 C.F.R. Parts 244, 250, 253, 259, and 399).

In addition, DOT relied on two government or industry sources:

- (5) Air Transport Association (ATA), [comments](#) submitted on the “[Notice of Proposed Rulemaking on Enhancing Airline Passenger Protections II](#),” citing ATA survey of 2008
- (6) Office of Management and Budget, “[Circular A-4](#),” 2003

Background. The Department’s price advertising rule, 14 C.F.R. pt. 399.84, states that any advertised price for air transportation must be the entire price to be paid by the customer for that transportation (23166). However, the Department’s enforcement policy permitted sellers of air transportation to state separately from the advertised price government-imposed taxes and fees, under certain conditions (23142). The Department proposed enforcing the price advertising rule as it is written and finalized the change as proposed (23142). The Department also explicitly applied the advertising rule to ticket agents and codified its enforcement policy on “each-way” advertising (23142-44).⁹ Finally, the rule prohibits opt-out provisions for any ancillary fee for an optional service such as seat selection, seat upgrades, pre-boarding, travel insurance, rental cars, and transfers to and from the airport.¹⁰ Under the rule, an optional service can be added to the total airfare only if the consumer affirmatively agrees to pay a fee for such service (23144-45).

*Value of time saved.*¹¹ DOT began its analysis by estimating the total tickets for domestic airline carriers in 2012 (340,845,677 tickets) and the period 2012-2021 using the FAA’s estimated airline growth rates (FRA A-4) and BTS’s 2009 airline and passenger data (FRA 15). DOT multiplied these estimates by 52%, which according to the ATA represents the percentage of passengers that use the internet to purchase airline tickets (FRA A-12). This calculation

⁹ Under this policy, advertisement of an each-way airfare that is contingent on a round-trip purchase is an unfair and deceptive practice unless the airfare is advertised as “each way” and the round-trip purchase requirement is clearly and conspicuously disclosed in a location that is prominent and proximate to the advertised fare amount (23143-44).

¹⁰ “The most common charges added on this basis are for travel insurance and preferred seating assignments” (FRA 55).

¹¹ The analysis is summarized in Table 30 (page 58) of the FRA.

yielded estimates of 177,239,752 tickets purchased on websites in 2012 and 2,396,529,316 tickets from 2012-2021 (FRA 58). DOT then drew on the ATA again for its estimate that the average travel trip party size is 1.4 (FRA A-12). Dividing this figure by the prior website ticket estimates yielded 126,599,823 purchasers of tickets on websites in 2012 and 1,711,806,655 purchasers from 2012-2021.

With these estimates in hand, DOT assumed that the percent of online purchasers who shop on multiple travel websites without the full fares displayed was 2% (FRA 58). This appears to represent the joint outcome of being a consumer who visits multiple travel websites and encountering websites that do not display full fares. The agency acknowledges not having data on the number of purchasers who examine multiple websites and take time to find prices that include all taxes and fees (FRA 57). However, the agency did review advertised prices on websites and found that only one of eight carrier websites displayed full-fare prices at the flight selection stage (FRA 54). This is the basis for the statement that the 2% estimate is “conservative” (FRA 57). Multiplying 2% by the previous ticket purchasers estimates yielded 2,531,996 purchasers who would benefit from “up-front posting of full-fare” in 2012 and 34,236,133 purchasers from 2012-2021 (FRA 58). DOT then assumed that these purchasers would save, on average, 3 minutes (or .05 hours) of “search and estimation time if all fares displayed on websites included all required government taxes and fees up front” (FRA 57). Although DOT did not include a formal citation, it did state that the assumption was based on “a series of user time trials” (FRA 57 n. 49).

DOT then drew on its own study for the “monetized value of time for airline passengers” while not traveling (FRA A-4). According to DOT, this value (\$24.15 for the average personal passenger) was calculated using earnings estimates data (FRA A-4). DOT multiplied \$24.15

by .05 hours to yield \$1.21 as the value of average time saved per purchaser. DOT then multiplied \$1.21 by the previously derived estimates for purchasers of tickets on websites to produce “the total value of time saved from reduction in search cost”: \$3,057,386 in 2012 and \$41,340,131 from 2012-2021 (FRA 58). Finally, DOT followed OMB’s Circular A-4 guidelines in discounting the latter figure by 7%, yielding \$28.97 million in benefits from 2012-2021.

Other benefits. DOT discusses other benefits from the advertising and opt-out requirements. One is the reduction in deadweight loss that occurs if passengers purchase tickets they otherwise would not have if the first fare they had seen displayed the full fare. DOT estimated the benefit from eliminating this misallocation of resources to be \$27 million over 10 years (FRA B-2). Industry commenters strongly disagreed with the assumption that people may “anchor” onto the first price they see; this analysis appears only in Appendix 2 to the FRA. Another benefit of this provision was the “time saved for those consumers beginning a ticket purchase that is later abandoned once the full fare is known” (FRA 56). DOT acknowledged that this benefit could not be quantified due to a lack of adequate data regarding the “number of consumers and the average amount of time lost” (FRA 56).

*Tire Fuel Efficiency Consumer Information Program (Department of Transportation)*¹²

In 75 Fed. Reg. 15893,¹³ the National Highway Traffic Safety Administration (NHTSA), an agency housed within the Department of Transportation, promulgated 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 (15895). The rule contributes to the implementation of this program by defining test procedures for tire ratings

¹² Scores: Information Failure = 4, Quantification Effort = 4.

¹³ Tire Fuel Efficiency Consumer Information Program, 75 Fed. Reg. 15893 (March 30, 2010) (49 C.F.R. pt. 575).

and requiring manufacturers to submit these ratings to NHTSA (15895). The primary goal of this rule is to address information failures in the consumer tire market due to a lack of easy access to this comparative information (15895). The benefit of the consumer information program is monetized by the value of both the fuel saved and the reduction in greenhouse gas emissions.

Sources. NHTSA relied on several of its own sources in its analysis:

- (1) National Highway Traffic Safety Administration, Department of Transportation, “[Vehicle Survivability and Travel Mileage Schedules](#),” Technical Report, January 2006
- (2) National Highway Traffic Safety Administration, Department of Transportation, [MY 2012-2016 CAFÉ PRIA](#), 2009
- (3) National Highway Traffic Safety Administration, Department of Transportation, [Final Regulatory Impact Analysis for the Tire Fuel Efficiency Consumer Information Program \(FRIA\)](#), March 2010
- (7) National Highway Traffic Safety Administration, Department of Transportation, [Notice of Proposed Rulemaking for the Tire Fuel Efficiency Consumer Information Program](#), June 2009

In addition, NHTSA relied on several other sources:

- (4) Transportation Research Board, National Research Council of the National Academies, “[Tires and Passenger Vehicle Fuel Economy: Informing Consumers, Improving Performance](#),” Special Report 286, 2006
- (5) Energy Information Administration, Department of Energy, “[Annual Energy Outlook 2008](#),” June 2008
- (6) Office of Management and Budget, [Circular A-94 Revised](#), October 1992

Background. Tires affect an automobile's fuel efficiency (via rolling resistance) and safety (via wet traction); tire durability (measured by treadwear) directly affects an automobile's operating costs. At the request of Congress, the National Academy of Sciences undertook research on reducing rolling resistance in replacement tires and the potential impact on safety and other factors (15904). The 2006 report "concluded that reduction of average rolling resistance of replacement tires by 10 percent was technically and economically feasible, and that such a reduction would increase the fuel economy of passenger vehicles by 1 to 2 percent, saving about 1 to 2 billion gallons of fuel per year nationwide" (15904).¹⁴ The report noted, however, that consumers had little practical way of assessing how tire choices can affect vehicle fuel economy (15904). Consumers also value tire safety and durability but have little practical way of assessing these performance factors or examining tradeoffs (15895). The tire consumer information program will provide information on all three measures of performance.¹⁵

Value of fuel saved and reduction in greenhouse gas emissions. The rule requires tire manufacturers to submit ratings for tire fuel efficiency, safety, and durability.¹⁶ NHTSA acknowledged lacking information about "likely consumer behavior in response to this [consumer information] program, and as a result of that, likely manufacturer reaction" (15933). However, assuming improved information causes a given number of additional tires to be purchased with a given reduction in rolling resistance, it is possible to use information about the resulting increase in fuel economy per-mile and the number of miles a consumer drives to

¹⁴ See Transportation Research Board Special Report 286, *Tires and Passenger Vehicle Fuel Economy: Informing Consumers and Improving Performance*, National Research Council of the National Academies (2006).

¹⁵ NHTSA conducted consumer research to determine whether consumers might sacrifice safety for improved fuel efficiency. NHTSA concluded that the results mitigate this concern but that it would be important "to not emphasize the fuel efficiency rating above the traction rating" when finalizing the consumer information and consumer education program (15921).

¹⁶ The final rule specifies test procedures by which NHTSA will evaluate the accuracy of ratings assigned by tire manufacturers. The tire manufacturers themselves are not required to use those test procedures (15912-13).

estimate fuel savings and emission reductions. Thus, “if we assume 1 percent of targeted tires (1.4 million tires) are improved and that the average reduction in rolling resistance is 5 percent, then...the proposal is estimated to save 3.0 million gallons of fuel and prevent the emission of 29,000 metric tons of CO₂ annually” (15933). NHTSA then relied on EIA fuel price forecasts and a \$20 per metric ton (in 2007 dollars) figure for the cost of emitting carbon dioxide (based on its MY 2012-2016 CAFE PRIA report) in order to generate its annualized monetary estimates of fuel saved and greenhouse gases prevented. Finally, relying on OMB-Circular A-94’s suggested discount rates of 3% and 7%, NHTSA discounted these monetary estimates to the year the tire in question was produced. At a 3% discount rate, the average annual benefit through 2050 is \$11.6 million. This is the figure reported in the main analysis of benefits and costs (15933) and in Table 1 (15902).

The NHTSA analysis assumes that better information about fuel efficiency, safety and durability would lead a number of consumers to purchase tires with greater fuel efficiency. To provide some foundation for this assumption, the agency conducted a consumer survey.¹⁷ Based on the survey, the agency states that “buyers would pay between \$4 and \$5 more per tire for improved fuel efficiency” (15935). In contrast, based on its costs analysis, the agency states that it costs just \$3 more per tire to improve rolling resistance by 5 percent. The agency essentially concludes that, with better information, more consumers would identify and purchase tires that they prefer, and that these tires would have improved fuel efficiency with little or no reduction in safety or durability (15935).

¹⁷ “NHTSA conducted additional consumer research after the notice of proposed rulemaking (NPRM) was issued to improve understanding of the typical tire purchaser and the tire purchasing process for the average consumer. *See* NHTSA Rolling Resistance Survey (Aug. 19, 2009)” (15921).

Unquantified benefits. In addition to fuel savings, consumers may be enabled by the rule to choose tires with increased safety ratings and/or durability. However, even more so than in the fuel savings context, estimates here require a host of assumptions. For instance, as NHTSA acknowledges, “it is not as straight forward as it is for a fuel efficiency rating to develop a rule of thumb for the safety rating scale such as ‘each difference of X on the safety rating scale equates to Y percent fewer crashes and Z dollars less in resultant economic damages’” (15933-34). A similar argument can be made against the easy estimation of durability benefits. As NHTSA points out, several assumptions are needed in order to claim that “each difference of X on the durability rating scale equates to a reduction of \$Y in tire purchases over the lifetime of the vehicle,” since such a relationship is complicated by “driving habits, tire maintenance,” and other factors (15934). Accordingly, NHTSA declined to quantify either safety or durability benefits in the rulemaking.

Externalities

*Refrigerator Standards (Department of Energy)*¹⁸

In 76 Fed. Reg. 57515,¹⁹ the Department of Energy (DOE) promulgated a final rule that “prescribes energy conservation standards for various consumer products and commercial and industrial equipment” (57516). The rule projects “significant environmental benefits” due to an anticipated reduction in greenhouse gas emissions. The benefit of these standards is monetized by the value of the emissions reductions.

Sources. DOE generated three of its own models or sources for its analysis:

¹⁸ Scores: Externalities = 4, Quantification Effort = 4.

¹⁹ Energy Conservation Program: Energy Conservation Standards for Residential Refrigerators, Refrigerator-Freezers, and Freezers, 76 Fed. Reg. 57515 (Sept. 15, 2011) (10 C.F.R. pt. 430).

- (1) Department of Energy, [National Impact Analysis \(NIA\) spreadsheet model](#). See Chapter 10 of the Technical Support Document for a discussion of the NIA.
- (2) Department of Energy, NEMS-BT, a modeling system adapted for DOE purposes from the Energy Information Administration's National Energy Modeling System. For details on the NEMS-BT, see Chapter 14 of the Technical Support Document (referenced above) and the 2003 NEMS, available at:
[https://www.eia.gov/outlooks/archive/aeo03/overview/pdf/0581\(2003\).pdf](https://www.eia.gov/outlooks/archive/aeo03/overview/pdf/0581(2003).pdf)
- (3) Department of Energy, [Technical Support Document](#) to "Energy Conservation Program: Energy Conservation Standards for Residential Refrigerators, Refrigerator-Freezers, and Freezers," Final Rule, September 2011

DOE also relied on several government sources:

- (4) Energy Information Administration (EIA), "[Annual Energy Outlook 2010](#)" (AEO2010)
- (5) Office of Management and Budget (OMB), "[Circular A-4](#)," September 2003
- (6) Interagency Working Group on Social Cost of Carbon, [Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis](#), FUND, DICE, and PAGE models
Value of emissions reductions. DOE used its National Impact Analysis (NIA) spreadsheet

model to assess the total consumer costs and savings as well as the national energy savings that would result from the refrigerator standards. This model uses a range of engineering and market

inputs.²⁰ These include an estimate of refrigerator shipments that takes into account the impact of the refrigerator standards on manufacturing costs, consumer prices and consumer demand.²¹

With the various inputs in hand, DOE forecasted “energy savings beginning in 2014, the year that manufacturers would be required to comply” with the new standards, and ending in 2043 for a 30-year forecast period (57532). The NIA spreadsheet model quantified energy savings as “the difference in energy consumption between the standards case and the base case,” where the base case “represents the forecast of energy consumption in the absence of amended mandatory efficiency standards” (57532). With all inputs factored in, the model produced an estimate of “4.84 quads of cumulative energy” saved over 30 years, i.e., “three times the total energy used annually for refrigeration products in the U.S.” (57532). DOE also forecasted cumulative national net present value of total consumer costs and savings, economic impacts on individual consumers (using a product life-cycle cost model), and industry net present value based on industry cash flows.

DOE used this national energy savings estimate as the main input for its NEMS-BT computer model, which calculates “the reduction in power sector emissions of carbon dioxide” (57558) and other gases, yielding “cumulative greenhouse gas emission reductions of 344 million metric tons...of carbon dioxide...in 2014-2043” (57518). DOE then obtained the most recent values for the social cost of carbon (SCC) by relying on an interagency group’s FUND,

²⁰ See Table IV.6 (57552-57553). The inputs into the NIA are (a) Estimated shipments of refrigeration products, (b) Compliance Date of Standard Base-Case Forecasted Efficiencies (2014), (c) Annual Energy Consumption per Unit, (d) Total Installed Cost per Unit, (e) Energy Cost per Unit, (f) Repair and Maintenance Cost per Unit, (g) Escalation of Energy Prices, (h) Energy Site-to-Source Conversion Factor, (i) Discount Rate, and (j) Present Year (future expenses discounted to 2010). DOE’s Technical Support Document accompanying the rule explains how the model combines these inputs to generate the output savings figure.

²¹ DOE’s “engineering analysis” provides estimates of the impact of the product standards on manufacturing costs (57543); its “markups analysis” converts these cost estimates into estimates of the impact on consumer prices (57545); and its “shipments analysis” converts these price estimates into estimates of the impact on product shipments using estimates of the price elasticity of demand (57553).

DICE, and PAGE models.²² Each of these models accepts three input parameters to calculate a value for the SCC: “climate sensitivity, socio-economic and emissions trajectories, and discount rates” (57560). These models yielded, at four different discount rates and in 2009 dollars, figures of \$4.9, \$22.1, \$36.3, and \$67.1 per metric ton avoided. DOE then multiplied these figures by the NEMS-BT output figure mentioned above (\$344 million metric tons), arriving at a range of \$2.8 and \$27.5 billion per year, in 2009 dollars (57518). This range represents the monetary value of the reduction in carbon dioxide emissions.

*Emergency Homeowners' Loan Program (Department of Housing and Urban Development)*²³

In 76 Fed. Reg. 11946,²⁴ the Department of Housing and Urban Development (HUD) promulgated 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 (11946). One of the benefits of the loan program is the reduction of externalities associated with foreclosures, such as lower tax revenues and depressed property values (11949). There are large transfers associated with the program as well (11949). The benefit of the program is monetized by the value of foreclosures avoided.

Sources. HUD referenced two of its own sources in its analysis:

- (1) Federal Housing Administration, Department of Housing and Urban Development, Home Affordable Modification Program (HAMP), [canceled loan data](#), 2010

²² See Interagency Working Group on Social Cost of Carbon, Technical Support Document: *Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866* (2010),

https://www.epa.gov/sites/production/files/2016-12/documents/scc_tsd_2010.pdf; updated at https://www.epa.gov/sites/production/files/2016-12/documents/sc_co2_tsd_august_2016.pdf.

²³ Scores: Externalities = 2, Quantification Effort = 4.

²⁴ Emergency Homeowners' Loan Program, 76 Fed. Reg. 11946 (Mar. 4, 2011) (24 C.F.R. Chapter XV).

- (2) Department of Housing and Urban Development, “[Regulatory Impact Analysis for Emergency Homeowners’ Loan Program](#),” Interim Rule, March 2011

HUD also relied on several government and industry sources:

- (3) Moreno, Ana, “[Cost-Effectiveness of Mortgage Foreclosure Prevention](#),” report prepared for the Family Housing Fund, 1995
- (4) Bureau of Labor Statistics, Department of Labor, [Consumer Price Index](#)
- (5) Apgar, William C., and Duda, Mark, “[Collateral Damage: The Municipal Impact of Today’s Mortgage Foreclosure Boom](#),” report prepared for the Homeownership Preservation Foundation, May 2005
- (6) Immergluck, Daniel, and Smith, Geoff, “[The External Costs of Foreclosure: The Impact of Single Family Mortgage Foreclosures on Property Values](#),” *Housing Policy Debate* 17 (1): 57-80 (2006)
- (7) [National Association of Realtors](#), unspecified data for home sale prices
- (8) [Standard & Poor’s](#), “The Anatomy of Loss Severity Assumptions in U.S. Subprime RMBS,” 2008
- (9) Harding, John, Miceli, Thomas, and Sirmans, C.F., “[Do Owners Take Better Care of Their Housing Than Renters?](#)” *Real Estate Economics* 28: 663-681 (2000)

Background. The Emergency Homeowners’ Loan Program (EHLPP) allows the U.S. Department of Housing and Urban Development to provide a maximum of \$50,000 for five years at zero interest to eligible homeowners (11948). Homeowners must be at least 90 days delinquent on their mortgages due to a reduction of household income and face the threat of foreclosure (11949). Reasons for the reduction of income are limited to involuntary unemployment, involuntary under-employment, and medical conditions (11950). Current

household income must be less than 85% of the household's previous income and previous income must have been no more than 120 percent of Area Median Income (AMI) (11951, 11053). Homeowner's must also meet certain conditions to demonstrate that they have a reasonable likelihood of resuming full monthly mortgage payments and repaying the loan (11951-52).

Value of foreclosures avoided. HUD began the analysis by estimating a range for the number of homeowners who would receive loans under the program (RIA 1-2). For the lower bound, HUD assumed that homeowners with cancelled HAMP loans were likely facing foreclosure. It then used the mortgage and income data available for these homeowners to estimate that 22,546 met the other program criteria. This provided a lower bound on the number of homeowners who could receive loans. HUD then calculated that the average loan amount to these homeowners would be \$26,148 (RIA 2). With \$901 million available for loans and assuming \$26,148 would be the average loan amount to all eligible homeowners, HUD concluded the program could support 34,474 homeowners (RIA 2). This provided an upper bound on the number of homeowners who could receive loans. The subsequent analysis assumes that all homeowners who could receive loans actually participate in the program.

HUD then estimates the benefits per foreclosure prevented to four groups: homeowners, local governments, lenders, and neighbors. Regarding costs to homeowners, HUD referenced the Family Housing Fund report for its estimate that "the total cost to homeowners related to foreclosure" was \$7,200 per household in 1995 dollars (RIA 2). HUD then adjusted this estimate for inflation using the Consumer Price Index, yielding \$10,339 per household in 2010 dollars of avoided loss to homeowners per foreclosure. Regarding costs to local governments, HUD relied

on Agpar and Duda's study for the estimate of \$6,200 as the average direct cost per foreclosure to local governments.

Regarding costs to neighbors, HUD borrowed from Immergluck and Smith's study the estimate that, on average, a foreclosure reduces the values of surrounding properties within one-eighth of a mile by 0.9 percent (RIA 4). HUD assumed that a "reasonable density" of 3 units per acre in order to estimate that a foreclosure affects 94 properties in a one-eighth mile (31.4 acre) radius (RIA 4). Relying on the National Association of Realtors for the median price of existing homes (\$171,100) sold in October 2010, HUD then calculated that the "aggregate externality" of a foreclosure would be, on average, \$144,750 (0.9 percent multiplied by 94 properties by \$171,100) (RIA 4).

Regarding lender costs, HUD focused on calculating two measures of loss to society: transactions costs due to a foreclosure and structural loss surrounding a foreclosure. Regarding the former, HUD began with Standard and Poor's estimate that "the avoided lender costs of foreclosure totals \$68,423 per house" (RIA 3). HUD then claimed that only legal fees (2% of the loan balance) and brokers' fees (6% of the housing price) should count as "deadweight loss," i.e., a loss, if avoided, would benefit society and not just the lender (RIA 3). Using those measures, HUD estimated that relevant transaction costs avoided per foreclosure totaled \$10,063. For structural costs due to foreclosure, HUD first referenced Harding *et al.* for its 19% estimate of the "stress discount" due to foreclosure, i.e., "the reduction in property value from being forced to sell a home because it is foreclosed upon" (RIA 3). However, HUD claimed that taking this stress discount in full would overestimate the benefit to society, as at least some of it would benefit an "investor who may gain from the opportunity to purchase at a lower price" (RIA 3). To deal with this issue, HUD assumed structural loss to be half of the stress discount (Harding's

19%), i.e., 9.5%. HUD then multiplied 9.5% by Standard and Poor's estimate of the "average unpaid principle" of relevant households, \$152,052, to obtain \$14,445. Combining the two measures of loss to society, HUD estimated that total avoided loss to lenders was \$24,508 per foreclosure.

With estimates of costs to homeowners, local governments, neighbors, and lenders in hand, HUD added them together to obtain the total economic benefit per foreclosure avoided: \$54,906. Recognizing that some households would default despite EHLPP assistance, HUD created two sets of estimates based on 15% and 25% foreclosure rates, yielding \$46,670 and \$41,180, respectively. HUD then multiplied those figures by its estimated range of households eligible for EHLPP assistance, yielding \$1.0 to \$1.6 billion at a 15% foreclosure rate and \$0.9 to \$1.4 billion at a 25% foreclosure rate.

Mine Safety Examinations (Department of Labor)²⁵

In 77 Fed. Reg. 20700,²⁶ 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. One of the "primary goals" of this rule is to reduce externalities associated with mining operations, such as "accidents, injuries, and illnesses" (20700). The benefit of these examinations is monetized by the value of reductions in fatalities and injuries.

Sources. The MSHA relied on some of its own materials in this analysis:

- (1) Mine Safety and Health Administration, Department of Labor, twelve [Reports of Investigation](#) involving preventable fatalities, 2005-2009

²⁵ Scores: Externalities = 4, Quantification Effort = 5.

²⁶ Examinations of Work Areas in Underground Coal Mines for Violations of Mandatory Health or Safety Standards, 77 Fed. Reg. 20700 (Apr. 6, 2012) (30 C.F.R. pt. 75).

In addition, the MSHA relied on several government and academic sources:

- (2) Bureau of Economic Analysis (BEA), “[National Income and Product Accounts Table: Table 1.1.9. Implicit Price Deflators for Gross Domestic Product](#),” 2010
- (3) Office of Management and Budget (OMB), [Circular A-4](#), 2003
- (4) Viscusi, W. & Aldy, J., “[The Value of a Statistical Life: A Critical Review of Market Estimates Throughout the World](#),” *Journal of Risk and Uncertainty* 27: 5-76 (2003)
- (5) Hintermann, B., Alberini, A., and Markandya, A., “[Estimating the Value of Safety with Labor Market Data: Are the Results Trustworthy?](#)” *Applied Economics*, 1085-1100 (2008).
- (6) Sunstein, C., “[Valuing Life: A Plea for Disaggregation](#),” *Duke Law Journal* 54: 385-445 (2004)

Value of reductions in fatalities and injuries. The MSHA began its analysis by estimating the number of fatalities and injuries that would be prevented by the final rule. Reviewing its investigation reports from 2005-2009 for accidents involving violations of relevant standards, the MSHA determined that “the final rule could have prevented...up to 12 fatalities or 2.4 fatalities per year” (20707). The MSHA also determined that “the final rule could have prevented 32 nonfatal injuries or approximately 6.4 nonfatal injuries per year” (20707). Central to these determinations were accident investigation reports from 2005 through 2009 that the MSHA analyzed to determine if inadequate examination of the underground work area, or violation of one or more of the nine standards that are the subject of examinations required by the final rule,

contributed to the accident. The MSHA’s calculations assume that the new rule would prevent these violations and the deaths and injuries attributable to them.²⁷

The MSHA then applied a willingness-to-pay approach to monetize these estimates. The MSHA used values from Viscusi and Aldy’s 2003 analysis for an avoided fatality and lost work-day injury: approximately \$7 million and \$50,000, respectively, in 2000 dollars. Using the BEA’s GDP deflation table, the MSHA then adjusted those values to \$8.7 million and \$62,000, in 2009 dollars. The MSHA noted that “this value of a statistical life [\$8.7 million] is within the range of the substantial majority of such estimates in the literature...as discussed in OMB Circular A-4” (20707). However, the MSHA also acknowledged potential problems with its values due to difficulties in estimating wage differentials (Hintermann *et al.*) and adapting the general willingness-to-pay approach to a specific field such as coal mining (Sunstein). The MSHA then calculated the final rule’s annualized benefits to be \$21.3 million (2.4 fatalities/year avoided multiplied by \$8.7 million, plus 6.4 nonfatal injuries avoided multiplied by \$62,000).²⁸

Unquantified benefits. The MSHA acknowledged that it was unable to quantify the final rule’s reduction of dust exposure and black lung disease due to a lack of data (20707).

Market Power

*Medical Loss Ratio Requirements Under the Affordable Care Act (Department of Health and Human Services)*²⁹

²⁷ In addition to the examinations, the rule requires quarterly reviews between mine operators and mine examiners of certain citations and orders. § 75.362(e). “This provision will promote a culture of safety, resulting in a continual improvement in the quality and effectiveness of mine examinations. This will ultimately lead to an overall improvement in compliance with health and safety standards at the mine...” (20707).

²⁸ The MSHA acknowledged that it was unable to quantify the final rule’s reduction of dust exposure and black lung disease “due to a “lack of data” (20707).

²⁹ Scores: Market Power = 4, Quantification Effort = 4.

In 75 Fed. Reg. 74863,³⁰ the Department of Health and Human Services (HHS) promulgated a final rule that implements “medical loss ratio (MLR) requirements for health insurance issuers” (74864).³¹ In particular, the rule provides “an annual rebate to enrollees...if the issuer’s MLR fails to meet minimum requirements” (74865). The thresholds are generally 85 percent in the large group market and 80 percent in the small group or individual market (74865). HHS intended this provision to compensate enrollees for the “lack of transparency in pricing” health insurance plans, which “may prevent adequate competition based on the value of the product” (74895). HHS states “we are unable to quantify benefits” (74893) but provides an estimate of the rebates from issuers to consumers.

Sources. HHS relied on one of its own sources in its analysis:

- (1) Department of Health and Human Services, [Regulatory Impact Analysis](#) (RIA) to “Health Insurance Issuers Implementing Medical Loss Ratio (MLR) Requirements under the Patient Protection and Affordable Care Act,” Final Rule, December 2010

In addition, HHS relied on several industry sources:

- (2) [National Association of Insurance Commissioners](#) (NAIC), Annual Financial Statements and Policy Experience Exhibits database
- (3) America’s Health Insurance Plans (AHIP), “[State Mandatory Medical Loss Ratio \(MLR\) Requirements for Comprehensive, Major Medical Coverage: Summary of State Laws and Regulations](#),” April 2010
- (4) Unspecified discussions with industry experts

³⁰ Health Insurance Issuers Implementing Medical Loss Ratio (MLR) Requirements Under the Patient Protection and Affordable Care Act, 75 Fed. Reg. 74863 (December 1, 2010) (45 C.F.R. pt. 158).

³¹ 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” (74895).

Background. In order to determine which insurers would have to pay rebates due to the rule, HHS created a formula for estimating an insurer's MLR, adjusted for various factors:

“Adjusted MLR = $(c)/(p - t - f) + (b * d) + u$, where c = incurred claims, p = earned premiums, t = Federal and State taxes, f = licensing and regulatory fees, b = base credibility adjustment factor, d = deductible credibility adjustment factor, u = low, medium, or high assumptions to account for quality improving activities, unknown behavioral changes and data measurement error” (74901)

The MLR consists of the ratio of claims to premiums (calculated net of taxes and fees) after making “credibility adjustments” and adjustments for quality improving activities, unknown behavioral changes and data measurement error.

Credibility adjustments derive from the statutory requirement “to take into account the special circumstances of smaller plans, different types of plans, and newer plans” (74866). In particular, small plans are disproportionately more likely to have a medical loss ratio that fluctuates around the 80% threshold because of random variation in large claims. By adding additional percentage points to the ratio of costs to premiums, credibility adjustments make it less likely that a small issuer will be required to pay a rebate due to random variation in large claims (74880-81).

Estimate of rebates. HHS first estimated the number of health insurance issuers affected by the rule by drawing on the National Association of Insurance Commissioners (NAIC) database. This database revealed that “618 insurers offering comprehensive major medical (CMM) coverage filed annual financial statements in 2009” (74896). These insurers accounted for approximately 99 percent of all premiums earned in the CMM market (RIA 2-3). HHS then excluded 176 of these insurers in recognition of the NAIC database's limitations and the relatively “small portion” (i.e., “3 percent of life years and 2 percent of earned premiums”) of the relevant market that these insurers represented, leaving 442 insurers for further analysis (74896).

The NAIC database also serves as the source for all of the parameters in the MLR formula except for “u,” the adjustment factor for quality improving activities, unknown behavioral changes and data measurement error. This factor takes the value “low, medium, high” and was derived from discussions with industry experts (74900-01). This adjustment factors is intended to account for certain limitations in the NAIC database. For instance, spending on quality improving activities would not be adequately accounted for in “c,” incurred claims, when estimated with NAIC data. HHS dealt with this limitation by consulting industry experts. These discussions suggested an average of “3 percent of premium” for such activities (74900). Due to uncertainty, HHS provided a range of estimates for this parameter, from low rebates (+7% to MLR for factors not accounted for by NAIC data) to high rebates (only +1% to MLR).

HHS then calculated that the “average MLR in the individual market in 2011 will be 86.5 percent, with a low-range...of 87.2 percent, and a high-range rebate estimate of 84.2 percent” (74904). Although the basis for this calculation is unspecified, presumably HHS used the formula described above in conjunction with NAIC data for the formula’s inputs.

HHS then created a formula to calculate “rebates for a company whose adjusted MLR value in a State falls below the minimum MLR standard in a given market”:

“ $[(m - a) * (p - t - f)]$, where m = minimum MLR standard for a particular market, a = adjusted State MLR for that market” (74,901)

HHS did not state explicitly where it obtained the adjusted State MLR standards, but it seems likely that AHIP data provided these standards given HHS’s reference to this data in a discussion of state MLR guidelines elsewhere in the rule (74899).

Using its rebate formula, HHS calculated a range of annualized rebate amounts for 2011 to 2013.³² For instance, at a 7% discount rate, HHS gave a low estimate of \$633.1 million, mid-range estimate of \$930.8 million, and a high estimate of \$1541.8 million, all in 2010 dollars. These estimates represent potential savings for enrollees due to the implementation of the MLR rebate provision.

Unquantified benefits. Due to data limitations, HHS discussed but did not quantify several benefits of the rule (74895). First, the rule could “help policyholders to select higher value coverage” by increasing “transparency relating to portion of premium spent on benefits” (74894). Second, the rule might result in “increased quality of medical care as a result of increased spending on quality-improving activities by issuers” (74894). Lastly, the rule might yield “improved health as a result of increased spending on medical care by issuers” (74894).

Public Goods

*Patient Safety Organizations (Department of Health and Human Services)*³³

In 73 Fed. Reg. 70732,³⁴ the Agency for Healthcare Research and Quality (AHRQ), an agency housed within the Department of Health and Human Services, promulgated 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” (70732). The creation of this public good—a database of patient safety events—was expected to generate “better patient outcomes and possible economic savings” by reducing the occurrence of such safety events (Notice of Proposed Rulemaking 8169). The benefit of the

³² The period covered by the RIA is only 2011-2013 because of significant changes expected in the marketplace in 2014 (74893).

³³ Scores: Public Goods = 4, Quantification Effort = 4.

³⁴ Patient Safety and Quality Improvement, 73 Fed. Reg. 70732 (Nov. 21, 2008) (42 C.F.R. pt. 3).

information reported to PSOs is monetized by the possible savings from a reduction in preventable health incidents.

Sources. AHRQ referred to its Notice of Proposed Rulemaking (NPR) that preceded the final rule for the details of its cost-benefit analysis:

- (1) Agency for Healthcare Research and Quality, Department of Health and Human Services, “[Patient Safety and Quality Improvement](#),” Notice of Proposed Rulemaking (NPR), February 2008

In addition, AHRQ relied on one independent source:

- (2) Corrigan, J. M., Donaldson, M. S., Kohn, L. T., McKay, T., and Pike, K. C., Committee on Quality of Health Care in America, Institute of Medicine, “[To Err Is Human: Building a Safer Health System](#),” 2000

Savings from reduction in preventable health incidents. AHRQ prefaced its discussion with the disclaimer that the benefits were contingent on “the [health care] providers themselves to bring about the changes that will result in a reduction in adverse events,” given the voluntary nature of the rule (NPR 8169). AHRQ began its analysis by citing the Institute of Medicine report for its \$17 to \$29 billion estimate of the “total national costs of preventable adverse events” (NPR 8169). Within this range, the Institute of Medicine report carved out a smaller range—\$8.5 to \$14.5 billion—for “direct health care costs” that presumably were within a health care provider’s ability to control (NPR 8169). AHRQ then assumed that PSOs would be capable of reducing such events by “one percent to three percent within their first five years of operation” (NPR 8169). With this assumption in hand, AHRQ multiplied the 1% to 3% range by the \$8.5 to \$14.5 billion range, yielding estimated savings of \$85 to \$145 million at the 1% level and \$255 to \$435 million at the 3% level.

AHRQ then projected these savings for the next five years, assuming both an increasing hospital penetration rate (starting at 10% in Year 1 and plateauing at 85% in Year 5) and percent reduction (starting at 1% in Year 1 and plateauing at 3% in Year 5) (NOPR 8170). AHRQ stated that it was “applying a median figure from the Institute of Medicine range to PSOs” (NOPR 8169). Multiplying for each year the Institute of Medicine’s \$8.5 to \$14.5 billion range by the assumed hospital penetration rate and percent reduction, AHRQ arrived at its final estimates, which ranged from \$11.5 million saved in Year 1 to \$293.25 million saved in Year 5.

Principal-Agent Issues

*Mortgage Servicing Rules (Consumer Financial Protection Bureau)*³⁵

In 78 Fed. Reg. 10695,³⁶ the Consumer Financial Protection Bureau (CFPB) promulgated a final rule that implements “provisions of the Dodd-Frank Wall Street Reform and Protection Act regarding mortgage loan servicing” (10696). In particular, the rule prohibits mortgage servicers “from charging borrowers for force-placed insurance coverage unless the servicer has a reasonable basis to believe the borrower has failed to maintain hazard insurance” (10697). One of the benefits of this rule is the correction of misaligned incentives on servicers that occur when different parties own and service loans, especially when trustees in a securitization retain servicers on behalf of investors who have the beneficial interest in the loans. The benefit of the requirements regarding force-placed insurance is monetized by the reduction in unnecessary force-placed insurance premiums.

³⁵ Scores: Principal-Agent Issues = 3, Quantification Effort = 4.

³⁶ Mortgage Servicing Rules under the Real Estate Settlement Procedures Act (Regulation X), 78 Fed. Reg. 10695 (Feb. 14, 2013) (12 C.F.R. pt. 1024). The CFPB concurrently issued two rules on mortgage loan servicing that together addressed nine major topics (10697-10698). The rules implemented sections of the Dodd-Frank Act amending TILA and RESPA. The rules also implemented requirements beyond those explicit in TILA and RESPA using authorities the CFPB has under those statutes and the Dodd-Frank Act.

Sources. The CFPB cited several industry sources in its analysis, including informal “discussions with industry during the development of the proposed rule” (10850):

- (1) Insurance Information Institute, “[Homeowners and Renters Insurance](#),” undated
- (2) Assurant, Specialty Property, “[Lender-Placed Insurance: Protecting American Homeownership and the Mortgage Process](#),” undated
- (3) Unspecified discussions with industry

Background. Section 1463(a) of the Dodd-Frank Act amended RESPA to establish new servicer duties with respect to servicers’ purchase of force-placed insurance.³⁷ Servicers must, among other requirements, provide two written notices to a borrower over a period of at least forty-five days before imposing a charge for force-placed insurance on the borrower. 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. All charges must bear a reasonable relationship to the servicer’s cost of providing the service (10762, 10776). Further, for borrowers who have escrow accounts for the payment of hazard insurance, the servicer must advance funds through the escrow account to pay the borrower’s homeowner insurance when this would prevent cancellation. The CFPB provides citations to federal complaints and comments at public hearings regarding payments made to servicers and services offered to servicers by providers of force-placed insurance that reduce servicer incentives to notify borrowers about lapsing insurance and drive up the cost of the insurance (10762).

More generally, the rulemaking presents multiple discussions of market failures in the market for mortgage loan servicing (10699-10701, 10718-10722, 10842-10846). Servicers of

³⁷ “Force-placed insurance” is hazard insurance obtained by a servicer on behalf of the owner or assignee of a mortgage loan that insures the property securing such loan. 12 C.F.R. pt. 1024.37(a).

securitized mortgages purchase mortgage servicing rights and obtain revenue from a servicing fee (a certain number of basis points on unpaid principal balances) and fees that may be levied directly on borrowers. Trustees and investors (and in the case of Fannie Mae and Freddie Mac, guarantors) have a limited practical ability to discipline servicers and borrowers have essentially none. The general conclusion is that servicers may pursue their self-interest to the detriment of both borrowers and investors (10701, 10818, 10853).

Value of reduction in unnecessary premiums. The CFPB began its analysis by presenting the Insurance Information Institute's statistics for the average homeowner's insurance premium (\$880) and the average force-placed insurance premium (\$1760). Dividing the difference between these two premiums by twelve to obtain a monthly differential (\$73), the CFPB calculated that "on average, a homeowner who pays for force-placed insurance for one to six months pays an additional \$73 to \$440" (10850). The CFPB then estimated that "1.04 million homeowners incur force-placement each year" (10850), based on its estimate that "there are approximately 52 million first liens" and discussions with industry, which provided information indicating that approximately 2% of mortgages incurred force-placement each year (10850).

The CFPB stated that it lacked "representative data with which to quantify the extent to which industry practice currently meets the standards of the force-placed insurance provisions" (10849). The CFPB argued, however, that "even a small reduction in force-placed insurance may provide borrowers with substantial benefits" (10850). To illustrate this claim, the CFPB considered a scenario in which the rule would "reduce the incidence of force-placed insurance by...10 percent" (10850). The CFPB multiplied 10% by the estimated 1.04 million homeowners incurring force-placement each year, yielding 171,000 homeowners who would no longer incur force-placement. Lastly, the CFPB multiplied 171,000 by the estimated range of \$73 to \$440

additional premium charges per homeowner to yield total annual savings of \$7.6 million to \$45.8 million.³⁸

Cognitive Biases

*Investment Advice (Department of Labor)*³⁹

In 76 Fed. Reg. 66135,⁴⁰ the Department of Labor (DOL) promulgated a final rule that in limited circumstances allows a fiduciary advisor to offer investment advice for a fee to individuals in participant-directed individual account plans. DOL argued that the rule increases the availability of quality investment advice, which would reduce investor “overconfidence, myopia, or simple inertia” (66153). The benefit of this relaxation of the prohibition on fiduciaries from rendering investment advice that provides a fee is monetized by the value of the reduction of investment mistakes. These monetary benefits are shared among the other benefits identified by this rule, including improved financial capabilities and decreased information failures.

Sources. DOL relied on several government and independent sources in its analysis:

- (1) Board of Governors of the Federal Reserve System (FRB), [Flow of Funds Accounts](#) Statistical Release, September 2014
- (2) Employee Benefit Research Institute (EBRI), [2007 Retirement Confidence Survey](#)
- (3) Employee Benefit Research Institute, [2008 Retirement Confidence Survey](#)
- (4) Aon Hewitt Associates, “Survey Findings: Hot Topics in Retirement,” 2007
- (5) Profit Sharing/401(k) Council of America (PSCA), “50th Annual Survey of Profit Sharing and 401(k) Plans,” 2007

³⁸ In a later analysis of the requirements for general servicing policies, procedures, and requirements (12 C.F.R pt. 1024.38), the CFPB used existing research on servicer performance and default to quantify (but not monetize) a reduction in avoidable default from the rule (10853-10854).

³⁹ Scores: Cognitive Benefits = 2, Quantification Effort = 5.

⁴⁰ Investment Advice—Participants and Beneficiaries, 66 Fed. Reg. 66135 (25 October 2011) (29 C.F.R. pt. 2550).

(6) Deloitte Consulting LLP, [Annual 401\(k\) Benchmarking Survey, 2005/2006](#)

Background. Fiduciaries are generally prohibited from rendering investment advice to plan participants and receiving fees. The rule implements two statutory exceptions to this prohibition. Under the first exception, advice is exempt if it meets a “fee-leveling” requirement. This requirement proscribes the receipt of fees or compensation that varies based on investment options selected (66139). Under the second exception, advice is exempt if it meets a “computer-model” requirement. 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 (66141).

Value of the reduction in investment mistakes. DOL first created a baseline estimate of how much investment mistakes cost participants prior to the implementation of the rule. Using a wide range of government, academic and industry sources, DOL estimated that approximately \$114 billion in 2010 was lost due to investment mistakes while acknowledging that “this estimate is subject to wide uncertainty.”⁴¹ DOL then created three levels of estimates—low (14% for defined-contribution (DC) plans, 50% for IRA plans), primary (16%, 67%), and high (17%, 80%)—for the percentage of plan participants that would use the advice made available by the rule.⁴² These estimates were based on several independent surveys and related qualitative assumptions. For example, the EBRI’s 2007 Retirement Confidence Survey revealed that 19% of surveyed workers were “very likely,” and 35% “somewhat likely,” to receive investment advice provided by the “company that manages their employer’s [DC] plan” (66155). DOL also

⁴¹ See “Existing/Pre-PPA advice only (baseline),” *Id.* at 66152 tbl.2 and fn. 45, which references 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. 49896-01, 49903-49905 (Aug. 22, 2008).

⁴² See *supra* note 40 at 66155 tbl.4. “Use of advice” in Table 4 means receiving and following the advice (“25 percent of the participants that are offered advice use the offered advice, as outlined in Table 4 below”).

considered qualitative assumptions, e.g., IRA beneficiaries use investment advice at relatively higher rates as compared to DC beneficiaries (66155 n. 67). Such assumptions were loosely based on the surveys administered by EBRI, AON Hewitt Associates, PSCA, and Deloitte Consulting. Using these percentages and information on the number of participants in DC and IRA plans, DOL estimated 9 to 11 million DC plan participants and 25 to 41 million IRA plan participants would use the new investment advice.⁴³

DOL then assumed that “advised participants make investment errors at one-half the rate of unadvised participants” (66156). Relying on this assumption, the above information and the FRB’s data on retirement assets, DOL estimated that the reduction in investment errors by advised participants would produce a total benefit range of \$7 billion to \$18 billion annually (66156).

*Required Warnings for Cigarette Packages and Advertisements (Department of Health and Human Services)*⁴⁴

In 76 Fed. Reg. 36627,⁴⁵ the Department of Health and Human Services (HHS) promulgated a final rule that adds “a new requirement for the display of health warnings on cigarette packages and in...advertisements” (36628). According to HHS, the requirement will dissuade smokers who overestimate the pleasure from smoking and/or “underestimate their personal probability of dying within the next 10 years” (36709-10). The benefit of the requirement is monetized by the “amount smokers are willing to pay to participate in cessation programs” as a proxy for the “value of health and other benefits of cessation” (36721). Note that

⁴³ See Table 5, *Id.* at 66156.

⁴⁴ Scores: Cognitive Biases = 3, Quantification Effort = 5.

⁴⁵ Required Warnings for Cigarette Packages and Advertisements, 76 Fed. Reg. 36627 (June 22, 2011) (21 C.F.R. pt. 1141).

this monetary estimate is not unique to the cognitive biases benefit, as it could also represent a quantification of other benefits associated with this rule.

Sources. HHS relied on a number of academic and government sources in its analysis:

- (1) Warner, K.E., Mendez, D., and Smith D.G., “[The Financial Implications of Coverage of Smoking Cessation Treatment by Managed Care Organizations](#),” *Inquiry* 41; 57–69, Spring 2004
- (2) U.S. Department of Commerce, Bureau of Economic Analysis, “[National Economic Accounts: Current-dollar and “real” GDP](#),” 2010
- (3) Health Canada, “[Overview of Historical Data, Wave 1, 1999–2009](#)”
- (4) Health Canada, “Long-Term Trends in the Prevalence of Current Smokers,” Mimeo, May 2009
- (5) National Center for Health Statistics, “[National Health Interview Survey: Questionnaires, Datasets and Related Documentation, 1997 to the Present](#)”
- (6) National Center for Health Statistics, “[Health, United States, 2005](#),” Table 63, Hyattsville, MD: National Center for Health Statistics, 2005
- (7) U.S. Census Bureau, [2005 Interim State Population Projections](#), File 4: [Interim State Projections of Population by Single Year of Age and Sex: July 1, 2004 to 2030](#)

Willingness to pay for smoking cessation. First, HHS extracted from the Warner *et al.* paper the average value of smoking cessation, \$1,167.00 (in 2000 dollars), then adjusted this figure for inflation using the Department of Commerce’s conversion rates, yielding \$1,444.00 (in 2011 dollars) (36721). Second, in order to forecast the rule’s reduction of the smoking population, HHS compared smoking rates in the United States and Canada, reasoning that Canada’s prior implementation of a similar graphic warning rule would yield differences that

could be attributed to the rule. HHS used data from Health Canada and the National Center for Health Statistics to estimate “pre-2001 smoking rate trends” in the two countries (36720). This trend estimate allowed HHS to then “subtract the predicted United States-Canada smoking rate differences from the actual differences” in the observed post-2001 data, resulting in a 0.088 percentage point average difference (36721). Noting that confounding factors had not been accounted for, and that this approach was “rudimentary,” HHS then projected on the basis of this difference that the rule would “reduce the United States’ smoking population by approximately 213,000 in 2013” (36721).

Lastly, HHS multiplied this estimated reduction in the smoking population by the average value of cessation and then applied 3% and 7% discount rates, yielding net benefits of \$307.9 million and \$322.4 million, respectively. HHS then performed this calculation for each year from 2014 to 2031, using U.S. Census Bureau data to update the population reduction figure in each calculation to account for the “particular year’s newly exposed cohort ” (36721). HHS claimed that these calculations likely represent lower bounds of the monetary value of the benefit, for the average cessation value—the price a typical smoker is willing to pay to stop smoking—may itself be affected by the cognitive biases that influence smokers’ preferences (36721).

Unquantified benefits. HHS acknowledged that it was unable to quantify “reductions in external effects attributable to passive smoking and the reduction in infant and child morbidity and mortality caused by mothers smoking during pregnancy” due to the lack of “reliable data with which to quantify [these effects] with greater precision than an order-of-magnitude approximation” (36708)

Limited Financial Capabilities

*Investment Adviser Performance Compensation (Securities and Exchange Commission)*⁴⁶

Overview. In 77 Fed. Reg. 10358,⁴⁷ the Securities and Exchange Commission (SEC) promulgated a final rule that revises the conditions under which an investment adviser can charge “performance based compensation” to an investor (10358). One of the rule’s goals is to protect investors who “may not possess the financial experience...to bear the risks of performance fee arrangements” (10365). The SEC partially quantified the benefit of the revision by estimating the number of investors that would no longer be eligible to enter into performance based compensation arrangements with investment advisors. The SEC also partially quantified costs by estimating how many of these investors might incur costs due to their inability to enter into such arrangements.

Sources. The SEC relied on several sources in its analysis, including two of its own:

- (1) Bucks, Brian K., Kennickell, Arthur B., Mach, Traci L., and Moore, Kevin B., Federal Reserve Board, “[Changes in U.S. Family Finances from 2004 to 2007: Evidence from the Survey of Consumer Finances](#)” (SCF), *Federal Reserve Bulletin* 95: A1-A55, February 2009
- (2) Hung, Angela A. *et al.*, Securities and Exchange Commission and RAND Institute for Civil Justice, “[Investor and Industry Perspectives on Investment Advisers and Broker Dealers](#),” 2008
- (3) Securities and Exchange Commission, unspecified [Form ADV](#) data

For “detailed documentation of the SCF methodology,” the Federal Reserve Board directed readers to two of its own articles:

⁴⁶ Scores: Limited Financial Capabilities = 4, Quantification Effort = 3.

⁴⁷ Investment Adviser Performance Compensation, 77 Fed. Reg. 10358 (February 22, 2012) (17 C.F.R. 275)

- (4) Kennickell, Arthur B., Federal Reserve Board, “[Wealth Measurement in the Survey of Consumer Finances: Methodology and Directions for Future Research](#),” May 2000
- (5) Kennickell, Arthur B., Federal Reserve Board, “[Modeling Wealth with Multiple Observations of Income: Redesign of the Sample for the 2001 Survey of Consumer Finances](#),” October 2001

Background. The rulemaking amended SEC rule 205-3 regarding “qualified clients.” One set of amendments implemented section 418 of the Dodd-Frank Act, which specified inflation adjustments to dollar amount thresholds in the rule. The SEC also amended the net worth test for qualified clients to exclude home equity (i.e., to exclude the market value of the primary residence from assets and certain debt secured by the property from liabilities).⁴⁸ The exclusion of home equity from the calculation of net worth reduces the number of investors whose net worth is large enough to allow them to enter into performance fee arrangements with advisors. In explaining the exclusion, the Commission 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. The value of the individual’s equity interest in the residence reflects the prevailing market values at the time and can be a function of time in paying down the associated debt rather than a function of deliberate investment decision-making” (10364).⁴⁹

Reduction in the number of qualified clients. The SEC drew on the Federal Reserve Board’s 2007 Survey of Consumer Finances (SCF) to determine how many households would

⁴⁸ The Commission notes that this change is similar to one required by section 413 of the Dodd-Frank Act for “accredited investors.” However the change to rule 205-3 regarding qualified clients is not required by the Dodd-Frank Act. *See* 10360.

⁴⁹ The Commission adds, “In 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” (10364). *See also* 10361 n. 41.

meet the rule’s “\$2 million net worth test” (10365). Regarding the SCF’s methodology, the Federal Reserve Board directed readers to two of its own articles (SCF A52 n. 67). According to the Kennickell 2001 article, the Federal Reserve Board and the Internal Revenue Service administer a questionnaire once every three years that focuses on household “assets and liabilities” and “use of financial services” (Kennickell 1). The questionnaire is administered to two different sample populations in order to account for “highly concentrated” U.S. household wealth and the lower response rates of wealthier households (Kennickell 2). The first sample is selected by “the National Opinion Research Center at the University of Chicago” according to a “standard multi-stage national area-probability (AP) design...which provides good coverage of the general population” (Kennickell 2). The second sample is selected by Federal Reserve Board staff “from statistical records derived from tax records” (Kennickell 2). The list of records is “stratified using a ‘wealth index’...to predict a rank ordering of people by wealth,” which allows the Federal Reserve Board to oversample wealthier households and adjust the sample for nonresponses (Kennickell 2).

The SCF revealed that “approximately 5.5 million households have a net worth of more than \$2 million *including* the equity of the primary residence” and that “approximately 4.2 million households have a net worth of more than \$2 million *excluding* the equity in the primary residence” (10365). The SEC subtracted 5.5 million from 4.2 million to obtain the estimate that up to “1.3 million households will not meet a \$2 million net worth test” and “therefore will now be protected by the performance fee restrictions” of the rule (10365). The SEC acknowledged that 1.3 million might be an overestimate due to its assumption that “none of these households would be grandfathered by the transition provisions of the rule” (10365 n. 81).

Number of investors subject to potential costs. The SEC began its analysis of costs by stating that 325,000 clients or “25 percent of the 1.3 million households would have entered into new advisory contracts that contained performance fee arrangements after the compliance date of the amendments” (10365). The SEC based this result on a 2008 SEC report, which indicated that 20% of investment advisors charge performance fees and that this reflects investor demand for these advisory arrangements” (10365 n. 83). The SEC then estimated that approximately 40% of these 325,000 clients would “separately meet the ‘qualified client’ definition” under another test provided by the rule, leaving 60%, or 195,000 households, that might be “negatively affected by their inability to enter into performance-based compensation arrangements with investment advisers” (10366). This estimate was based on “data filed by registered investment advisers on Form ADV.”

The SEC then estimated that approximately 80% of these 195,000 households, or 156,000, would “enter into non-performance fee arrangements,” while the other 20%, or 39,000 households, would “decide not to invest their assets with an adviser” (10366). These estimates were based on the behavioral assumption that a “substantial majority” of investment advisers would “offer alternate compensation arrangements” in order to retain the business of households not meeting the qualified client definition (10366 n. 86). The SEC referenced its Form ADV data for the estimate that “less than one percent of registered investment advisers are compensated solely by performance fees,” which presumably implies that most investment advisers are indeed capable of offering alternative compensation arrangements (10366 n. 85).

The SEC did not quantify costs beyond the above estimates of potentially negatively affected investors, stating instead that the rule would be “unlikely to impose a significant net cost on most advisers and clients” (10366). Regarding the estimated 156,000 clients who would enter

into non-performance fee arrangements, the SEC “anticipate[d] that [such arrangements] may contain management fees that yield advisers approximately the same amount of fees that clients would have paid under performance fee arrangements” (10366). As for the estimated 39,000 clients who would not decide to invest their assets with an adviser, the SEC stated that “some of these [clients] will likely seek other investment opportunities,” while others “may forego professional investment management altogether because of the higher value they place on the alignment of advisers’ interests with their own interests” (10366).

*High Cost Mortgage and Homeownership Counseling (Consumer Financial Protection Bureau)*⁵⁰

Overview. In 78 Fed. Reg. 6856,⁵¹ the Consumer Financial Protection Bureau (CFPB) promulgated a final rule that imposed a pre-loan counseling requirement on 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 (6857).

Homeownership counseling may benefit those consumers who “feel confused or overwhelmed by the information and disclosures provided” (6950). One of the goals of this rule is thus to address consumers’ limited financial capabilities. Although the CFPB did not quantify the resulting benefits, it did provide several paragraphs of qualitative discussion.

Sources. The CFPB referenced several sources in its qualitative analysis:

⁵⁰ Scores: Limited Financial Capabilities = 3, Quantification Effort = 1.

⁵¹ 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) (12 C.F.R. Parts 1024 and 1026).

- (1) Ding, Lei, Quercia, Roberto G., Reid, Carolina K., and White, Alan M., “[State Anti-Predator Lending Laws and Neighborhood Foreclosure Rates](#),” *Journal of Urban Affairs* 33: 451–467 (2011)
- (2) Bucks, Brian and Pence, Karen, “[Do Borrowers Know Their Mortgage Terms?](#)” 64 *Journal of Urban Affairs* 218 (2008)
- (3) Lacko, James M. and Pappalardo, Janis K., Federal Trade Commission (FTC) “[Improving Consumer Mortgage Disclosures: An Empirical Assessment of Current and Prototype Disclosure Forms](#),” June 2007
- (4) Fannie Mae, “[Mortgage Shopping: Are Borrowers Leaving Money on the Table?](#)” November 2012

Background. Sections 1433(e) and 1414 of the Dodd-Frank Act amended the Truth in Lending Act to require creditors to obtain confirmation that a borrower has obtained counseling from a federally approved counselor prior to extending a high-cost mortgage under HOEPA or (in the case of first-time borrowers) a negative amortization loan. The Dodd-Frank Act also amended RESPA to require distribution of a housing counselor list as part of the general mortgage application process (6858).

Qualitative discussion of benefits. The CFPB declined to quantify the benefits of homeownership counseling, stating that “in some instances, there are limited data that are publicly available with which to quantify” such benefits,” and that particular benefits such as “the value of homeownership counseling...are extremely difficult to quantify and to measure” (6941). The CFPB did provide several paragraphs of qualitative discussion of the above benefits, with references to various sources.

For example, the CFPB states that “some mortgage consumers appear to have difficulty understanding or at least recalling the details of their mortgage.” This claim was supported with citations to a journal article (Bucks and Pence) and two government studies (FTC and Fannie Mae) (6943). Pre-loan counseling (along with new mandated disclosures) would potentially improve applicants’ understanding of loan terms. Counseling might also improve the consumer’s assessment of his or her ability to meet the scheduled loan payments or make the consumer aware of alternatives such as purchasing a different home or different mortgage product (6949). 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 (6950). Thus, counseling might cause some consumers to identify preferable alternatives to a high-cost or negative amortizing mortgage and thus reduce the risk of incurring unnecessary costs associated with these mortgages.

The CFPB also compared the current rule to similar state statutes, suggesting that the current rule might have a similarly positive effect. According to an academic article by Ding *et al.*, such statutes “are associated with lower neighborhood-level mortgage default rates.” The CFPB notes that this result is consistent with some consumers receiving more beneficial loans as well as with some consumers who are more likely to default being less likely to receive a mortgage. However, the latter interpretation “is arguably more difficult to reconcile with the finding that strong State statutes are estimated to have only a limited effect on the volume of subprime lending” (6944).

*Escrow Requirements under the Truth in Lending Act (Regulation Z) (Consumer Financial Protection Bureau)*⁵²

⁵² Scores: Limited Financial Capabilities = 3, Quantification Effort = 1.

Overview. In 78 Fed. Reg. 4726,⁵³ the Consumer Financial Protection Bureau (CFPB) promulgated a final rule that implements the Dodd-Frank Act’s escrow-related amendments to the Truth in Lending Act (TILA) (4726). In particular, the rule “lengthens the time for which a mandatory escrow account established for a higher-priced mortgage loan must be maintained” (4726). During this longer period of time, consumers avoid “the burden of tracking whom to pay, how much, and when, across multiple payees,” which falls instead on the mortgage servicer (4744). One of the goals of this rule is thus to address consumers’ limited financial capabilities. The CFPB partially quantified this benefit by estimating the values associated with the shift in tracking burden and with incremental payments.

Sources. The CFPB referenced three sources in its analysis:

- (1) Liu, Hongju, Chintagunta, Pradeep, and Zhu, Ting, “[Complementarities and the Demand for Home Broadband Internet Services](#),” *Marketing Science* 29: 701–720 (2010)
- (2) Barr, Michael, and Dokko, Jane, Federal Reserve Board, “[Paying to Save: Tax Withholding and Asset Allocation Among Low- and Moderate-Income Taxpayers](#),” *Finance and Economics Discussion Series*, 2008
- (3) Anderson, Nathan, and Dokko, Jane, Federal Reserve Board, “[Liquidity Problems and Early Payment Default Among Subprime Mortgages](#),” *Finance and Economics Discussion Series*, 2011

Background. TILA was enacted in part to “provide meaningful disclosure of credit terms to enable consumers to compare credit terms available in the marketplace more readily” (4726). Sections 1461 and 1462 of the Dodd-Frank Act amended TILA by creating “section 129D, 15 U.S.C. 1639d, which substantially codifies Regulation Z’s escrow requirement for higher-priced

⁵³ Escrow Requirements under the Truth in Lending Act (Regulation Z), 78 Fed. Reg. 4726 (Jan. 22, 2013) (12 C.F.R. pt. 1026).

mortgage loans but lengthens the period for which escrow accounts are required” (4727). This amendment also “adjusts the rate threshold for determining whether escrow accounts are required for ‘jumbo loans’...and adds two disclosure requirements” (4727).

Value of longer escrow periods. The CFPB identified three benefits arising from mandatory escrow accounts for consumers: “(1) The convenience of paying one bill instead of several; (2) a budgeting device to enable consumers not to incur a major expense later; and (3) a lower probability of default and possible foreclosure” (4744). Because these benefits “last for as long as the escrow account exists,” the rule would “extend the duration of these benefits...from one year to five” (4744). Noting the lack of current research to measure the convenience and budgeting device benefits, the CFPB found an approximation in Liu *et al.*’s study of home Internet services. This study estimated a benefit of “around \$20 per month per customer...coming from the value of paying the same bill for phone, cable television, and Internet services” (4745).

The CFPB also identified a benefit arising from the payment structure of mandatory escrow periods. Because a consumer would have to pay “the same fixed amount, sometimes interest-free, throughout the year,” she would be “less likely to experience potentially unexpected cost shocks associated with paying a large property tax and/or home insurance bills” and mortgage default risks (4745). The CFPB approximated this benefit by drawing on a Federal Reserve Board study (Barr and Dokko) in an analogous context: taxpayer “over-withholding of personal income taxes through periodic payroll deductions” (4745). 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 amount paid for property taxes and insurance” (4745). The CFPB acknowledged that the mortgage and tax analogy is not exact “because a tax refund

can be used for other purposes whereas an escrow account is calibrated to meet only the consumer's insurance and property tax obligation" (4745). 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 (4745).

Unquantified benefits. The CFPB did not quantify the benefit of a "lower probability of default and possible foreclosure" (4744). In addition, the CFPB drew on another Federal Reserve Board study (Anderson and Dokko) for the observation that this benefit may be most valuable in year one of the escrow duration, and thus largely not a product of the rule at hand (4745). The CFPB nonetheless claimed that "some further benefit...exists at least for some consumers" (4745)

Unfair Outcomes

*Nondiscrimination in Public Accommodations (Department of Justice)*⁵⁴

Overview. In 75 Fed. Reg. 56236,⁵⁵ the Department of Justice (DOJ) promulgated a final rule that adopts "enforceable accessibility standards under the Americans with Disabilities Act of 1990 (ADA)" (56236). 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" (56242). The benefit of the clearance standards is monetized by the value of the time saved by individuals who use these toilet rooms.

Sources. The DOJ relied on three of its own sources in its analysis:

⁵⁴ Scores: Unfair Outcomes = 4, Quantification Effort = 4.

⁵⁵ Nondiscrimination on the Basis of Disability by Public Accommodations and in Commercial Facilities, 75 Fed. Reg. 56236 (Sept. 15, 2010) (28 C.F.R. pt. 36)

- (1) Department of Justice, [1991 ADA Standards for Accessible Design](#), 28 C.F.R. pt. 36, Revised as of July 1994
- (2) Department of Justice and HDR|HLB Decision Economics, Inc. (HDR), [Final Regulatory Impact Analysis for Nondiscrimination on the Basis of Disability by Public Accommodations and in Commercial Facilities](#) (FRIA), Final Rule, July 23, 2010
- (3) Department of Justice and HDR|HLB Decision Economics, Inc., [Benefits Risk Analysis Process \(RAP\) Panel of Experts](#) (see FRIA 381, Appendix 7)

In addition, the DOJ relied on several government sources:

- (4) U.S. Census Bureau, 2010 Population Estimates, July 2009. For the population totals used in the analysis, see: <https://www2.census.gov/programs-surveys/popest/tables/2000-2009/national/asrh/nc-est2009-01.xls>
- (5) Bureau of Labor Statistics, Department of Labor, [Average Hourly Earnings of Production Workers](#), 2008
- (6) Energy Information Administration, “[Commercial Buildings Energy Consumption Survey](#),” 2003

Background. Under the existing 1991 Standards for Accessible Design (1991 Standards), the clearance space in single-user toilet rooms between and around the toilet and the lavatory did not necessarily permit side or parallel methods of transferring from a wheelchair to a toilet. Side or parallel transfers are used by large numbers of persons who use wheelchairs and are regularly taught in rehabilitation and occupational therapy. Persons who use side or parallel transfer methods from their wheelchairs were faced with a stark choice at establishments with single-user toilet rooms—*i.e.*, patronize the establishment but run the risk of needing assistance when using the restroom, travel with someone who would be able to provide assistance in toileting, or forgo

the visit entirely. The revised regulations made single-user toilet rooms accessible to more persons who use wheelchairs but lack the physical strength, balance, and dexterity and the training to use a front transfer method (56241-56242).

Value of time saved (out-swinging doors). The DOJ first assessed the “population of users with disabilities who would likely benefit from this revised standard” by drawing on U.S. Census data as well as the Benefits RAP Panel of Experts convened by the DOJ and HDR, yielding an estimate of 11.9% of Americans ages 15 and older, i.e., 35 million people (56242). Relying further on the RAP Benefits Panel, the DOJ estimated that the time savings per use of a toilet room would be approximately 5 and one-half minutes (56242). The DOJ used a Bureau of Labor Statistics study on average hourly earnings to monetize these time savings at \$10 per hour, yielding \$0.92 per use of a toilet room. In its Final Regulatory Impact Analysis (FRIA), the DOJ then created various estimates for the number of facility visits of persons with disabilities, accounting for the different types of disabilities, facilities, and income levels (FRIA 46, 299-303). The DOJ concluded that the monetary benefits of water clearance standards for toilet rooms with out-swinging doors was “approximately \$900 million over the life of these regulations” (56242).

The DOJ estimates that the monetized costs of these requirements substantially exceed the monetized benefits. However, the DOJ also states that the additional benefits that persons with disabilities will derive from greater safety, enhanced independence, and the avoidance of stigma and humiliation are, in the DOJ’s experience and considered judgment, likely to be quite high. People with the relevant disabilities would have to place only a very small monetary value on these quite substantial benefits for the costs and benefits of these water closet clearance standards to break even. The DOJ estimates that the costs of the requirement as applied to toilet

rooms with out-swinging doors will exceed the monetized benefits by \$454 million, an annualized net cost of approximately \$32.6 million (56243). The DOJ estimates that people with the relevant disabilities will use a newly accessible single-user toilet room with an out-swinging door approximately 677 million times per year (56243). Dividing the \$32.6 million annual net cost by the 677 million annual uses, the DOJ concludes that for the costs and benefits to break even in this context, people with the relevant disabilities will have to value safety, independence, and the avoidance of stigma and humiliation at just under 5 cents per visit (56243).

Value of time saved (in-swinging doors). The DOJ calculated monetary benefits of water clearance standards for toilet rooms with in-swinging doors to be 9 minutes instead of 5 and a half minutes (56243). The DOJ then estimated that the net cost of the clearance standards for toilet rooms with in-swinging doors would be \$19.14 million per year, while such rooms would be used 8.7 million times per year. The DOJ then divided \$19.14 million by 8.7 million to yield \$2.20 per visit, which represents the minimum amount “people with relevant disabilities will have to value “safety, independence, and the avoidance of stigma and humiliation” per toilet room visit in order for the provision’s benefits to break even with its costs. Based on “its experience” and “informed judgment,” the DOJ stated that the \$2.20 figure “approximates, and probably understates, the value wheelchair users place” on such benefits (56243).

*Prohibiting Discrimination Based on Genetic Information in Health Insurance Coverage and Group Health Plans (Department Health and Human Services)*⁵⁶

Overview. In 74 Fed. Reg. 51664,⁵⁷ the Departments of Labor, Treasury, and Health and Human Services (“the Departments”) promulgated a final rule that prohibits “discrimination

⁵⁶ Scores: Unfair Outcomes = 3, Quantification Effort = 1.

⁵⁷ Interim Final Rules Prohibiting Discrimination Based on Genetic Information in Health Insurance Coverage and Group Health Plans, 74 Fed. Reg. 51664 (Oct. 7, 2009) (26 C.F.R. pt. 54).

based on genetic information in health insurance coverage and group health plans” (51664). In particular, the rule aims to decrease the number of individuals that are denied coverage due to genetic predispositions for diseases (51671). Although the Departments did not quantify the resulting benefits, they did provide several paragraphs of qualitative discussion.

Sources. The Departments refer to one of their own sources in the qualitative discussion:

- 1) The Departments, [Request for Information Regarding Sections 101 Through 104 of the Genetic Information Nondiscrimination Act of 2008](#) (RFI), 73 FR 60208, October 2008

The Departments also refer to one government source for an estimate of how many individuals would obtain health coverage due to the rule (51671 n. 16):

- 2) Congressional Budget Office, [Cost Estimate](#), H.R. 493 Genetic Information Nondiscrimination Act (GINA) of 2007, April 2007

*Qualitative discussion of benefits.*⁵⁸ 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.” The absence of such tests suggests that a significant portion of the direct benefits to consumers is in prohibiting expected future discrimination rather than current discrimination. The Departments indicated that such a benefit would be quantifiable if they had “sufficient information to project the trajectory” of the increase in such tests and studies. The Departments also note that when scoring the Genetic Information Nondiscrimination Act (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.

⁵⁸ See page 51671 of the final rule.

One potential benefit associated with GINA is that genetic testing and research may increase if the protections provided under GINA allay the public's concerns that health plans and insurers will use genetic information to discriminate based on the collection and disclosure of such information. Comments received in response to the Departments' Request for Information (RFI) indicate that genetic testing and research currently are being underutilized. A major reason cited for the lack of genetic testing is the public's fear of adverse employment-related or health coverage-related consequences associated with having genetic testing or participating in research studies that examine genetic information. Removing 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. Additional economic benefits may derive directly from the improved clarity provided by the interim final regulations, which will reduce uncertainty and help group health plan sponsors and health insurers comply with GINA's requirements in a cost effective manner. Moreover, the prohibitions enacted in GINA and the interim final regulations should provide a benefit to individuals with genetic predispositions for diseases by decreasing the number of individuals that are denied coverage under a group health plan or priced out of the individual health insurance market.

Consumer Welfare

*Electronic Prescriptions for Controlled Substances (Department of Justice)*⁵⁹

⁵⁹ Scores: Consumer Welfare 3, Quantification Effort = 4.

Overview. In 75 Fed. Reg. 16235,⁶⁰ the Drug Enforcement Administration (DEA), an agency housed within the Department of Justice, promulgated a final rule that provides medical practitioners with the “option of writing prescriptions for controlled substances electronically” (16235). One of the benefits of this rule is the “reduction in wait time for patients picking up prescriptions” (16,299). The DEA monetized the benefit of the option to write prescriptions for controlled substances by the value of the potential reduction in wait time.

Sources. The DEA referenced one of its own sources in its analysis:

- (1) Drug Enforcement Administration, Department of Justice, “[Economic Impact Analysis for Electronic Prescriptions for Controlled Substances \(EIA\)](#),” Interim Rule, March 2010

The DEA also relied on several government and industry sources:

- (2) Drugtopics.com, unspecified survey, 1999
- (3) IMS Health, “Channel Distribution Dispensed Prescriptions (U.S.),” 2008
- (4) Bureau of Labor Statistics (BLS), Department of Labor, “[Employer Costs for Employee Compensation—December 2008](#),” Table 2 (all civilian workers), March 2009

Value of Time Saved. The DEA began its analysis by determining the number of original controlled substance prescriptions that could require public wait time. The same number of prescriptions may have reduced public wait time if they were provided electronically. In summary:

⁶⁰ Electronic Prescriptions for Controlled Substances, 75 Fed. Reg. 16235 (June 1, 2010) (21 C.F.R. Parts 1300, 1304, 1306, and 1311).

Total prescriptions in 2008	3,843,100,000.00
Fraction of prescriptions for controlled substances	0.12
Subtotal	461,172,000.00
Growth rate	0.03
Number of prescriptions for controlled substances in Year 1	475,007,160.00
Original prescriptions	0.75
Subtotal	356,255,370.00
Fraction not faxed or phoned	0.81
Fraction not filled by mail order	0.86
Number of original controlled substance prescriptions that could require public wait time	248,167,490.74

DEA obtained an estimate for the total number of prescriptions for the top 400 drugs in 2008 from IMS Health (www.imshealth.com) (16294). The fraction for controlled substances (12%) came from SDI/Verispan (www.drugtopics.com) (16294). Previous DEA analysis of controlled substances indicated that 75% were for original prescriptions; of those, 19% would be phoned in and 14% filled by mail order and therefore not subject to reduced wait time if filled electronically. In support of the 19% figure, the DEA cited a 1999 Drugtopics.com survey that indicated “36% of all prescriptions were phoned in” (16299). The DEA divided the 36% figure almost in half because “slightly less than half of prescriptions are refills,” thus yielding 19% (16299). In support of the 14% figure, the DEA cited an IMS Health source that categorized the various types of prescription providers and revealed prescription volumes.

The DEA then assumed that the average wait time would be 15 minutes for the relevant prescriptions. Moreover, the DEA assumed that electronic prescriptions would “phase in over 15 years,” and provided a chart (Exhibit 6-3) in its Economic Impact Analysis containing estimates of paper prescriptions avoided each year (EIA 6). Multiplying these estimates by the average wait time (15 minutes) and BLS’s measure of the “current United States average hourly wage”

(\$20.49), the DEA obtained estimates of hours-saved and cost-savings for each year, as listed in Exhibit 6-3. The DEA then used 7% and 3% discount rates to calculate the annualized savings over 15 years, yielding \$1.08 billion at 7% and \$1.1 billion at 3%.

Notwithstanding this analysis, the Department reported its “primary estimate” for reduction in public wait time to be *zero*. This conclusion was based on concerns over whether pharmacies would actually be willing to fill electronic prescription for controlled substances without the patient present. The Department cited research showing that 28% of electronic prescriptions transmitted were never picked up by patients; for painkillers, more than 50% were never picked up. The Department noted that filling these prescriptions caused the pharmacy to spend time for which it would not be reimbursed. 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 (16299).

Unquantified benefits. The DEA also identified consumer welfare benefits arising from the elimination of illegible written prescriptions and misunderstood oral prescriptions (16299). However, the DEA stated that it had “no basis for estimating the scope of the problem or the extent of reduction that will occur and the speed at which it will occur” (16301).

*Standards for Health Care Electronic Funds Transfers (Department of Health and Human Service)*⁶¹

Overview. In 77 Fed. Reg. 1555,⁶² the Department of Health and Human Services (HHS) promulgated a final rule that requires the adoption of a standard for business-to-business “health

⁶¹ Scores: Consumer Welfare = 2, Quantification Effort = 4.

⁶² Administrative Simplification: Adoption of Standards for Health Care Electronic Funds Transfers (EFTs) and Remittance Advice, 77 Fed. Reg. 1555 (Jan. 10, 2012) (45 C.F.R. Parts 160 and 162).

care electronic funds transfers” (health care EFT). HHS argued that the adoption of this standard was necessary to promote the growth of health care EFT by plans and providers (1574). The growth of health care EFT would in turn 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 that would ultimately benefit patients (1574, 1581). Although HHS declined to monetize this benefit, it did provide estimates of these cost and time savings and it discussed the potential benefits to patients.

Sources. HHS cited numerous government and industry sources in its analysis:

- (1) Association for Financial Professionals, “[2010 AFP Electronic Payments: Report of Survey Results](#),” November 2010
- (2) [U.S. Healthcare Efficiency Index](#), “National Progress Report on Healthcare Efficiency,” 2010
- (3) [National Committee on Vital and Health Statistics](#), December 2010 Hearings on EFT
- (4) The Center for Medicare & Medicaid Services, “[National Health Expenditure Data](#),” 2011
- (5) The Center for Medicare & Medicaid Services, [Electronic Data Interchange \(EDI\) Performance](#) Statistics and CROWD data, undated
- (6) The Center for Medicare & Medicaid Services, “[The 2010 Annual Report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds](#),” August 2010
- (7) American Enterprise Institute for Public Policy Research, “[The 2011 Medicare Trustees Report: The Baby Boomer Tsunami](#),” May 2011
- (8) The White House, [Website on the Affordable Care Act](#)

- (9) Federal Reserve Board, “[The 2010 Federal Reserve Payments Study: Noncash Payment Trends in the United States: 2006–2009](#),” April 2011
- (10) Financial Management Service, U.S. Department of Treasury, “[Payment Volume Charts Treasury-Disbursed Agencies](#)” and other unspecified data, undated
- (11) DeNavas-Walt, Carmen, Bernadette D. Proctor, and Jessica C. Smith, U.S. Census Bureau, Current Population Reports, P60–238, “[Income, Poverty, and Health Insurance Coverage in the United States: 2009](#),” September 2010
- (12) Sakowski, J.A., Kahn, J.G., Kronick, R.G., Newman, J.M., & Luft, H.S., “[Peering into the Black Box: Billing and Insurance Activities in a Medical Group](#),” *Health Affairs* 28: w544–w554 (2009)
- (13) [U.S. Bureau of Labor Statistics](#), Department of Labor, unspecified data
- (14) Association of American Medical Colleges, “[Physician Shortages to Worsen Without Increases in Residency Training](#),” June 2010
- (15) Barbara C. Mayerick, Veterans Health Administration, Department of Veterans Affairs, “E-Payment Cures for Healthcare,” presentation, April 2010, and “Comments from VHA Health Care as Health Care Provider,” testimony for National Committee on Vital Health Statistics December 2010 hearing

Background. Section 1104(b)(2)(A) of the Patient Protection and Affordable Care Act amended the Social Security Act by adding electronic funds transfers to the list of electronic health care transactions for which HHS must adopt a standard (1557). In general, electronic fund transfers eliminate the costs of printing, mailing and depositing paper checks; reduce fraud associated with paper checks; and allow for improved cash flow (1560). However, the standard HHS adopted was further intended to automate the re-association of electronic payments with the

detailed billing information contained in the “electronic remittance advice” (1560-1561). Currently, electronic funds transfers and the electronic remittance advice are sent in different formats through different networks and eventually re-associated in a time-consuming, manual process (1561-1563). Automating the process of re-association would reduce these costs. Health care EFT standards will help industry overcome the collective action problem that limits the use of health care EFT, limits automation, and causes cost savings to go unrealized (1574).

HHS declined to monetize the benefit to patients from the adoption of health care EFT standards. HHS presented research documenting the time and money spent on BIR tasks: 60 hours of staff time per week per physician and 10 to 14% of physician practice revenue. HHS concluded that, overall, “the time and money spent on BIR tasks are increasingly encroaching on the time and money spent on delivering quality health care” (1587).

Cost savings. HHS began its analysis by establishing a baseline of current EFT usage, estimating that “the entire health care industry combined...used EFT for approximately 32 percent of all health care claim payments in 2010” (1574). In order to arrive at this estimate, HHS drew on “numerous health care and other industry studies,” e.g., the Association for Financial Professionals survey results on electronic payments, the National Progress Report on Healthcare Efficiency, and testimony from the National Committee on Vital Health Statistics hearing (1574). HHS then adjusted the baseline for 2013 levels, using data from the Center for Medicare & Medicaid Services and several other sources in order to project numbers of EFT and non-EFT health care claim payments in 2013.

Extrapolating further from this 2013 baseline, HHS estimated that the rule would create a “6 to 8 percent annual increase in the percentage of [EFT] payments per year...from 2014 through 2018 and a 4 to 6 percent increase from 2019 through 2023” (1576). HHS justified these

estimates with several arguments, including the argument that health care claims were on an upward trend due to a projected twofold increase in Medicare enrollment between 2011 and 2031 (American Enterprise Institute) and the Affordable Care Act’s expected addition of 32 million insured adults in 2014 (White House) (1575). HHS also argued that electronic payments were “expected to become more widespread and acceptable for U.S. businesses,” citing the statistic that “ACH payments increased 9.4 percent every year between 2006 and 2009” (Federal Reserve) (1575). Although HHS provided these and other arguments, it did not elaborate on which calculations it used to derive its estimates of EFT percentage increases.

HHS then used data from the Financial Management Service (FMS) in conjunction with its EFT percentage estimates to project the annual increase in EFT transaction volume from 2014 to 2023. These figures are not reproduced here because HHS provided a comprehensive table of annual estimates for both Medicaid and commercial health plans, as well as a further low-high estimate breakdown within each table, based on the 6 to 8% (and 4 to 6%) annualized range. Lastly, HHS borrowed the FMS’s estimate that a health plan would save approximately \$0.92 per check upon switching from paper checks to EFT in order to calculate annualized savings for Medicaid and commercial health plans. HHS’s total estimate for all health plan savings from 2014 to 2023 was \$49.85 million on the low end and \$72.04 million on the high end.

Time savings. HHS began its analysis by creating a formula for calculating the “total time dedicated to receiving and posting payments for physician practices”:

[percent of time full time employee is dedicated to BIR (Billing and Insurance Related) tasks per physician] *multiplied by* [total number of physicians in physician practices] *multiplied by* [percent of BIR time spent on payment and posting] (1585-86)

HHS relied on Sakowski *et al.* and the U.S. Bureau of Labor Statistics to create estimates for the formula’s variables. For instance, Sakowski *et al.* estimated that the percent of BIR time

spent on payment and posting by full-time employees was 14% (1585). In order to adjust for growth in the total number of physicians from 2014 to 2023, HHS used “projections of physician supply and demand” by the Association of American Medical Colleges. With these projections in hand, HHS used the above formula to calculate total time dedicated to payments for each year from 2014 to 2023. HHS then multiplied these total time figures by its estimate that the rule would create “a 10 to 15 percent savings in the time spent receiving and posting payments” (1585). In support, HHS cited two Veterans Health Administration (VHA) sources claiming time savings of 64% due to the implementation of a “much more comprehensive” E-payment system (1585). HHS did not, however, explain the calculations it used to move from VHA’s 64% estimate to its own 10 to 15% range.

HHS then multiplied each year’s time savings by “the average salary of a billing and posting clerk in physician practices” (drawn from the Bureau of Labor Statistics, plus benefits and a 3% annual increase) and an average number of new EFT enrollment per provider (a constant number supplied by HHS) to yield monetized time savings for each year from 2014 to 2023. HHS projected this new EFT enrollment “as spread evenly” over the time period (1586). HHS also assumed that the number of full-time employees spending time on BIR tasks would remain constant due to “administrative complexity involved in the projected increase in the number of claims” possibly counterbalancing the administrative efficiencies generated by the rule (1587). HHS’s final annual estimates ranged from \$1847.47 million (low, 10%) and \$281.20 million (high, 15%) in 2014 to \$246.17 million (low) and \$353.35 million (high) in 2023.

Clarity/Reducing Litigation

*Ability to Repay Reg. Z (Consumer Financial Protection Bureau)*⁶³

⁶³ Scores: Clarity/Reducing Litigation = 2; Quantification Effort = 3.

Overview. In 78 Fed. Reg. 35,430,⁶⁴ the Consumer Financial Protection Bureau (CFPB) promulgated a final rule that creates certain “exemptions, modifications, and clarifications to [Truth in Lending Act] ability-to-repay requirements” (35430). In particular, the rule defines new types of “qualified mortgages” under which certain mortgages issued by smaller creditors and held on portfolio receive “a conclusive or rebuttable presumption of compliance with the ability-to-repay provisions” (35496). The CFPB estimated the number of institutions and loans that would enjoy this presumption of compliance.

Sources. The CFPB used its own modeling and regression estimates in the analysis. In addition, the CFPB relied on several government sources:

- (1) Association for Financial Professionals, “[2010 AFP Electronic Payments: Report of Survey Results](#),” November 2010
- (2) Federal Financial Institutions Examinations Council, [Home Mortgage Disclosure Act \(HMDA\)](#), 2011
- (3) Federal Deposit Insurance Corporation (FDIC), [Consolidated Report of Condition and Income](#) (Call Report), undated
- (4) [The National Mortgage Licensing System](#) (NMLS), Mortgage Call Report, 2011
- (5) [The Federal Housing Finance Agency](#) (FHFA), Historical Loan Performance (HLP) dataset, undated

Number of Affected Entities and Loans. The CFPB estimated that “roughly 9200 institutions with approximately 450,000 loans on portfolio are likely to be affected by the extension of qualified mortgages for certain small creditors” (35497). In order to arrive at these estimates, the CFPB used data from the HMDA, which contains information about the “counts

⁶⁴ Ability-to-Repay and Qualified Mortgage Standards under the Truth in Lending Act (Regulation Z), 78 Fed. Reg. 35430 (June 12, 2013) (12 C.F.R. pt. 1026).

and properties of mortgages” for entities that report under the HMDA (35496). For entities that do not report under the HMDA, the CFPB compared HMDA data with the FDIC’s Call Report data and NMLS’s Mortgage Call Report data, projecting estimated loan counts for the non-HMDA entities. To make these projections, the CFPB used “Poisson regressions that estimate loan volumes as a function of an institution’s total assets, employment, mortgage holdings, and geographic presence” (34597).

With total estimated institution and loan counts in hand, the CFPB then created a model to predict the debt to income (DTI) ratio of the selected loans. Estimating DTI ratios was essential to the CFPB’s analysis because the rule’s standard qualified mortgage definition requires that the consumer have a DTI ratio of 43% or less (35439). By matching HMDA data to the FHFA’s HLP dataset, the CFPB was able to create a model that predicted a consumer’s DTI based on “loan amount, income, and other variables” (35496 n. 180). This in turn enabled the CFPB to determine how many of the total estimated institutions and loans would actually be affected by the rule (9200 institutions and 450,000 loans).

Unquantified Benefits. The CFPB did not quantify the expected reduction in litigation and associated benefits to small creditors and certain consumers. The CFPB noted that it could not estimate the percentage of these loans that were not qualified mortgages under a different, temporary category of qualified mortgage established six months earlier (35496).⁶⁵ Thus, the CFPB could not determine the percentage of these 450,000 loans that obtained a conclusive or rebuttable presumption of compliance with the ability-to-repay provision because of the rule.

⁶⁵ Ability-to-Repay and Qualified Mortgage Standards under the Truth in Lending Act (Regulation Z), 78 Fed. Reg. 6407 (Jan. 30, 2013) (12 C.F.R. pt. 1026).

The benefit of the rule would also depend on the risk of litigation and the likelihood and costs of different outcomes absent the presumption of compliance provided by the rule.⁶⁶

Increased Compliance/Self-Regulation

*Electronic Prescriptions for Controlled Substances (Department of Justice)*⁶⁷

Overview. In 75 Fed. Reg. 16235,⁶⁸ the Drug Enforcement Administration (DEA), an agency housed within the Department of Justice, promulgated a final rule that provides medical practitioners with the “option of writing prescriptions for controlled substances electronically” (16235). One of the benefits of this rule is increased compliance with the Controlled Substance Act due to the potential reduction in the “diversion of controlled substances,” i.e., forged and altered prescriptions (16300). The DEA partially quantified this benefit by providing estimates of (a) the healthcare costs due to prescription drug misuse and (b) the agency’s own legal costs due to diversion cases.

Sources. The DEA referenced one government source in its analysis:

- (1) Substance Abuse and Mental Health Services Administration (SAMHSA), [Drug Abuse Warning Network \(DAWN\) data](#), 2003, 2006

Healthcare costs. The DEA drew on SAMHSA’s DAWN data in order to provide upper bound estimates of the healthcare costs that might be reduced by the rule. For instance, DAWN data from 2003 shows that there were “352 deaths from misuse of oxycodone and hydrocodone” (16300). The DEA applied a value per life figure of \$5.8 million to this estimate, yielding more than \$2 billion in estimated costs of deaths for 2003. The DEA also used DAWN data from 2006

⁶⁶ In the previous rulemaking, the CFPB undertook an extensive quantitative analysis of the risk of litigation and the likelihood and costs of different outcomes for loans that were not qualified mortgages (or which met only the temporary provisions granting qualified mortgage status). *Id.* at 6564-6570.

⁶⁷ Scores: Increased Compliance/Self-Regulation = 4, Quantification Effort = 4.

⁶⁸ Electronic Prescriptions for Controlled Substances, 75 Fed. Reg. 16235 (June 1, 2010) (21 C.F.R. Parts 1300, 1304, 1306, and 1311).

to show that the cost of emergency room visits due to “nonmedical use of pharmaceuticals” exceeded \$350 million (16300).

Legal costs. The DEA also reported that the agency had “spent between \$2,700 for a small [diversion] case and \$147,000 for a large diversion case just for the primary investigators” (16300). The DEA did not indicate the source of these estimates.

Unquantified benefits. The DEA did not provide more specific estimates of the rule’s benefits beyond the costs discussed above, stating that it had “no basis for estimating what percentage of these costs could be addressed by the rule” (16300).