

Law and Economics after the Behavioral Turn: Learning from Insurance

*Tom Baker and Peter Siegelman*¹

Contents

I. The economics of insurance in brief:.....	6
A. Information Problems Facing Insurers.....	7
B. Information Problems Facing Consumers.....	8
C. Insurance Economics and Insurance Regulation.....	9
II. Behavioral economics and insurance	10
A. Demand side anomalies	11
B. Protecting the Imperfectly Rational	14
1. Subjective vs Objective Mistakes and Paternalism.....	15
2. Heterogeneity.....	16
3. Equilibrium	17
III. Three insurance examples.....	22
A. Extended warranties for consumer products.....	23
1. Are Extended Warranties a Bad Deal for Consumers?.....	24
2. Behavioral Economics and Extended Warranties.....	26
B. Credit life insurance	35
1. What is Credit Life, and What Does it Protect?.....	36
2. Is Credit Life a Bad Deal for Consumers?.....	37
3. Behavioral Economics and Credit Life Anomalies.....	41
C. Low deductible health insurance.....	43
V. Conclusion	50

The discipline of economics and the field of insurance have had a long, mutually productive encounter. The economics of information grew out of ideas first articulated by insurance actuaries and then formalized by economists, some of whose life paths had taken them through the insurance business.² Mathematicians hired by insurance organizations in the 18th and 19th centuries developed statistical

¹ William Maul Measey Professor of Law and Health Science, Penn Law School, and Roger Sherman Professor, University of Connecticut Law School. Thank you to Tess Wilkinson-Ryan and William Bratton for comments on an earlier draft, Phillip Tetlock for helpful conversation, and Bill Draper for assistance in the research.

² Tom Baker, *On the Genealogy of Moral Hazard*, 75 TEX. L. REV. 237 (1996) (describing the transmission and transformation of the concept of moral hazard from the insurance business into economics); Tom Baker, *Containing the Promise of Insurance: Adverse Selection and Risk Classification*, in Richard V. Ericson and Aaron Doyle (eds), RISK AND MORALITY (2003) (describing discovery of the phenomenon of adverse selection in 19th century life insurance business).

techniques that, with later advances, led to the subfield of econometrics.³ More recently, insurance institutions have employed insights and techniques from many parts of the economics discipline: insurance economics to be sure, but also financial economics, health economics, econometrics, and, last but not least, law and economics.⁴ The Affordable Care Act provides a striking recent example of the influence of economic ideas and economists on the insurance field, as well as the feedback loop between insurance practice and economic theory. The Obama Administration justifies the most politically and legally controversial aspect of the Act (the mandate that individuals buy health insurance) on the basis of an economic idea (adverse selection) that is directly traceable to the encounter between insurance practice and economic theory.⁵

The recent behavioral turn in economics provides another opportunity to learn from this encounter. Insurance provides a fertile testing ground for, and potential challenge to, standard economic theory because that theory generates clear normative statements and, therefore, testable predictions about when rational people should buy (or when the government should subsidize or supply) what kinds of

³ LORRAINE DASTON, CLASSICAL PROBABILITY IN THE ENLIGHTENMENT (1988); THEODORE M. PORTER, THE RISE OF STATISTICAL THINKING (1986). Cf., GEOFFREY CLARK, BETTING ON LIVES: THE CULTURE OF LIFE INSURANCE IN ENGLAND 1695-1775 (1999) (cautioning against too tight a link between insurance and statistics and documenting). *Accord*, TIMOTHY ALBORN, REGULATED LIVES: LIFE INSURANCE AND BRITISH SOCIETY 1800-1914 (2009).

⁴ One measure of the insurance industry's appreciation of economics can be seen in the International Association for the Study of Insurance Economics (the Geneva Association), the members of which are the Chief Executive Officers of 80 insurance companies worldwide, and which sponsors the journal *The Geneva Papers on Risk and Insurance*, which has published work by many leading economists. Law and economics is a dominant paradigm in insurance legal scholarship, see, e.g., Kenneth Abraham, *Distributing Risk*, and has had an impact on the development of insurance law, among other ways through the prolific insurance law opinions of Judge Posner. See Jesse A. Langer, *Deciphering Posner's Insurance Jurisprudence*, 7 CONN. INS. L. J. 1 ((2001-01) See also ALI Liability Insurance Project Preliminary Draft No. 1 (incorporating law and economic analysis in liability insurance law).

⁵ See e.g. *Thomas More Law Center v. Obama* --- F.3d ---, 2011 WL 2556039 (6th Cir. 2011), (“The government recites the common refrain that the health insurance market is unique and attributes this to some blend of free-riding, adverse selection, universal participation, and unpredictability as to when and how much care might be needed.”). See also Affordable Care Act, at § 1501(a)(2)(I), as amended by § 10106:

[I]f there were no requirement [to maintain minimum essential coverage], many individuals would wait to purchase health insurance until they needed care. By significantly increasing health insurance coverage, the requirement, together with the other provisions of this Act, will minimize this adverse selection and broaden the health insurance risk pool to include healthy individuals, which will lower health insurance premiums. The requirement is essential to creating effective health insurance markets in which improved health insurance products that are guaranteed issue and do not exclude coverage of preexisting conditions can be sold.

Cf., National Association of Insurance Commissioners Exchanges (B) Subgroup, “Adverse Selection Issues and Health Insurance Exchanges Under the Affordable Care Act” at 3 (June 6, 2011) (available at: www.naic.org/documents/committees_b_110622_adverse_selection.pdf) (“Designed to bring a more balanced risk profile to the entire marketplace, the purchase mandate is perhaps one of the most important checks on adverse selection in the ACA”).

insurance, provided of course that the institutional context can be adequately specified. Empirical and experimental research that reveals consistent, reproducible patterns of behavior that depart from these predictions poses a series of challenges – to the adequacy of the specifications of the institutional context underlying the predictions, to the rationality of the observed behavior, to the regulatory framework that shapes the insurance market, and to standard economic theory itself.

In this essay we report on and engage with this ongoing, productive, and sometimes frictive encounter. As law professors with a substantial investment in understanding insurance institutions, we are especially interested in charting (and influencing) the meaning of this encounter for insurance regulation. But the payoffs from this exercise, like others in the long term relationship between insurance and economics, extend beyond the specific problem at hand.

After first reviewing some basic economics of insurance and behavioral research, we closely analyze three kinds of insurance that, although widely purchased, should not be appealing to a rational, reasonably informed individual, because the benefits they provide are almost certainly negative, or at least so small as to be outweighed by even modest transaction costs. Yet two of the three – extended warranties and credit life insurance – are among the most profitable forms of insurance, a clear demonstration that the *perceived* benefits to purchasers very substantially exceed what expected utility theory would predict. The third – low or no deductible health insurance – is widely preferred over an available alternative (same coverage with a higher deductible and a lower price) that is demonstrably superior in the standard economic account.

These may seem like odd and perhaps even inconsequential phenomena upon which to direct serious analytical firepower. Yet, they are ideal for the task at hand. First, the observed behavior sharply diverges from the predictions of expected utility theory. Second, the institutional context is sufficiently well understood that we can be reasonably sure that the divergence reflects something about consumer behavior, not the difficulty of developing sound predictions for that context. Third, the behavioral research is sufficiently developed to provide a well-grounded explanation (or set of explanations) for consumer behavior and why it diverges from the predictions of expected utility theory. Finally, as others have already pointed out, this research might well point toward a sophisticated, “consumer sovereignty” justification for kinds of insurance that expected utility theory would condemn, posing a clear challenge to that theory.⁶ All three examples thus present difficult, practical, and generalizable problems for

⁶ Daniel Schwarcz, *Regulating Consumer Demand in Insurance Markets*, --- ERASMUS L. REV. --- (2010) available at <http://ssrn.com/abstract=1572908>; Colin Camerer, Samuel Issacharoff, George Loewenstein, Ted O'Donoghue,

regulators: how should policymakers respond when consumers apparently “want” (or at least, are willing to pay for) something that a rational person would not choose to buy?⁷ What, if any, forms of regulation are likely to be effective and desirable under these conditions?

We conclude that expected utility theory stands up to this challenge, and for extended warranties and credit life insurance we advocate paternalist regulation of the strongest kind: prohibiting their sale, at the very least in the contexts in which people presently are most likely to buy them. Low deductible health insurance poses a more difficult case, but not because the consumer sovereignty justification emerges victorious from the encounter with expected utility theory. Rather, there are so many policy objectives at play, and the health care sector has evolved so far from an ordinary market, that we are not sufficiently confident that restricting access to low deductible health insurance policies would be welfare enhancing. Moreover, in contrast to the extended warranty and credit life insurance examples, behavioral economic analysis has not identified a discrete, potentially remediable market failure affecting the choice between low and high deductibles in the health insurance market. Finally, and most importantly, in contrast to the homeowners insurance, extended warranties, and credit life insurance contexts, what is really at stake in decisions about health insurance deductibles and other aspects of health insurance design has little or nothing to do with insurance per se. What is at stake, instead, is the health care that people do (or do not) buy with health insurance, especially the cost and quality of that care. We are on the cusp of a flowering of relevant research on health insurance design and the impact of that design on behavior. Better to wait for the results of that research than to make hasty policy recommendations.

and Matthew Rabin, *Regulation for Conservatives: Behavioral Economics and the Case for 'Asymmetric Paternalism'*, 151 U. PA. L. REV. 1211, et al. Cf See Michael Braun and Alexander Muermann, *The Impact of Regret on the Demand for Insurance*, 71 J. RISK & INS. 737 (2004).

⁷ By way of contrast, consider *United States of America v. Rose Marks et al*, Case No. 11-80072-CR-MARRA/VITUNAC(s) (S.D. Fl. 2011) (available at <http://www.justice.gov/usao/fls/PressReleases/Attachments/110816-01.SupersedingIndictment.pdf>), in which the defendant and nine others are charged, among other things, with mail and wire fraud, for claiming “to have powers of intuition that enabled [them] to perceive things beyond the realm of the five senses,” and “represent[ing] to [their] clients that [they were] conferring with the Archangel Michael for his advice and counsel for them.” One defendant was accused of having told a client that “they would bring her [estranged] husband back to her, . . . [but that this] ‘work’ would require sacrifices which would mean money because money was the root of all evil.” *Id.* at 12. The U.S. Attorney alleges that the amount wrongfully taken from clients exceeded \$40 million. See, <http://www.justice.gov/usao/fls/PressReleases/110816-02.html>. Most readers presumably wouldn’t question such indictments, although extreme devotees of caveat emptor might believe that fraud should not be criminalized. But surely the patrons of the alleged psychics believed that they were getting something worthwhile for the money they spent, just as buyers of extended warranties do. Both psychics and extended warranties can and do make people feel better; both do so only by appealing to their irrational natures.

As these examples will illustrate, the most significant regulatory payoffs from the encounter between behavioral economics and insurance have not come from a more precise understanding of the motives for buying insurance, advances in identifying what constitutes “good” insurance or the ultimate goals of insurance regulation.⁸ Rather, the benefits have come from advances in the understanding of the equilibrium that results when real—incompletely rational—people buy insurance. For example, the equilibrium insights of the “shrouded pricing” model developed by Xavier Gabaix and David Laibson explain why people end up paying too much for extended warranties, credit life insurance, and other kinds of add-on insurance products.⁹ Their behavioral analysis explains how anomalies can give rise to a *situational* monopoly that can persist, even in an otherwise intensely competitive market, due to the interaction between behaviorally heterogeneous consumers and rational insurance sellers.

Others have made this point before, but it is worth emphasizing: behavioral decision research has normative implications, but those implications are in the realm of means not ends.¹⁰ Eventually, behavioral economics may lead to a new understanding of what constitutes “good” insurance—for example the deferred dividend (tontine) insurance that we have suggested in the health care context,¹¹ but the “behavioral” part of behavioral economics will not produce an alternative to expected utility theory. What it can do is help policymakers design better tools for achieving the ends that expected utility theory (or a rival theory) identifies. For the insurance field the payoff lies in devising ways to help consumers choose good insurance products, identifying situations in which they are so unlikely to make good choices that stronger regulation is justified, and, with appropriate attention to equilibrium analysis, guiding policymakers in designing regulatory strategies, such as those addressing the situational monopolies in the extended warranty and credit life insurance markets.

⁸ We do not mean to imply by this that behavioral research is, or should be, directed at determining what is “good” insurance. Behavioral decision research often lacks such a normative ambition.

⁹ See Xavier Gabaix and David Laibson, *Shrouded Attributes, Consumer Myopia, and Information Suppression in Competitive Markets*, 121 Q. J. ECON. 505 (2006). See TAN --- *infra*, explaining the application of the “shrouded pricing” model.

¹⁰ See, e.g., George Loewenstein and Peter Ubel, *Economics Behaving Badly*, N.Y. TIMES, July 14, 2010: [B]ehavioral economics should complement, not substitute for, more substantive economic interventions. If traditional economics suggests that we should have a larger price difference between sugar-free and sugared drinks, behavioral economics could suggest whether consumers would respond better to a subsidy on unsweetened drinks or a tax on sugary drinks. But that’s the most it can do.

¹¹ *Tontines for the Invincibles: Enticing Low Risks into the Health Insurance Pool with an Idea from Insurance History and Behavioral Economics*, 2010 WIS. L. REV. 79 (2010). For a short version, see: *Tontines for the Young Invincibles*, 32(4) REGULATION MAGAZINE 20 (Winter 2009-2010), available at: <http://www.cato.org/pubs/regulation/regv32n4/v32n4-4.pdf>

What we have learned from working through these examples extends beyond insurance. Behavioral economics does provide scope for welfare-enhancing interventions. But, once we admit the existence of non-standard motivations or imperfect reasoning, those interventions must be very carefully tailored to particular circumstances in order to be effective. There is no simple route from identifying a non-standard motivation or a “flaw” in reasoning to recommending an appropriate regulatory policy. Put perhaps too simply, we need psychology to identify how people reason, economics to understand the consequences of that behavior for market equilibrium, and law and other disciplines that reward detailed institutional knowledge to incorporate these insights into regulatory strategies that have a chance of moving the market toward a new, welfare-enhancing equilibrium.

I. The economics of insurance in brief:

The discipline of economics has a simple but powerful explanation of the value of insurance to individuals, a well-worked out explanation of why insurance needs to be regulated, and a relatively consistent approach to the form that insurance regulation should take.

In this paradigm, people value insurance for two reasons: they are risk averse (meaning that they have a declining marginal utility of money) and, with regard to contingent losses, insurance is a more efficient way than savings to equalize the marginal utility of consumption over time. Put in ordinary language, insurance allows people to shift money from times when they do not need it very much to times when they need it much more. Expected utility theory teaches that insurance is most valuable when it provides a mechanism for a large group of people to each pay a small amount of money so that there is a large sum available for the few who really need it. The do it yourself alternative – savings – is not as efficient, because it shifts the money into the future whether you need it then or not. By contrast, insurance gives you the money in the future only if you need it.

In a world with perfect information and no transaction costs, everyone would be better off with insurance against all risks; insurance would be available for all risks¹²; and there would be no need for regulation of the insurance market.¹³ Adding a dose of realism by acknowledging the presence of

¹² See, Kenneth J. Arrow, *Insurance, Risk and Resource Allocation* in ESSAYS IN THE THEORY OF RISK BEARING 134 (1971) (demonstrating that absent adverse selection and moral hazard, an ideal insurance system would insure against any economically relevant event).

¹³ Allowing for insurance of significantly correlated risks makes the economics a bit more complicated, but does not change the conclusion about the need for regulation. See Dwight Jaffee, *Monoline Restrictions, with Applications to Mortgage Insurance and Title Insurance*, 26 REVIEW OF INDUSTRIAL ORGANIZATION 83 (2006). The correlation of

transaction costs (i.e. the costs of selling the insurance and running the insurance business) changes this conclusion only slightly: instead of complete insurance, people would be better off with partial insurance, such as insurance with a deductible or coinsurance. With perfect information, once again, the market would supply the appropriately partial form of insurance, with no need for regulation.

The need (and economic justification) for insurance regulation becomes apparent after adding a second, larger dose of realism: taking into account the information problems that exist on both sides of the insurance relationship.

A. Information Problems Facing Insurers

Insurance companies have long been aware of the information problems that exist on their side of the relationship: there are limits to what an insurance company can find out about the people looking for insurance, and it's hard to monitor consumers' behavior once they have the insurance. The result is that the people buying insurance tend to be more risky than average and, once they have the insurance, they aren't as careful to avoid losses as they would have been without it.

Economists have formalized the insurance companies' information problems and, in the process, developed what has come to be known as the economics of information. Insurance purchasers' private information about their risk leads to adverse selection, the information problem that George Akerloff first discussed in his Nobel prize winning paper on the "lemons problem."¹⁴ The insurer's inability to monitor its customers' behavior after they buy insurance leads to moral hazard, the information problem that Kenneth Arrow – another Nobel prize winner – first discussed in his classic article on the economics of health insurance.¹⁵

risks is sometimes cited as justification for government provision of insurance against natural disasters and terrorism. In our view, that justification reduces to an information problem, but demonstrating that point will divert us from our task. Accordingly, for purposes of this article we do not treat the government provision of insurance as a form of insurance regulation.

¹⁴ George A. Akerloff, *The Market for "Lemons": Quality Uncertainty and the Market Mechanism*, 84 Q. J. ECON. (1970); Michael Rothschild & Joseph Stiglitz, *Equilibrium In Competitive Insurance Markets: An Essay On The Economics Of Imperfect Information*, 90 Q. J. ECON 629 (1976) (explaining how insurance markets can sometimes address adverse selection by designing coverage to induce policyholders to willingly sort themselves into risk classes). For review of empirical research on adverse selection in insurance, Alma Cohen & Peter Siegelman, *Testing for Adverse Selection in Insurance Markets*, 77 J. RISK & INS. 39 (2010) (finding that adverse selection occurs in some contexts, but not universally, and suggesting that economists lack a good theory of when it is likely to exist).

¹⁵ Kenneth J. Arrow, *Uncertainty and the Welfare Economics of Medical Care*, 53 AM. ECON. REV. 941 (1963). Arrow worked as an insurance actuary before going to economics graduate school. He summarized the impact of his actuarial experience as follows:

Insurance companies' information problems offer parsimonious, powerful explanations of much of the institutional structure of real-life insurance relationships. Insurers manage moral hazard through cost sharing arrangements, exceptions from coverage, and underwriting requirements.¹⁶ Insurers manage adverse selection through risk classification, contract terms that encourage long term relationships, and underwriting.¹⁷ For the most part, insurance organizations have been able to arrive at reasonably satisfactory solutions to these problems without the government's help. Exceptions to privately arranged solutions include the mandated purchase of insurance to prevent adverse selection (as in the Affordable Care Act) and the related regulation of competition among insurers to prevent cream-skimming and other behavior that, in the limit, can sometimes lead to the failure of insurance markets.¹⁸

B. Information Problems Facing Consumers

Insurance regulators have long been aware of the information problems that exist on the consumer side of the insurance relationship. Left on their own, ordinary consumers can know very little about either the insurance they're buying or the companies selling that insurance; and once they buy insurance, they are vulnerable to insurer opportunism. These information problems are less susceptible to private contract based solutions than those facing insurers and, thus, provide wider ranging justification for insurance regulation.¹⁹ Insurance companies have private information about many things that affect the value of their products: for example, their solvency (a promise to pay is not worth much if the

one thing is true ["about this actuary business"]: I really learned. One thing I learnt about during the course of this was moral hazard and adverse selection. . . . I suddenly realized insurance people knew what they were talking about: there was a real economic issue which economists had not understood. It turned out that even though I didn't pursue it [at the time], it was a very important economic problem. I really understood what risk bearing was about and understood the realities of it.

Interview with Kenneth Arrow, by Juan Dubra. Munich Personal RePEc Archive, March 2005. Available at <http://mpra.ub.uni-muenchen.de/967/>. Stiglitz's father was an insurance agent.

¹⁶ See CAROL HEIMER, REACTIVE RISK AND RATIONAL ACTION; Steven Shavell, *On Moral Hazard and Insurance*, 92 Q. J. ECON. 541 (1979).

¹⁷ See, e.g. Igal Hendel and Alessandro Lizzeri, *The Role of Commitment in Dynamic Contracts: Evidence from Life Insurance*, 118 Q. J. ECON. 299 (2003).

¹⁸ For a vivid example of how consumer selection among insurance plans fostered adverse selection and lead to the decimation of a particular insurance market, see David M. Cutler & Richard J. Zeckhauser, *Adverse Selection in Health Insurance*, in FRONTIERS IN HEALTH POLICY RESEARCH (1998). Note, however, that this is a somewhat unusual example, and that claims of adverse selection "death spirals" are difficult to verify. See Cohen and Peter Siegelman, JRI.

¹⁹ Brokers or middlemen might in theory solve some of these problems, and are in fact commonly observed in insurance markets. But brokers create problems of their own, and in any case, are typically unavailable for smaller-scale transactions.

company is not able to pay), the meaning of the terms of their contracts, and their approach to investigating and paying claims.

Referring to this information as “private” does not mean that it is completely unobservable. For example, the written terms of an insurance contract appear in the insurance policy form (assuming that the insurance company is willing to provide the policy in advance, which is not always the case in practice).²⁰ But it is so time consuming and expensive to evaluate the terms of the contract or, indeed, most of the other observable aspects of quality, that no individual person or company would rationally make that effort.²¹ Other aspects of quality, such as past claims servicing practices or current financial solidity, might be observable in theory, but that observation would require the disclosure of information that the insurer prefers to keep private and that is interpretable only in relation to information about other insurers (posing a collective action problem, a classic justification for regulation). Still other aspects of insurance product quality are completely unobservable by anyone at the time of purchase, because they depend on what happens in the future. Insurance consists fundamentally of the promise to pay money in the future, sometimes very far in the future. No one can observe today the financial solidity and claims paying practices of an insurance company in the future.

This private information creates the potential for (inverse) adverse selection, the risk that bad insurance contracts will drive out the good, and (inverse) moral hazard, the risk that insurance companies will change their financial condition and claims-paying practices to the detriment of existing policyholders.²² Insurance regulation addresses these problems by certifying the quality of both insurance contracts and insurance companies. Government approval of insurance companies’ standard form contracts certifies the quality of those contracts. Solvency regulation and insurance guarantee funds certify the insurance companies’ ability to pay claims. Market conduct regulation and related tools such as private rights of action for insurer misconduct, in effect, certify insurance companies’ willingness to pay claims and deter insurers from opportunism at the point of claim.

C. Insurance Economics and Insurance Regulation

The economic approach to insurance has been enormously influential among people who study and teach insurance, in actuarial training and practice, and, as a result, within at least the expert sector of

²⁰ See Daniel Schwarcz, *Re-evaluating Standardized Insurance Policies*, 78 U. CHI. L. REV. __ (forthcoming 2011)

²¹ Alon Harel and Yuval Procaccia, *On the Optimal Regulation of Unread Contracts* (September 15, 2009). Available at SSRN: <http://ssrn.com/abstract=1473770>

²² See, e.g., Eric D. Beal, *Posner and Moral Hazard*, 7 CONN. INS. L.J. 81 (2000/2001).

the insurance regulatory community. Much of insurance regulation is broadly consistent with the economics of insurance, even if the actual implementation of regulation may fall short of economic prescriptions.²³

Nevertheless, our sense is that the standard economic model does not easily justify some of the consumer protection rationales for insurance regulation. The reason is that, in the standard economic model, consumers—bolstered by competition among insurers—are assumed to be reasonably well-equipped to maximize their own utility, so that intervention by insurance regulators is likely to deprive consumers of choices they would either prefer to make (in which case, the consumers experience a loss of welfare) or would not make (in which case, the regulatory intervention is simply useless). The behaviorally informed research that we review next presents a very different view of consumer behavior, in which consumers are poorly equipped to maximize their own utility, and of markets, in which firms are able to avoid the leveling effect of competition.

II. Behavioral economics and insurance

Much as the insurance market has provided fertile ground for the development of the economics of information, it has also spurred the growth of behavioral economics. Researchers such as Howard Kunreuther have long noted that consumer behavior in the insurance market does not match the predictions of standard economic theory: anomalies abound.²⁴ Consumers do not demand enough of some kinds of insurance that the standard account says that they should value highly, such as catastrophic insurance and annuities. At the same time, consumers demand too much of some other kinds of insurance that, in theory, they should not want at all, such as dread disease insurance and extended warranties for consumer products. And, given the choice, consumers regularly purchase insurance policies with deductibles and policy limits that are too low relative to the costs and benefits.²⁵ For example, Martin Feldstein famously suggested that for reasonable levels of risk aversion, optimal health insurance would

²³ See Seth Chandler, *Insurance Regulation*, in ENCYCLOPEDIA OF LAW & ECONOMICS, available at <http://encyclo.findlaw.com/5700book.pdf>.

²⁴ See, e.g., Eric Johnson, John Hershey, Jacqueline Meszaros, Howard Kunreuther, *Framing, Probability Distortions and Insurance Decisions*, 7 *J. Risk & Uncertainty* 35, 42 (1993); Paul J. H. Shoemaker and Howard C. Kunreuther, *An Experimental Study of Insurance Decisions*, 46 *J. Risk and Insurance* 603 (1979).

²⁵ See generally, HOWARD KUNREUTHER AND MARK PAULY, ANOMALIES.

entail a much greater level of risk-sharing than current health insurance, with co-insurance rates of 50-66 percent.²⁶

A. Demand side anomalies

Research has revealed an increasingly well-defined set of what Kunreuther and Mark Pauly call “demand side anomalies” in the insurance market.²⁷ These anomalies are regularities in insurance purchasing behavior that differ systematically from what expected utility theory predicts.²⁸ The following is a selective list:

- People choose low deductibles and, because of loading costs, overpay to provide protection against losses that are not worth insuring against, given plausible levels of risk aversion.²⁹
- Having chosen and paid for a low deductible, people do not file a claim unless their loss is much larger than the deductible.³⁰
- People buy some kinds of insurance that protect exclusively against losses that are small in relation to their wealth, sometimes even when the price for that insurance is quite large in relation to its expected value (e.g. extended warranties for consumer products,³¹ collision damage waivers for rental cars).
- People are more willing to insure emotionally treasured objects than they are to insure other objects of equal financial value, and they also put more effort into preparing insurance claims for the loss of a treasured object.³²

²⁶ Martin S. Feldstein, *The Welfare Loss of Excess Health Insurance*, 81 J. POL. ECON. 251 (1973). Although risk-averse consumers would ideally choose to insure 100 percent of all exogenous risks when prices are actuarially fair, full insurance is no longer optimal when insurance is subject to moral hazard (over-use) that increases costs. In Feldstein’s analysis, reducing insurance coverage by one-third would lead to an increase in welfare equivalent to about 25% of total private insurance premiums. *Id.* at 251.

²⁷ Kunreuther & Pauly, *supra* note ___.

²⁸ A great deal is at stake in the use of the word “systematically,” as we demonstrate below. Even if replicable laboratory experiments can isolate particular biases in highly-controlled environments, behavioral research often lacks a meta-theory about which biases will be operative in complex real-world settings. As we suggest, this is especially significant for regulators, because biases seem to be context-dependent and of uncertain signs—that is, some biases lead to “too much” insurance being purchased, while others lead to too little.

²⁹ David M. Cutler & Richard Zeckhauser, *Extending the Theory to Meet the Practice of Insurance*, 2004 Brookings-Wharton Papers on Fin. Services 1 (2004). [need to cite Johnson & Kunreuther]; Justin Sydnor, *(Over)insuring Modest Risks*, 2 AMERICAN ECONOMICS JOURNAL: APPLIED ECONOMICS 177-199 (2010).

³⁰ Michael Braun, Peter S. Fader, Eric T. Bradlow & Howard Kunreuther, *Modeling the “Pseudodeductible” in Insurance Claims Decisions*, 52 Mgmt. Sci. 1258 (2006) (finding that 80% of households had a pseudodeductible higher than the next highest available deductible, meaning that they could save money without affecting their actual coverage by selecting the higher deductible policy).

³¹ See T. Chen et al., *Why Do Consumers Buy Extended Service Contracts?*, 36 Journal of Consumer Research 611 (2009); Matthew Rabin & Richard H. Thaler, *Anomalies: Risk Aversion*, 15 J. ECON. PERSPECTIVES 219 (2001).

³² Christopher K. Hsee & Howard C. Kunreuther, *The Affection Effect in Insurance Decisions*, 20 J. Risk & Uncertainty 141 (2000). Note that the standard model of insurance demand is predicated on risk aversion, which implies a decreasing marginal value of money. On this account, subjective value—e.g., for family heirlooms—

- People prefer insurance policies with no-claim rebates or deferred dividends, even though these policies violate the assumption of declining marginal utility of wealth.³³
- Insurance against “named events” (e.g. purchase of a limited purpose life insurance policy in the form of flight insurance, “dread disease” insurance) is sometimes more attractive than more objectively valuable general insurance.³⁴
- People do not buy more objectively valuable insurance against other low probability, high severity events.³⁵
- People are more likely to buy disaster insurance after a disaster, even when they (wrongly) believe that this disaster *reduced* the likelihood of the next one.³⁶

We can broadly group the behavioral explanations for these anomalies into two categories. The first set of explanations focuses on biases that affect the perception of the value of insurance in a manner that conflicts with expected utility theory. Some of these biases tend to decrease the perceived value of insurance and, thus, may lead to insufficient demand. These include:

- Excessive discounting (an irrationally high preference for money today over money tomorrow), and
- Optimism bias (believing that bad things are unlikely to occur to one’s self).³⁷

Other biases tend to increase the perceived value of insurance and, thus, may lead to exaggerated demand, including:

- Emotional attachment to people or objects (which should not influence insurance demand, unless the loss changes the marginal utility of wealth),
- Dread (an exaggerated fear of certain kinds of events), and
- Superstition (buying insurance in the belief that it will prevent bad things from happening).

Still others could have either effect, depending on context, including:

should not motivate insurance purchase unless the loss of the object would increase the marginal utility of wealth. Thus, it is irrational to insure grandpa’s shaving mug (market value \$50) unless losing the mug would make an additional dollar (substantially) more valuable than if the mug were intact.

³³ Paul Slovic et al., *Preference for Insuring against Probable Small Losses: Insurance Implications*, 44 J. Risk & Ins. 237 (1977). See also Tom Baker and Peter Siegelman, *Tontines for the Invincibles* ...

³⁴ Need citation.

³⁵ Colin F. Camerer & Howard Kunreuther, *Decision Processes for Low Probability Events: Policy Implications*, 8 J. Pol’y Analysis & Mgmt. 565 (1989); David H. Krantz & Howard C. Kunreuther, *Goals and Plans in Decision Making*, 2 JUDGMENT & DECISION MAKING 137 (2007).

³⁶ Howard Kunreuther, Warren Sanderson & Rudolf Vetschera, *A Behavioral Model of the Adoption of Protective Activities*, 6 J. ECON. BEHAV. & ORG. 1 (1985).

³⁷ “Optimism bias is inconsistent with the independence of decision weights [e.g., probabilities] and payoffs found in models of choice under risk, such as expected utility, subjective expected utility, and prospect theory.” Anat Bracha & Donald J. Brown, *Affective Decision Making: A Theory of Optimism Bias*, Fed. Resv. Bank of Boston Working Paper 10-16 (Dec. 2010), available at <http://www.bos.frb.org/economic/wp/index.htm>.

- The availability heuristic (risks that are easier to recall are assumed to be more likely to occur than they actually are),
- Regret aversion (wanting to have made the optimal choice, as determined ex post),³⁸
- Threshold effects (ignoring probabilities below a cut off in some situations, and, in others, overweighting reductions from an extremely low probability to a perceived zero probability),
- Overconfidence (sometimes called the control illusion),³⁹ and
- Herding (copying my friends and family).

Most of the demand side anomalies listed earlier can be explained by some combination of these biases. Regret aversion helps explain buying insurance for low value losses (if a loss happens, I don't want to regret not having the insurance) and buying insurance with a no-claim rebate (if the risk doesn't materialize, I can be sure I get at least something for my money).⁴⁰ Emotional attachment helps explain buying insurance for treasured objects. The availability heuristic and dread help explain buying insurance for named events. Threshold effects help explain not buying insurance for low probability, high severity events. The availability heuristic helps explain buying that same insurance after a disaster.

A second set of explanations for the demand side anomalies focuses on more general information processing problems that consumers face in making decisions of all kinds. These kinds of behavioral regularities are different from those listed earlier because they don't directly affect the perceived value of insurance. Rather, they reduce the capacity to make a decision, whatever the perceived value of insurance may be. These include:

- Hyperbolic discounting (valuations that fall rapidly for small delays, but more slowly for longer delays, leading to procrastination and other time-inconsistent preferences),
- Complexity aversion,
- Aversion to contemplating some topics (death, stigmatized or taboo events),⁴¹ and
- More general cognitive constraints.⁴²

³⁸ See Michael Braun and Alexander Muermann, *The Impact of Regret on the Demand for Insurance*, 71 J. RISK & INS. 737 (2004) (developing a model of insurance demand that adds regret aversion to expected utility and showing that regret aversion leads individuals to “hedge their bets” by purchasing more insurance for small losses and less insurance for large losses than would be optimal from an expected utility perspective).

³⁹ This bias reduces the perceived likelihood (or effect) of events you can control (car crash) and increases the perceived likelihood (or severity) of events you can't control (plane crash), making you less likely to buy car insurance and more likely to buy flight insurance. .

⁴⁰ Johnson et al, *supra* n. 24; Baker & Siegelman, *supra* n. 11.

⁴¹ See, e.g., CHERIS CHAN, *MARKETING DEATH: CULTURE AND THE MAKING OF A LIFE INSURANCE MARKET IN CHINA* (Oxford University Press, forthcoming 2012) (describing how domestic life insurance industry in China succeeded by reconceptualizing life insurance as a retirement product in order to overcome the stigma surrounding death). Cf. Philip Tetlock, as discussed *infra*, TAN154 .

⁴² See, e.g., Shane Fredrick, *Cognitive Reflection and Decision Making*, 19 J. ECON. PERSPECTIVES 25, 40 (2005) (showing that a simple 3-item “Cognitive Reflection Test” can predict such aspects of individual behavior as risk

In the insurance context, these information processing problems can lead consumers to make the default “decision” not to buy insurance, or leave them vulnerable to firms that frame or create a bad decision as the default.

Considering all of these biases and information processing problems together produces a rather bleak picture, at least for those who would like to see behavioral economics provide clear guidance to policymakers. There are systematic yet conflicting biases that affect the perceived value of insurance. Consumers want too much of some “bad” kinds of insurance and not enough of some “good” kinds of insurance, and, even if they are motivated to distinguish between good and bad insurance, information processing problems make doing so very difficult.

In a world of complete information and zero transactions costs, actuarially-fair insurance is always and everywhere a valuable financial product for a rational, risk averse consumer.⁴³ In the real world, insurance is only sometimes a good financial deal. Whether it is a good deal in any particular situation is a complicated question that turns on individual preferences, the frequency and severity of loss, and the loading charges that insurance companies must impose in order to run their business, not to mention the complications resulting from moral hazard, adverse selection and the existence of alternative ways to manage risk. The behavioral decision research clearly demonstrates that people do a remarkably poor job at making decisions that involve even simple mathematical concepts, such as the compounding of interest. Insurance is a much more complicated financial product than a bank account or loan,⁴⁴ so it should come as no surprise to learn that behavioral decision research provides very little reason to be confident that consumers are making optimal insurance purchasing decisions.

B. Protecting the Imperfectly Rational

Suppose we take it as a given that consumers cannot be relied upon to make wise choices with respect to insurance: What role does this then leave for policy interventions to improve welfare? Our message here is that even if we know the causes and direction of consumer “errors,” the behavioralist turn

preferences and time preferences, and speculating that “some preferences are better than others and that cognitive ability is one indicator of the ‘better’ preference). Thomas Dohmen, et al, *Are Risk Aversion and Impatience Related to Cognitive Ability?*, 100 AMER. ECON. REV. 1238 (2010) (finding that individuals with higher cognitive ability are more willing to take risks and are also more patient than those with lower cognitive ability).

⁴³ Arrow, *supra* note --.

⁴⁴ See Howell Jackson, *Regulation in a Multi-Sector Financial Services Industry*, 77 WASH U. L.Q. 319 (1999).

makes good regulation of insurance more, or at least no less, difficult than it ever was.⁴⁵ In this section we discuss some general problems with the design of regulation to protect imperfectly-rational insurance buyers.

1. Subjective vs. Objective Mistakes and Paternalism

A key problem for regulators seeking to act on behavioral insights is that behavioral theories may do a good job of *explaining* behavior, but they do so in a way that severs the link between a consumer's behavior and her welfare. Under standard economic assumptions, there is a tight link between the two: behavior is chosen to maximize welfare—indeed, this is close to the very definition of rationality. It would be irrational if one preferred X to Y, yet choose Y when both options were possible. A rational consumer who chooses to buy an extended warranty is *by definition* doing so because she believes it advances her welfare, and there's an obvious subjective sense in which she is right. The link between behavior and welfare is what gives economics much of its normative bite: allowing consumers to act as they choose is desirable precisely because their actions will be rationally chosen to promote their well-being.

But what happens if the link between behavior and welfare is broken or attenuated, which is precisely the conclusion of the behavioral research in insurance? One obvious regulatory solution – which rarely works – is to provide the consumer with the correct information about the frequency of repair. Doing so poses relatively few problems for a welfarist approach to policy making: by assumption, the consumer will use the new, accurate information to make the appropriate (subjectively welfare-maximizing) choice not to buy the warranty. If on the other hand, providing the information does *not* alter the consumer's decision, then (arguably) buying the extended warranty must have been based on some kind of non-standard preferences (for example, regret-aversion or loss-aversion), and therefore the purchase actually increases the consumer's utility. Either way, disclosure appears to solve the problem.

Camerer et al, and Schwarz⁴⁶ follow this line of reasoning in arguing that mistakes can and should be corrected by disclosure, but that if consumers are buying extended warranties because of loss-

⁴⁵ A similar conclusion is reached by Edward Glaeser, *Paternalism and Psychology*, 73 U. Chi. L. Rev. 133 (2006), albeit for different reasons. Glaeser's view is that regulators are likely to have their own behavioral biases, which they are even less likely to be able to overcome than are consumers.

⁴⁶ See Camerer, et al, *supra* note -- at 1253-54 (noting that consumers purchase what seem to be extravagantly overpriced extended warranties, and suggesting that the problem could be solved by disclosing the true frequency of repair, because “[i]f disclosure reduces warranty purchases by reminding consumers of the low chance of product

aversion or as relief for “anxiety,” they should be free to do so, because restricting their ability to make such decisions would leave them (subjectively) worse off. Yet behavioral (and other) research has not been kind to the proposition that disclosure corrects decisional errors.⁴⁷ Precisely because consumers who buy extended warranties are not fully rational, frequency-of-repair statistics and other forms of “de-biasing” education will be difficult for them to process. Behavioral research might help to make disclosure more effective,⁴⁸ but we see no reason to be optimistic that disclosure can fully overcome even the most minimal behavioral impediments to appropriate decision-making. This in turn implies that the distinction between mistakes (based on incorrect information) and non-standard preferences as motives for insurance purchases does not provide a solid basis for regulatory policy. Unless we define “mistakes” tautologically (as those decisions that can be altered by disclosure), *effectively* correcting mistakes will often require something more than disclosure, and thus entails making it difficult or impossible for consumers to do what they “want.”

2. Heterogeneity

A second important problem—typically only implicit in much of the behavioral research—is the possibility of heterogeneity among consumers. While rational consumers are all alike (in their rationality, if not their preferences), there are a multitude of ways to be irrational. Not only are some people apparently “more rational” than others,⁴⁹ the multiplicity of possible irrationalities adds enormous complexity to policy-making because it means that the conventional Kaldor/Hicks or Pareto criteria for

breakage, then purchasing the warranty would have been a mistake rather than a preference. If informed consumers continue to purchase the warranties, then it is quite possible that they have good reason to do so, however unfathomable that decision may seem to an economist.”). Schwarcz, supra note __ at __, argues that some anomalies

can plausibly be explained as sophisticated consumer behavior to manage emotions such as anxiety, regret, and loss aversion. Moreover, the capacity of insurance to address these negative emotions is not necessarily an artifact of manipulative insurance sales or marketing. Rather, it may be a sophisticated and informed strategy on the part of consumers to manage emotions that exist independently of insurers’ (and their agents’) sales efforts.

⁴⁷ See, e.g., Omri Ben-Shahar and Carl E. Schnieder, *The Failure of Mandated Disclosure*, <http://ssrn.com/abstract=1567284> (2010). General literature on de-biasing, w/spotty results. Nor is financial education likely to improve consumer decision-making. See, e.g., Lauren E. Willis, *Against Financial-Literacy Education*, 94 IOWA L. REV. 197 (2008).

⁴⁸ See Leowenstein, supra note –

⁴⁹ See, e.g., Syngjoo Choi et al, *Who is (More) Rational?*, Nat. Bur. of Econ. Res. Working Paper 16971 (Feb. 2011) (attempting to test subjects’ choices for consistency with utility maximization, and finding considerable heterogeneity amongst subjects: richer and better educated subjects are more likely to exhibit rational behavior). See also Shane Fredrick, supra n. 42 and Thomas Dohmen, et al, supra n. 42.

policy evaluation are often unavailable, and distributional issues cannot be avoided.⁵⁰ Policies that help one group of irrational consumers may hurt another. Policies that help the rational may harm the irrational, and vice-versa. We have relatively little to offer here, except to say that behavioral heterogeneity makes policy-making even more difficult than it would be in a world where consumers were all fully rational.

3. Equilibrium

A key challenge facing regulation of any kind is to understand the effects of intervention in equilibrium, after all relevant actors have had a chance to adjust their behavior.⁵¹ For instance, rent controls may reduce the rent of those who keep their apartments, which is largely a transfer from landlords to renters. At the same time, however, controls may make it harder for outsiders to get an apartment, and more significantly, result in lost welfare from mismatches between renters and apartments that goes beyond the dead-weight loss revealed by a static analysis of rent controls. For example, Edward Glaeser and Erzo Luttmer have suggested that the most significant welfare losses from rent control in New York City arise from tenants who stay in larger apartments than they otherwise would because of rent control.⁵²

At least since the pioneering work of Rothschild and Stiglitz, economists have understood that equilibrium in insurance markets—which are pervasively characterized by asymmetric information (as described earlier)—can be extraordinarily complex and in some cases, might not even exist at all. Adding behavioral “anomalies” to the equilibrium analysis is far from straightforward. But without an equilibrium analysis, regulatory interventions are likely to have unintended consequences, and may even be welfare-reducing.

Consider, for example, the choice of deductible in homeowner’s insurance. In an important recent paper, Justin Sydnor uses data from one large insurer to demonstrate that 83 percent of consumers choose a deductible that is dramatically too small to be justified by any reasonable level of risk aversion or future

⁵⁰ We do not mean to suggest that distributional concerns *should* be avoided, but only heterogeneity makes it impossible to ignore these issues. All three of the studies cited in the previous note suggest that there are non-surprising correlations between class, gender and ethnicity and “mistakes,” which in our view only strengthens the case for regulatory intervention.

⁵¹ Cf. Alan Schwartz & Louis L. Wilde, *Intervening in Markets on the Basis of Imperfect Information: A Legal and Economic Analysis*, 127 U. PA. L. REV. 630, 635 (1979) (criticizing regulatory interventions that “incorrectly focus[] on individuals rather than on the markets in which they purchase”).

⁵² See Edward L. Glaeser and Erzo F. P. Luttmer, *The Misallocation of Housing Under Rent Control*, 93 AMER. ECON. REV. 1027 (2003).

expected claims.⁵³ For example, many consumers chose a \$500 deductible, rather than the \$1,000 deductible they might have picked instead. Given typical claiming rates, the average expected monetary benefit from the additional coverage was only about \$20, but its additional cost was about five times more than that. In other words, consumers paid \$100 to receive an expected \$20 monetary benefit.⁵⁴

Whatever the explanation for this choice, the purchase of “excess” deductibles appears to be costly to consumers: Sydnor estimates that other things equal, “homeowners could expect to save roughly \$4.8 billion per year by holding the highest available deductible.”⁵⁵ But as Sydnor points out, this analysis can be seriously misleading as a guide for regulation, because it ignores the way markets equilibrate. Consistent with competition among suppliers, the insurer he studied did not appear to earn excess profits on its low-deductible policies, even though consumers “overpaid” for these policies relative to the expected value of the low deductible. That’s because low-deductible consumers had higher claim rates, presumably due to the presence of adverse selection. The low-deductible consumers, who had private information about their own elevated likelihood of making a claim, chose policies that reflected this information, even though the additional expected claims were not “worth” the cost of the additional coverage. In fact, those with a \$500 deductible had about a 50 percent higher claim rate than those with a \$1000 deductible, by various measures that controlled for the fact that people with a \$1000 deductible cannot make a claim for a \$900 loss.⁵⁶

⁵³ *(Over)insuring Modest Risks*, 2 AMER. ECON. J.: APPL. ECON. 177 (2010).

⁵⁴ *Id.* at 196. To justify the lower deductible, a rational consumer would have to have a utility function that was so astronomically risk-averse that he would almost-literally never be able to get out of bed. In quantitative terms, buying the lower deductible is a rational economic decision only if one’s coefficient of relative risk aversion is between 1,840 and 5,064. Yet empirical studies estimate plausible values for the coefficient of relative risk aversion to be in the single digit range. Someone with a coefficient of relative risk aversion of 5000 would turn down a bet that offered a 50/50 chance of either losing \$1,000 or gaining *any amount of money* (including, say \$1,000,000,000,000). *Id.* at Table 3, p. 190. Instead, Sydnor’s preferred explanation for the purchase of unreasonably low deductibles is that consumers have inconsistent and imperfectly rational preferences that do not match those in the standard economic account. “Feelings about money given up for a purchase are segregated from attitudes towards surprise losses,” such that “loss aversion affects attitudes towards money paid when an accident happens (i.e., the deductible) but not the amount of money paid up front for the policy.” For an earlier behavioral explanation using prospect theory, see Eric Johnson, John Hershey, Jacqueline Meszaros, Howard Kunreuther, *Framing, Probability Distortions and Insurance Decisions*, 7 J. Risk & Uncertainty 35, 42 (1993) (explaining a payment within a deductible as a segregated loss that is highly disliked because the reference point is \$0, in contrast to the additional premium, for which the reference point is already far from \$0).

⁵⁵ The paternalism problem also becomes relevant at this point: this \$4.8 billion might be thought of as money well spent *given consumers’ actual, if inconsistent and imperfectly rational, preferences*. Or, it could be thought of as a cost of irrationality that society ought to take steps to overcome.

⁵⁶ Roughly 3-3.5% for the \$500 deductible, vs roughly 2% for the higher deductible. *Id.* at 198. It is important to control for the fact that those with a lower deductible can make claims (e.g., for between \$500 and \$1000) that those with a higher deductible cannot; thus, it is appropriate to use the rate of claims in excess of the higher deductible for

I may be able to get a better view at the ball game if I stand up, but this does not imply that *everyone* can simultaneously get a better view if we all do so. Similarly, Sydnor concludes that “[i]ndividual consumers could benefit financially by avoiding over-insuring modest risk. However, if all homeowners changed their behavior, the company would likely need to raise insurance costs or create a new higher deductible in order to separate the more and less risky consumers. . . . If all consumers had standard risk preferences, the new market equilibrium would not necessarily be welfare-improving for the customers.”⁵⁷

Along similar lines, consider the possibility of optimism bias, in which consumers mistakenly believe that they have a lower risk of some loss than is actually the case. One might naturally conclude that this would lead to an inappropriately low demand for insurance, and thus result in welfare losses from excess exposure to risk. But in an equilibrium model with asymmetric information, that conclusion no longer holds. In an elegant recent paper, Sandroni and Squintani show theoretically that overconfidence can actually *improve* welfare in the presence of adverse selection. That is, when some high risk insureds optimistically (but mistakenly) believe that they are low risk, they are less-inclined to purchase insurance than they would otherwise be. But that makes selection problems less severe, and the market reaches a better equilibrium as a result.⁵⁸ So efforts to “de-bias” consumers by giving them a better sense of the probability of loss might end up correcting one problem (overconfidence), only to exacerbate another (selection), in way that might well be welfare-reducing.

The moral of these examples is *not* that behavioral economics offers little or no scope for welfare-enhancing intervention. It is rather that, once we admit the possibility of non-standard motivations or imperfect reasoning, interventions need to be very carefully tailored to particular circumstances in order to be effective, and there is no simple route from identifying a behavioral flaw (itself a complicated endeavor) to recommending an appropriate regulatory policy. A significant example of equilibrium analysis with behavioral anomalies—one that we rely on heavily in our analysis (below) of the markets for extended warranties and credit life insurance—is the famous “shrouding” model of two-stage or ‘tied’ purchases, due to Gabaix and Laibson.⁵⁹ We summarize that model here, stressing its prediction that when

this comparison. Some of the increased claiming may be the result of moral hazard. Teasing out which is a complex matter that was not necessary for Sydnor’s purposes.

⁵⁷ *Id.* at 198.

⁵⁸ *Overconfidence, Insurance, and Paternalism*, 97 AMER. ECON. REV. 1994 (2007).

⁵⁹ Xavier Gabaix and David Laibson, *Shrouded Attributes, Consumer Myopia, and Information Suppression in Competitive Markets*, 121 Q. J. ECON. 505 (2006).

some actors are subject to a plausible behavioral anomaly, inefficient and discriminatory terms can survive in equilibrium.⁶⁰

In the shrouding model, a consumer has to make an initial purchase, and then *optionally* makes a secondary purchase that is somehow tied to the first. Gabaix and Laibson use examples such as a laser printer and replacement cartridges, a hotel room and telephone charges, and a car rental and a collision damage waiver. In the next part we discuss two additional examples: buying a car and purchasing credit life insurance on the loan, and buying a stereo and then purchasing an extended warranty. There are two kinds of consumers in their model—“myopes,” who don’t think about the possibility of future “add-ons” when they make their initial purchase, and “sophisticates,” who do. The initial purchase is made in a competitive market, where all stage-one prices of all sellers are completely observable; but the first purchase exposes the buyer to a subsequent purchase from the same seller, in a potentially non-competitive market in which the price is unobservable at the time the initial purchase is made (unless one inquires about it).

As Gabaix and Laibson observe, the second stage price is often significantly above the marginal cost of providing the good or service. We think it is helpful to think of the second stage purchase as taking place in a “situational monopoly” in which the seller has a captive market for that part of the purchase. One could presumably buy an extended warranty separately from the primary purchase, but this turns out to be very rare in practice, with the result that extended warranties are sold at decidedly supra-competitive, monopoly-like prices. The shrouded pricing model provides an explanation for why.

Suppose a firm tries to compete by offering a lower second-stage price than its rival—e.g., on extended warranties—and by alerting potential customers to the fact that its rivals charge more (“come buy from us—we charge less for our warranties”). Doing so has two consequences. First, it educates the rival’s sophisticated consumers, who will prefer to stay with the rival (which has lower base charge) and avoid the rival’s high add-on charges (by substituting a competitively-supplied extended warranty for that offered by the seller or, better yet, by not buying one at all and relying instead on savings or a credit card to replace the product if it breaks). Importantly, however, this advertising will have no effect on the

⁶⁰ By contrast, models with heterogeneously informed consumers but *no* behavioral anomaly suggest that inefficient pricing is unlikely to survive in equilibrium. See, Schwartz & Wilde, *supra* n. --., at 638, who conclude that “the presence of at least some consumer search in a market creates the possibility of a “pecuniary externality”: persons who search sometimes protect nonsearchers from overreaching firms.” Moreover, in their model, if at least one-third of consumers undertake comparison shopping, the market price will be close to the competitive price in market where all consumers are informed. *Id.* at 653.

rival's myopic consumers, who aren't paying attention to the second-stage transaction at all. Thus, competitive attempts to unmask rivals' high add-on prices will only succeed in transferring benefits from the rival to the rival's sophisticated customers, and will not do anything for the firm providing the educational information at all. Hence, there will be no reason for any firm to try to unmask its rivals' high add-on fees, which can then persist in equilibrium.

The shrouding model offers several important insights for the application of behavioral economics to the regulation of insurance. Most significantly, it shows how behavioral "flaws" don't just influence the consumer's decision about what/how much to buy.⁶¹ These flaws also shape the structure of competition between firms and the resultant market equilibrium. An analysis that focuses only on consumers' deviations from perfect rationality (or non-standard preferences) will miss the important properties of the equilibrium that results. Sadly, there is thus no short-cut from behavioral anomaly directly to policy recommendations: rather, as the previous examples also demonstrate, the behavioral anomalies have to be inserted into an overall model of market functioning to predict how policy can influence welfare.⁶²

Equilibrium analysis also bears on the paternalism problem, voiced most recently by Dan Schwarcz.⁶³ Suppose we conclude that consumers are not "mistaken" in many insurance purchasing decisions and that instead, they are motivated to purchase credit life insurance, flight insurance, collision damage waivers, or extended warranties by genuine (albeit irrational) fears or anxieties. It does not follow that consumers should over-pay for the insurance they purchase, as the shrouding model predicts and the evidence strongly suggests is the case. In other words, an equilibrium behavioral analysis might still suggest a market failure that regulation could potentially address, even if insurance is purchased for "legitimate-but-non-standard" reasons such as regret- or loss-aversion. The market failure arises not from consumer motivation per se, but from the way such motivations shape the resultant market equilibrium and reduce the ability of competitive market forces to protect consumers from overpaying. We discuss

⁶¹ Of course, this characterization assumes we have already decided that the anomalies should be corrected, rather than reflecting non-standard preferences that are nevertheless worth honoring or taking seriously.

⁶² Cf, George Loewenstein and Peter Ubel, *Economics Behaving Badly*, N.Y. TIMES, July 14, 2010, who explain that behavioral economics should complement, not substitute for, more substantive economic interventions. If traditional economics suggests that we should have a larger price difference between sugar-free and sugared drinks, behavioral economics could suggest whether consumers would respond better to a subsidy on unsweetened drinks or a tax on sugary drinks. But that's the most it can do.

⁶³ Schwarcz, supra note ___

this point further in explaining our policy recommendations for extended warranties and credit life insurance in the next part.

III. Three insurance examples.

As we have discussed, behavioral biases and information processing problems, like information problems, may lead to market failures in which the kind or amount of insurance that is actually purchased in the market does not match the kind or amount of insurance that is understood to be efficient (welfare-maximizing) by economic analysis. To date, policymakers have not explicitly used the concept of a behaviorally-based market failure as justification for insurance regulation, but it is likely that an implicit understanding of these behavioral regularities has provided at least some motivation for existing insurance regulation. For example, behavioral decision research tends to confirm regulators' judgment that people do not read and cannot understand insurance contracts and, thus, supports insurance regulators' traditional distrust of disclosure as the regulatory tool of choice.⁶⁴ Accordingly behavioral economics may improve our understanding of existing insurance regulation (much as it has improved our understanding of consumers' insurance purchasing decisions), and one task on the research agenda should be analyzing existing insurance regulation through a behavioral lens.

In this section, we identify three forms of insurance that, according to expected utility theory, are a bad deal for consumers, and we use insights from the behavioral research to help explain why these forms of insurance nevertheless are very popular. We then consider whether economists' traditional antipathy toward them ought to be reconsidered in light of this analysis and whether there is a market failure that insurance regulation offers a reasonable possibility of correcting, while taking into account equilibrium issues of the sort discussed in the prior section.

The three forms of insurance we will consider are extended warranties for consumer products, credit life insurance, and very low deductibles in health insurance. Two of these – extended warranties and low deductibles – have negative value in expected utility terms because the losses they protect against are small and the price charged for the insurance is high relative to the expected value, and rational expected utility maximizers shouldn't be risk averse at all over such small stakes. In both cases the

⁶⁴ For a persuasive survey and critique of disclosure regulation across a wide variety of fields, see Omri Ben-Shahar and Carl E. Schnieder, *The Failure of Mandated Disclosure*, <http://ssrn.com/abstract=1567284> (2010). Behavioral insights can confirm regulators' suspicions about disclosure, but their doubts about its efficacy long predate the advent of any behavioral research.

expected utility analysis approximates the exercise that Justin Sydnor conducted for the low deductible homeowners' insurance, which we described earlier. Credit life insurance is a bad deal for a different reason. The stakes can be high and, thus, worth insuring, just not when the cost is so high relative to the expected value, especially because there is a widely available, much better alternative: ordinary term life insurance.

A. Extended warranties for consumer products

An extended warranty is an optional contract, sold in connection with a consumer good, that provides the purchaser with a longer period of protection from the failure of the product than the standard warranty offered by the manufacturer. Data on extended warranties are difficult to come by. As a result, there is very little empirical social science literature describing their workings, despite the frequent criticism of extended warranties by economists and consumer advocates.⁶⁵ One recent estimate put the size of this market at \$16 billion, but that appears to be a largely impressionistic number, with no derivation given.⁶⁶ Better estimates are available for the UK—at least, for the consumer electric goods market—thanks to an investigation by the Competition Commission, which found that on total electric goods sales of £15-20 Billion in 2001, “18.5 million E[xtended] W[arranty]s were supplied . . . with a total value of nearly £900 million (including a valuation of free EWs), about 5% of total sales.⁶⁷ EWs were purchased by about one-third of all consumers who bought an electric good worth more than £50.⁶⁸ Extrapolating those figures to the US yields a rough estimate of about \$30 billion in electric goods sales in 2010, and about \$1.4 billion in extended warranties sold for these types of products.⁶⁹ The website

⁶⁵ Some economic theorists have modeled the market for extended warranties. See, e.g., Aidan Hollis, *Extended Warranties, Adverse Selection, and Aftermarkets*, 66 *J. Risk & Ins.* 321 (1999) (surveying theoretical literature, and arguing on the basis of an adverse selection model that sellers of primary goods should not be able to exclude third-party extended warranties). At least in some contexts, extended warranties can be used to price-discriminate among consumers, even when buyers are rational, by increasing switching costs. See Edward Iacobucci, *A Switching Costs Explanation of Tying and Warranties*, 37 *J. LEGAL STUD.* 431 (2008).

⁶⁶ “Extended Warranties,” *Warranty Week*, Nov. 21, 2006, available at <http://www.warrantyweek.com/archive/ww20061121.html> (suggesting that the total extended warranty market was worth \$16 Billion, but not specifying whether this is a stock measure of the value of warranties in force or an annualized flow).

⁶⁷ UK Competition Commission, *A report on the supply of extended warranties on domestic [household] electrical goods within the UK*, at vol 1. p. 3 (2003).

⁶⁸ *Id.*

⁶⁹ There is no precise US equivalent to the UK definition of household electric goods. We used Bureau of Economic Analysis Table 2.4.5, “Personal Consumption Expenditures by Type of Product” for 2010 available at (<http://www.bea.gov/national/nipaweb/TableView.asp?SelectedTable=70&Freq=Year&FirstYear=2008&LastYear=>

Warranty Week recently estimated that the market for automobile extended warranties in the U.S. represents another \$11.2 billion.⁷⁰

1. Are Extended Warranties a Bad Deal for Consumers?

Extended warranties sold as an add-on to the purchase of a consumer product are, in expected utility terms, the paradigmatic bad insurance deal.⁷¹ In contrast to low deductible homeowners' or health insurance policies, extended warranties are bad deal in an absolute sense, because they do not provide protection against any level of loss for which insurance at the prevailing price makes sense for a rational, expected utility maximizing individual.⁷² A low deductible is part of an insurance policy that also covers large risks, which is valuable to a risk-averse consumer. Extended warranties, by contrast, are not a part of anything; they are nothing more than very expensive insurance for risks that a rational consumer should not want to insure. The reason is simple: a rational consumer cannot be risk-averse for losses that are "small" relative to her overall wealth. Risk-aversion only applies to large losses, and for almost anyone buying a \$200 CD player or even a \$1,000 TV set, the amount of potential loss—the replacement cost of the item in question—is likely to be quite small in relation to assets or lifetime wealth.

Extended warranties differ fundamentally from the *manufacturer's* warranties that are included in the price of a consumer product. Manufacturers' warranties do have the potential to provide substantial value, but not because of their insurance function. Rather, the value of a manufacturer's warranty lies in the quality signal it sends. Consumers rationally conclude that the manufacturer would not offer a generous warranty if the product regularly failed within the warranty period and, thus, consumers appropriately prefer a product with a better manufacturer's warranty.⁷³

An optional extended warranty, sold at an additional cost, does not signal high quality. Indeed, our personal shopping experience suggests the opposite. We have found that, once we have decided to buy a particular TV/refrigerator/washing machine/sound system at a retail establishment, the sales person

2009) and included the categories Small Electric Household Appliances, Video & Audio Equipment, and Information Processing Equipment.

⁷⁰ See <http://www.warrantyweek.com/archive/ww20100909.html> (using A.M. Best

⁷¹ See, e.g., Cutler & Zeckhauser, *supra*; Schwarcz, *supra* at 27; Rabin and Thaler, *J. Econ. Perspectives*.

⁷² Except, possibly, for a purchaser who knows that she or he will use the product in an unusual manner, which is not considered misuse voiding the warranty, that poses a high risk of product failure. The ability of such an individual to buy the warranty at the regular price represents a market failure, not a justification for the market.

⁷³ Cf., A. M. Spence, *Consumer Misperceptions, Product Failure and Producer Liability*, 44 *REV. ECON. STUD.* 561 (1977); George Priest, *A Theory of the Consumer Warranty*, 90 *YALE L. J.* 1297 (1981).

who earnestly persuaded us of the high quality of the selected item disappears, and a “customer assistant” arrives with news of other disappointed customers whose very same TV/refrigerator/washing machine/sound system stopped working shortly after they bought them. Because the product might not actually be as good as it is supposed to be, the customer assistant explains, the store has arranged for an extended warranty that is available, at a small additional charge, to protect us from such disappointment.⁷⁴ This extended warranty is pure insurance (and almost pure profit for the store).

Consider a consumer who purchases a Sony 55" Class Bravia® EX620- Series LED LCD HDTV sold by Sears on line for \$1619.99.⁷⁵ According to the Sears website, the extended warranty on this item—dubbed the “3 year in-home master protection Agreement”—costs an additional \$349.⁷⁶ Table 1 evaluates the cost/benefit calculations for the extended warranty, showing that it is roughly twice as bad a deal as the low deductible in homeowners insurance that Sydnor investigated. It is important to note that these calculations are conservative for at least two reasons. First, they ignore discounting. Second, as Cutler & Zeckhauser point out, electronic goods tend to fall in price and increase in quality over time over

⁷⁴ This practice turns out to be called “double hitting” in the U.K. Retailers “stressed to [the U.K. Competition Commission] the action they take to stop unacceptable selling practices, which they have told [the U.K.C.C.] would alienate customers.” U.K. C.C. report at 40. The “unacceptable selling practices” include “double hitting,” providing “misleading information,” and “persisting in trying to sell an EW when the customer has declined the offer.” *Id.*

⁷⁵ See

http://www.sears.com/shc/s/p_10153_12605_05771742000P?blockNo=3&blockType=G3&prdNo=3&i_cnr=1314814734858 visited August 31, 2011; Sears does note that the price includes a manufacturer’s warranty for “Service & Support: Limited warranty - parts and labor - 1 year.”

⁷⁶ No information about any warranty is available on the main web page described above. Only after you have “checked out” (clicked the button signifying that you wish to purchase the TV), are you informed about the possibility of an extended warranty. This certainly constitutes an example of “shrouded” pricing. Moreover, although you can choose not to by the extended warranty, the default is that it is included; you have to check a “decline warranty” box to avoid paying for it. Here is how Sears describes the warranty:

Our coverage goes well beyond the original manufacturer's warranty. No extra charge for covered repairs includes all parts and labor. Cosmetic defects are covered for the first 3 years. Schedule service day or night by calling 1-800-4-MY-HOME. Repairs are done by a force of more than 10,000 Authorized Sears Service Technicians, which means someone you can trust will be working on your products. Fast Help by Phone - we call it Rapid Resolution - provides you with non-technical and instructional assistance. Think of it as a talking owner's manual. It also includes rental reimbursement and a 25% discount on the purchase of consumable parts like filters and blades ordered from Sear Parts Direct (1-800-252-1698). An annual Preventive Maintenance check can be scheduled at the customer's request. The No Lemon Guarantee and Product Replacement includes delivery and installation if applicable. Coverage can be renewed and is transferable.

The “5 year in-home master protection Agreement” costs \$519” (almost 1/3 the value of the TV set itself).

time, with the result that the option to repair the product rather than junk it in favor of a better/cheaper model becomes increasingly less valuable.⁷⁷

Table 1: Extended Warranty Calculations	
Assumptions	
TV Lifetime	5 years
Lifetime probability of repair ⁷⁸	20%
Annual probability of repair	$1 - (1-.2)^{1/5} = 4.3\%$
Prob. of repair in 2 out-years (not covered by manufacturer's warranty)	$1 - (1-0.43)^2 = 8.5\%$
Cost of Repair ⁷⁹	\$400
Results	
Expected Value of Warranty	$0.085 \times \$400 = \34.16
Cost of 3 year Warranty	\$349
Cost/Expected Monetary Value	$\approx 10/1$

2. Behavioral Economics and Extended Warranties

Why do so many people – for example, about 25% of the purchasers of consumer electronics in the U.K.⁸⁰ – buy something that is such a bad deal? Camerer et al describe one hypothesis in evocative terms. People who buy extended warranties are cognitively challenged “Homer Simpsons,” who mistakenly think the warranties are a good deal, perhaps because they overestimate the cost of a repair or the frequency with which products fail and misunderstand the value of insurance against such relatively small losses.⁸¹ We will call this the “mistaken calculator” hypothesis.

⁷⁷ Cutler & Zeckhauser, supra note __

⁷⁸ Source: Cutler & Zeckhauser, Table 5.

⁷⁹ This is a guess. Doubling the guess would reduce the cost/expected value ratio to 5:1, exactly the same as that for the low deductible in the homeowners policy that Sydnor investigated. Recall that the risk aversion needed to explain that choice in expected utility terms would imply that the person would be unwilling to pay \$1000 for a 50% chance to win \$1 trillion.

⁸⁰ Competition Commission, supra note __, at __.

⁸¹ See, Colin Camerer, Samuel Issacharoff, George Loewenstein, Ted O'Donoghue, and Matthew Rabin, *Regulation for Conservatives: Behavioral Economics and the Case for 'Asymmetric Paternalism'*, 151 U. PA. L. REV. 1211, 1254 n. 144.:

In a classic Simpsons episode, Homer was having a crayon hammered into his nose to lower his I.Q. (Don't ask.) The writers indicated the lowering of his I.Q. by having Homer make ever stupider statements. The surgeon knew the operation was complete when Homer finally exclaimed: 'Extended Warranty! How can I lose?'

Behavioral decision research also suggests a second hypothesis, under which consumers buy the warranties as an emotional risk management device that reflects their (irrational but real) aversion to both loss and regret. Because of mental accounting, people experience the extended warranty premium payment as a “cost” rather than a “loss,” so the premium payment is less painful than the potential failure of the product – which is experienced as a loss and, accordingly, is over-weighted because of the emotional distress associated with loss aversion.⁸² Regret aversion is a slightly different phenomenon that similarly increases the perceived value of an extended warranty. Regret aversion involves the present recognition that we will in the future evaluate our past decisions based on what actually happens, rather than (as in the expected utility analysis) based exclusively on what it is possible for us to know at the moment a decision is made.⁸³ Michael Braun and Alexander Muermann developed a model for insurance demand that adds regret aversion to the expected utility calculation and concluded that regret aversion leads otherwise rational actors to “hedge their bets” by buying insurance for low value losses and also, although this is not relevant to extended warranties, less insurance than they should for severe but infrequent losses.⁸⁴

A recent paper by Marieke Huysentruyt and Daniel Read (H&R) reports the results of survey research that provides some support for both the mistaken calculator and the emotional risk management hypotheses, while concluding that emotional risk management is likely to be the better explanation in the extended warranty context.⁸⁵ Using convenience samples that were weighted toward people with a greater immediate need for money and, thus, more disinclined than usual to spend money today to buy future protection, H&R asked people to imagine buying a washing machine and then asked two sets of questions that were directly related to an extended warranty offered in connection with that purchase. One set of questions elicited their evaluation of the expected financial value of the extended warranty.⁸⁶ A second set of questions elicited their assessment of the emotional benefits from purchasing the

⁸² Johnson et al, supra note ---.

⁸³ Following the classic article by Graham Loomes and Robert Sugden, *Regret Theory: An Alternative Theory of Rational Choice Under Uncertainty*, 92 *ECON. J.* 805 (1982), regret is associated with having made a *choice* that works out badly. In their terms, “compare the sensation of losing £100 as a result of an increase in income tax rates, which you could have done nothing to prevent, with the sensation of losing £100 on a bet on a horse race.” *Id.* at 808.

⁸⁴ See Braun & Muermann, supra note ___ at ___.

⁸⁵ See Marieke Huysentruyt and Daniel Read, *How do people value extended warranties? Evidence from two field surveys*, 40 *J. RISK UNCERTAIN* 197 (2010).

⁸⁶ These questions inquired into the fair price was for the warranty, the market price for the warranty, how often the washing machine would break down during the extended warranty period, and how much it would cost to repair the machine if it broke down.

warranty.⁸⁷ H&R also asked a third, unrelated, set of questions that measured the cognitive capacities of the participants.⁸⁸

The answers to all three sets of questions were correlated with the participants' predicted likelihood of buying the extended warranty. People who placed a higher financial value on the extended warranty were more likely to say they would buy it.⁸⁹ People who scored higher on the cognitive tests placed lower (but still inflated) financial values on the extended warranty and, thus, were less likely to say they would buy it. People who highly valued the emotional benefits were more likely to say that they would buy it. The first two correlations support the mistaken calculator hypothesis; the third correlation supports the emotional risk management hypothesis. Among these correlations, the emotional benefit assessment was the strongest.

Notably, the relationship between the emotional benefits reported by the individuals and their responses to the other two sets of questions was independent. In other words, the perceived emotional benefits strongly affected the willingness to buy the extended warranty, without affecting the expected financial value of the warranty. This same result holds true even for participants with higher cognitive capacities. Higher cognitive functioning participants were less likely to buy the warranty, but that effect came entirely through their lower estimates of the expected financial value of the warranty, not through their emotional benefit score. Put another way, even the higher cognitive functioning people had heterogeneous assessments of the emotional benefits of an extended warranty, and the differences in those assessments strongly affected their reported willingness to buy the warranty.

Taken as a whole, the H&R result supports the emotional risk management hypothesis more strongly than the mistaken calculator hypothesis as an explanation for the demand for extended warranties. Some people were willing to buy extended warranties because they greatly exaggerated the costs of repairs, but more people – including the cognitively advantaged – were willing to buy the

⁸⁷ Using a seven point Likert scale, they asked participants to agree or disagree with six statements about the warranty:

- It would give me peace of mind.
- If I didn't buy it and the washing machine broke down, I would feel a lot of regret.
- It would be comforting to have the protection of the warranty.
- Even without the warranty I would not worry about repair costs.
- I would feel more stress without the warranty.
- Hopefully I won't need a repair, but I would rather not take the risk.

Id. at 207.

⁸⁸ They used the Cognitive Reflection Test discussed in detail in Frederick, *supra* note ____.

⁸⁹ It was the predicted cost of the breakdown that most strongly affected the perceived financial value, rather than the predicted frequency of the breakdown. This is an example of probability neglect.

warranties because they highly valued the “peace of mind” the warranties provide. The logical extension of this finding is that people already know that the price for extended warranties exceeds the purely financial value. People are willing to pay that (high) price because they value the non-financial, emotional benefits.

This kind of result poses a challenge to the normative claims of the standard economic account, by identifying a plausible, consistent utility function for a kind of insurance that cannot be justified on the basis of declining marginal utility and risk aversion.⁹⁰ This account points toward a consumer sovereignty justification for some insurance products, despite the fact that expected utility theory would condemn them.

Pointing toward a justification and actually arriving there are two different things, however. The existing empirical evidence has not examined the degree to which sellers are able to manipulate consumers’ information or risk-perceptions. As H&R acknowledge, their research leaves out a key actor in real life: the salesman. We suspect that relatively few consumers would independently request extended warranties if they were not urged to buy them by sellers (though there may be more people who would continue to buy them in the future having first been persuaded to do so). At a minimum, the sellers are taking advantage of the availability heuristic (by highlighting the possibility that the product will fail) and the endowment effect (by selling the extended warranty in a second step, after the customer has decided to buy); quite likely they are doing even more to manipulate buyers.⁹¹ Moreover, even if regret-aversion is considered a “legitimate” motivation for buying extended warranties, it is not clear that banning the sale of such warranties would reduce welfare. After all, if there are no extended warranties available, the consumer cannot experience regret for having failed to purchase one. Thus, a policy-maker who was convinced that regret-aversion was the sole reason for consumer purchase of insurance product could presumably ban the insurance with no loss in welfare. (This is an arguably rare case where supply creates its own demand, and if we think the demand is welfare-reducing, we can eliminate the supply *and* the demand at the same time.)

Finally, even if we credit consumers with using insurance to manage emotions that are not the product of manipulation or supply-induced demand, the results of their insurance decisions are not necessarily good ones. Given the choice, a consumer surely would prefer to manage his or her emotions through the purchase of cheaper or “better” insurance (or alternatives) rather than “worse” insurance. So,

⁹⁰ Camerer et al; Schwarz

⁹¹ See the Competition Commission’s list of “unacceptable practices,” supra note ____.

for example, someone who buys an extended warranty because of loss or regret aversion would strongly prefer to buy an extended warranty at a competitive price rather than at the situational monopoly price that the shrouded pricing dynamic produces.

This last observation suggests a possible middle ground for regulation that may not require making an all-or-nothing choice between expected utility theory and consumer sovereignty. This middle ground would attempt to make extended warranties a better deal for consumers by addressing the market failure revealed by Gabaix and Laibson's shrouded pricing model. In the current marketplace, extended warranty purchasers do not receive the usual benefits of price competition, which H&R describe as follows:

The central feature of a functioning market is that because providers compete for the business of customers, prices get pushed downward, and consumers can get the best deal with the minimum cognitive effort – they do not have to combine breakdown probabilities and repair costs because warranty sellers have done it for them. To a first approximation, all consumers have to do is choose or reject the best deal amongst those available. If a consumer believes that a warranty is worth three times its objective value, but finds that she can buy it for one third of that price, she will buy it and obtain the benefits from knowing she has obtained a bargain as well as the warranty itself.⁹²

In theory, there should be plenty of competition in the market for extended warranties, but consumers cannot benefit from that competition because the shrouded pricing dynamic gives the seller the ability to charge a situational monopoly price. Considering potential regulatory strategies to address this situational monopoly is a useful exercise for its own sake, but it also sets the stage to return to the consumer sovereignty challenge to expected utility theory, as we will see.

a. The U.K. Competition Commission Reform

In 2003 the U.K. Competition Commission conducted an investigation of extended warranties sold in connection with consumer electronics, producing an extensive report that we have relied upon for some of our empirical assertions about extended warranties.⁹³ The Commission found that there was a market failure, but they, like Camerer et al, proposed an *information forcing* solution that runs counter to the assumptions of the shrouded pricing model.

The Commission's principle recommendation was to mandate the advertising of the extended warranty price along with the price of the covered product, thereby allowing consumers to shop on the

⁹² H&R at 217.

⁹³ See Competition Commission, *supra* note --..

basis of the combined price.⁹⁴ The Commission also proposed three reforms designed to reduce the likelihood of the customer being pressured into buying the extended warranty: (1) obligating the retailer to provide an offer of an extended warranty that could be accepted at any time during the first 30 days after the purchase (so the consumer could think about it); (2) requiring the warranties to be cancellable with full refund rights for the first 30 days and on a pro rata basis for the life of the warranty; and (3) obligating the retailer to provide an informational booklet at the time of the sale that would explain to the consumer how to get an extended warranty from an independent third party provider.⁹⁵ All four reforms were adopted by regulation, effective April 2005.⁹⁶

Taken together, these reforms reflect the Commission's conclusion that the excess profits from extended warranties result from a combination of (a) collusion among retailers to refrain from advertising the extended warranty prices and (b) improper selling practices. Because retailers know that they can make so much money from pressuring customers into buying overpriced extended warranties, the retailers collude to preserve their collective ability to charge excessive prices, or so the Commission seemed to suggest.

We are skeptical that retailers could successfully collude in this manner, however. There are hundreds (maybe even thousands) of retailers offering extended warranties, and it seems highly implausible that they could collusively agree to maintain high prices without chiseling. If making the price of the extended warranty more transparent would actually change the behavior of consumers, such that they would prefer to buy the product from the seller with the cheapest price for both the product and the warranty, then some retailer in the crowded and, to our eyes, intensely competitive consumer electronic product market would at least try competing on that basis.

For this reason, the behaviorally-informed shrouded pricing model offers a much more compelling story about how supra-competitive pricing could be sustained in equilibrium, without any resort to implausible assumptions about collusion. The shrouding model accepts the behavioral decision research finding that people regularly depart from the rational actor model, focuses on the fact that people are not all the same in this regard, and then incorporates an equilibrium analysis that takes into account the behavior of both buyers and sellers. Thus, at a minimum, it provides a much more compelling

⁹⁴ Id at: at ____

⁹⁵ A minority of the Commission would have limited point of sale extended warranties to a maximum of one year.

⁹⁶ <http://www.competition-commission.org.uk/inquiries/completed/2003/warranty/index.htm>; <http://www.legislation.gov.uk/ukxi/2005/37/contents/made> (the regulation as adopted allowed for a 45 day cancellation period).

explanation for the observed evidence of over-priced extended warranties than does the Competition Commission's story about seller collusion. Our skepticism is supported by the fact that profits from extended warranties on consumer electronic products in the U.K. continue to be very high, despite the reforms, and the U.K. Office of Fair Trading still sees the market as "unfair and uncompetitive."⁹⁷

b. The H&R Alternative Reform Proposals

Huysentruyt and Read finished their research and wrote their article several years after the Competition Commission reforms went into effect, and they had the benefit of the shrouded pricing model to consider when suggesting reforms. They suggested two reforms that are pointed more directly at the situational monopoly that results from the shrouded pricing dynamic: (a) requiring retailers to give consumers a choice among extended warranty providers at the point of sale, and (b) allowing retailers to sell only extended warranties that were selected through a competitive bidding process conducted "on behalf of consumers."⁹⁸

Although we agree with H&R's description of the market failure, we are skeptical that their proposals would be any more effective than the Competition Commission's reforms. Our skepticism is easier to explain for their consumer choice proposal. As long as a retailer gets to decide which extended warranties to offer, obligating the retailer to offer consumers a choice should not reduce the excess profits. If the retailer gets to decide which choices to provide to the consumers, extended warranty providers will have to compete to be selected by the retailer. The way to win that competition is by offering the highest commissions to the retailer, not by offering the cheapest price to consumers. Consumers may end up with a choice, but the choice will be among extended warranties sold at the monopoly price (and that award most or all of the monopoly profits to the retailer).⁹⁹

Our skepticism of H&R's competitive bidding proposal takes a bit more work to explain. Initially, we shared H&R's intuition that a competitive bidding process would drive out the monopoly profits. Our intuition shifted, however, when we realized that a competitive bidding process would only

⁹⁷ See, Rupert Neate, *OFT to look into extended warranties*, The Daily Telegraph, April 15, 2011, Business Section at 3 (reporting that the Office of Fair Trading (OFT) is going to examine the £750M market for extended warranties for electrical goods again; ne in four customers purchase extended warranties; and the warranties are still seen by OFT as "unfair and uncompetitive.") Prices of extended warranties have declined at traditional retailers since the reforms, but that appears to be the result of competition from internet retailers and big box stores. See Office of Fair Trade, *Evaluating the impact of the Supply of Extended Warranties on Domestic Electrical Goods Order 2005* at 5-6 (2008) (available at http://www.offt.gov.uk/shared_offt/reports/Evaluating-OFTs-work/oft1024.pdf).

⁹⁸ H&R, *supra* note – at --. Note that they discuss the shrouded pricing model.

⁹⁹ IO literature to cite here?

break through the situational monopoly if retailers did not have the ability to influence consumers' extended warranty buying behavior.¹⁰⁰

If the retailer can steer the consumer to the warranty paying the higher commission, then warranty suppliers will submit bids that build in high commissions. This point is pretty obvious. What is not as obvious is the following: even if all the retailer can do is influence whether the consumer buys a warranty (but not which warranty), warranty suppliers will submit bids that include high commissions.¹⁰¹ The reason is this: if retailers are able to influence whether the consumers buy the extended warranties (a reasonable assumption in our view), then the retailers, in effect, control access to those consumers who will only buy the warranty if the retailer engages in the effort needed to persuade them to buy it. Even if the consumer who decides to buy a warranty always chooses the lowest priced warranty available, warranty suppliers will have to build into their prices compensation sufficient to motivate the retailer to make the effort needed to persuade the consumer.

It would take a model that we have not created in order to work out all of the relationships among these assumptions in order to develop a thorough understanding of what will emerge from a competitive bidding process for the right to offer extended warranties to consumers. Nevertheless, we are confident that this price will reflect compensation to the retailer for "selling" the extended warranty to consumers who would not buy it if the retailer didn't put forth some costly effort to persuade them.

c. Addressing the Consumer Sovereignty Challenge

The analysis of H&R's competitive bidding proposal identifies a fatal weakness in the consumer sovereignty challenge to expected utility theory's condemnation of extended warranties. Recall that the consumer sovereignty challenge was based on research supporting the view that buying extended warranties represents "sophisticated consumer behavior to manage emotions such as anxiety, regret, and loss aversion" and "a sophisticated and informed strategy on the part of consumers to manage emotions that exist independently of insurers' (and their agents') sales efforts."¹⁰² Yet, as long as we accept that retailers have the capacity to influence the number of consumers who buy warranties, we can see that the consumer sovereignty justification actually protects (a) sales to people who have to be persuaded, (b) a sales context that provides significant opportunity to exploit behavioral biases, and (c) a product – the

¹⁰⁰ Is there something from the IO literature that we can cite here?

¹⁰¹ Note that heterogeneity in susceptibility to retailers' sales pressure could help to explain the shrouded pricing dynamic, if we assume that people either are unaware of their susceptibility or mistakenly believe that they will be able to resist the pressure this time.

¹⁰² Daniel Schwarcz, *Regulating Consumer Demand in Insurance Markets*, --- Erasmus L. Rev. --- (2010)

extended warranty – that is demonstrably not in the average buyer’s financial interest (even if some buyers can be persuaded that it will make them feel better). Separating the buying from the selling, and, in Arthur Leff’s words, the selling from the swindling is almost certainly an impossible task.¹⁰³ The U.K. Competition Commission’s reforms have not worked in this regard, and we doubt that any real world regulator can do a better job.¹⁰⁴ Moreover, the shrouded pricing model demonstrates that even if consumers value extended warranties for legitimate, if non-standard reasons, the market can still be distorted in a way that leads them to pay far more than the cost of providing the warranties in question. It is hard to imagine a “sovereign” consumer who would prefer that situation.

Rather than trying to change behavior that is structurally destined to be bad, it would be more effective to change the structure, by prohibiting retailers from selling extended warranties. If people really want extended warranties for emotional risk management purposes, they will find those warranties in all the ways that people find other things that they want: on the internet, in the yellow pages, through an advertisement. This is the reform that the Competition Commission recommended in 2009 for credit life insurance, as we will explain in the next section.¹⁰⁵ We do not know why they failed to suggest this obvious reform in the extended warranty market. We would have liked to think that developments in behavioral economics between 2005 and 2009 led to the change in position, but, alas, the Competition Commission’s credit life insurance report does not invoke or even allude to any behavioral explanations.¹⁰⁶

Short of this simple, easy to enforce structural solution, there is a more complicated and admittedly old-fashioned approach to addressing monopoly situations: price regulation.¹⁰⁷ To be safe, we would also prohibit any form of joint ownership of the extended warranty supplier and the retailer, and we would set a very low cap on the maximum commission that the retailer can earn from selling the warranties. That way a “sophisticated consumer” who wants “to manage emotions such as anxiety, regret, and loss aversion” with an extended warranty can do so, at a fair price, and everyone else will be protected from the swindling incentivized by an unregulated shrouded pricing dynamic.

¹⁰³ See ARTHUR LEFF, SWINDLING AND SELLING (1976).

¹⁰⁴ See Office of Fair Trade, Evaluating the impact of the Supply of Extended Warranties on Domestic Electrical Goods Order 2005 at 7 (available at http://www.offt.gov.uk/shared_offt/reports/Evaluating-OFTs-work/oft1024.pdf) (2008) (finding spotty compliance with the disclosure requirements, misinformation regarding consumer rights, and other sales practices inconsistent with legal requirements).

¹⁰⁵ See TAN __, *infra*.

¹⁰⁶

¹⁰⁷ For a survey of the regulation of monopolies, see Rick Geddes, *Public Utilities*, in ENCYCLOPEDIA OF LAW & ECONOMICS, available at <http://encyclo.findlaw.com/5940book.pdf>.

Under either approach – a ban or price regulation -- there would be general equilibrium effects. The list prices for products would likely increase, Gabaix and Laibson’s “sophisticates” would receive smaller subsidies from the “myopes,” and retailers whose success depends disproportionately on profits from extended warranties would suffer in relation to retailers whose success does not. The result may be to increase the share of internet commerce, as the British experience suggests that traditional retailers depend more on profits from extended warranties than internet sellers.¹⁰⁸ This latter possibility, together with the political clout of the numerous, geographically distributed traditional establishments (and their employees and suppliers) may provide the best explanation of why the Competition Commission failed to propose a ban on retailers’ sale of extended warranties.

B. Credit life insurance

Credit life insurance is highly profitable for sellers, but is typically a bad deal for those who buy it. The failure of competition to reduce sellers’ profits, and the success of a product that most consumers probably shouldn’t want in the first place, constitute anomalies that behavioral economics might be able to help explain. And indeed, behavioral economics does offer some—perhaps too many—explanations for how credit life insurance can provide such meager benefits at such a high cost. (We note that scholars and regulators have been skeptical about credit life since at least since the 1950s,¹⁰⁹ so the behavioral critique is not new in spirit, even if some of the substance is novel.) We’re convinced that improved regulation of credit life is possible, and the U.K. Competition Commission’s reforms provide a good

¹⁰⁸ See Office of Fair Trading, *supra* note – at 26

¹⁰⁹ See, e.g., Philip H. Peters, *How Should Credit Life Insurance be Regulated*, 1958 INS. L. J. 529 (suggesting problems were widespread); *Sunderland v. Day*, 12 Ill. 2d 50, 51 (Ill. 1957) (interpreting Ill. Small Loans Act to forbid a lender from requiring—as was apparently common—that borrower purchase credit life insurance as a condition precedent to the making of a loan); William T. Beadles, *Control of Abuses Under Credit Life and Health Insurance*, 26 J. INS. 1 (1959) (detailing a litany of abuses and suggesting regulations to counter them); Subcommittee on Antitrust and Monopoly, U.S. Senate, Committee on the Judiciary (discussed in Leland J. Gordon, rev. of Daniel P. Kedzie, CONSUMER CREDIT INSURANCE (1957), 25 J. INS. 77 (1958)) (finding significant “abuses in the consumer credit insurance business[,] which included sales of credit insurance far in excess of money loaned, failure to deliver the policy to the borrower, payment of excessive commissions, pyramiding of policies by requiring the borrower to purchase a second policy upon refinancing his loan without cancellation of the first policy, and failure to make a refund of unearned premiums.” National Association of Insurance Commissioners, *A Background Study of the Regulation of Credit Life and Disability Insurance* (1970) at 39-51 (chapter entitled “Credit Life Abuses”). Interestingly, the volume of scholarly literature on credit life seems to have peaked in the 1960s, and relatively little has been written about it since then.

start.¹¹⁰ Thus, in this context, behavioral economics offers an additional justification for a reform already proposed.

1. What is Credit Life, and What Does it Protect?

Credit life insurance was invented in 1917 by Arthur Morris.¹¹¹ It is purchased by borrowers to guarantee that if they die before repaying a particular outstanding debt (e.g., a mortgage or a car loan), the insurer will repay the lender. (Closely related products such as credit health or credit disability work in much the same way, except that they are triggered by an event other than the death of the insured.) The volume of credit life insurance sold in the US was about \$770 million in 2010; credit accident and health insurance amounted to an additional \$875 million.¹¹²

The first thing to note about credit life insurance is that it does not *directly* protect the borrower, her estate, or her heirs. The primary beneficiary (in a legal and economic sense) is the *lender*, who is protected from the risk that the debtor dies before repaying the loan and the estate cannot repay it. It is not immediately clear why a borrower should be willing to pay *anything* at all to avoid a risk to a financial institution with which he or she presumably has no close affinity.¹¹³

There are circumstances under which credit life insurance may provide benefits for the purchaser. Suppose the wage-earning spouse buys a car for \$15,000, financing it with a loan secured by the car. If the borrower dies before the car loan has been repaid and the surviving spouse cannot make the remaining payments, the lender can take back the car; and if the remaining debt is less than the car's resale value, the lender can come after the estate for the rest of what's owed. Thus, there is a risk that one's survivor will

¹¹⁰ See, e.g., U.K. Competition Commission, *Market investigation into payment protection insurance* at 13 (2009)(concluding that the best approach to regulating credit life and similar products is to simply prohibit “distributors and intermediaries from selling payment protection insurance to their credit customers within seven days of a credit sale.”)

¹¹¹ See NAIC *Background Study*, *supra* n. 109 at 2 (noting that Morris' purpose was to allow the extension of credit to workers with no security or collateral). See also Arthur J. Morris, *The Origins of Credit Life Insurance*, 1957 *INS. L. J.* 329.

¹¹² NAIC, *CREDIT LIFE INSURANCE AND CREDIT ACCIDENT AND HEALTH EXPERIENCE 2006-2010* (2011) at 4. The roughly 30% drop in the volume of net written premiums between 2008 and 2010 presumably reflects the effects of the recession and the decline in overall consumption expenditures. Somewhat surprisingly, however, there has been a clear downward trend in the volume of both credit life and credit accident/health since 2001, with a drop-off of 62% over this period.

¹¹³ The lender and insurer have many other ways of protecting against this risk, of course, beginning with charging a higher interest rate to reflect the risk that the borrower would die before the loan was repaid. Indeed, one plausible explanation for the existence of credit life insurance is that it offers a legal way to charge risky borrowers a higher interest rate, without running afoul of usury laws.

have to repay the loan, and this risk does impinge on the utility of the person buying the insurance, thereby providing at least a superficially plausible motivation for buying credit life insurance. Credit life replaces the payments remaining at the time of the borrower's death, eliminating that risk that the deceased's estate will have to make those payments.

Credit life insurance is thus different from extended warranties or low deductibles for two reasons. First, the amounts at stake in credit life insurance are often large enough relative to overall wealth that a rational consumer might conceivably find insuring these risks attractive. That is generally not the case for our other two examples, where the size of the risks involved is so much smaller. Second, the value of credit life depends not only on the insured's risk aversion, but also on his altruistic concern for the welfare of his beneficiaries, which makes it more difficult for an outside observer to be certain when credit life insurance is a bad deal.¹¹⁴

2. Is Credit Life a Bad Deal for Consumers?

Under ideal circumstances, credit life offers a way for borrowers to protect their survivors against the risk of having the borrower's estate drained by paying off a loan after the borrower dies. As many have noted, credit life is not a particularly good way to manage this risk—ordinary life insurance, if it is available, is typically both dramatically cheaper and more flexible, since proceeds are not dedicated to repayment of a particular loan.¹¹⁵ This flexibility is especially valuable when the deceased borrower's estate is insolvent or if the loan is non-recourse. In either case, the debtor's family or other chosen beneficiary, not the creditor, gets the money, surely the result that is more consistent with the altruistic justification for the purchase of life insurance.

¹¹⁴ That is, credit life—and indeed all life insurance—does not pay the insured, but rather his or her beneficiaries. Their utility matters to that of the insured, but only indirectly. Thus, although we can place plausible bounds on risk aversion, we cannot as readily put bounds on altruism from sources outside of insurance demand. For an attempt to do so using insurance data, see B. Douglas Bernheim, *How Strong are Bequest Motives? Evidence Based on Estimates of the Demand for Life Insurance and Annuities*, 99 J. Pol. Econ. 899, 900 (1991) (concluding that most individuals are significantly “motivated by a desire to leave bequests”).

¹¹⁵ Many sources note that if it's available, ordinary life insurance is typically a much cheaper way to cover the risk that credit life also insures against. See, e.g., State of Wisconsin Department of Financial Institutions website, http://www.wdfi.org/yymm/brochures/credit/credit_insurance.htm (suggesting that “credit insurance is expensive in comparison to other forms of insurance” and offering a chart showing that a typical policyholder, aged 30 and in good health, could expect to pay \$342 per year for \$50,000 of credit life insurance, while the same amount of term life—which of course pays cash, and is not restricted to the repayment of a particular debt—would cost only \$70, only one-fifth as much.)

Moreover, some versions of credit life are even less defensible. For instance, many subprime mortgages were sold with so-called “Single Premium Credit Life,” in which the total premium for the life of the policy is rolled into the initial mortgage. This meant that

[t]he borrower then pa[id] interest on this amount for the life of the loan and typically ha[d] not even begun reducing the loan’s principal balance by the time the five-year credit life insurance coverage period expire[d]. Consequently, when a borrower move[d] or refinance[d] out of a subprime loan after five years, all of the premiums for the terminated insurance [were] . . . stripped directly out of the borrower’s home equity.¹¹⁶

Financing the entire credit life premium, rather than paying it month-by-month, thus worked out to be a very poor deal for virtually every consumer.

Many other credit life practices have been highly criticized for over 50 years. Among the abuses discussed in a report by the National Association of Insurance Commissioners report in 1970¹¹⁷ were: excessive coverage (selling coverage for more than the amount borrowed), failure to refund unearned premiums when the debt was paid earlier than required, coercive selling practices, bad faith claims-adjusting, failures to inform the policyholder of coverage,¹¹⁸ overcharging, and a host of other practices. While regulatory changes beginning in the 1960s attempted to restrict the most blatant of these abuses,¹¹⁹ their efficacy is unclear, and at least some of these practices continue in some jurisdictions.

Rather than focusing on the worst practices, however, it’s probably more relevant to consider a typical policy. Unfortunately, data on a “typical” product are not easy to come by,¹²⁰ but the details of one assertedly representative example are furnished by the Wisconsin Department of Financial Institutions. Using this example, supplemented by some actuarial data, we can do a conservative back-of-the-envelope calculation on the payback from an average credit life insurance policy, as summarized in Table 2.

¹¹⁶ Coalition for Responsible Lending, *Quantifying the Economic Costs of Predatory Lending* (2001), available at <http://www.selegal.org/Cost%20of%20Predatory%20Lending.pdf>. Under pressure from regulators and public opinion, the worst of these practices were abandoned by most sub-prime lenders in the mid-2000s.

¹¹⁷ For an extensive discussion, see NAIC Report, *supra* n. 105 at 39-52.

¹¹⁸ Borrowers were sometimes sold policies bundled with the primary loan, and were not even informed that they were being charged for coverage. In such cases, the estate of a borrower who died would not know to make a claim on the insurer.

¹¹⁹ NAIC Report at 52-87.

¹²⁰ This in itself is interesting. Much as Dan Schwarcz found with home insurance, it appears to be very difficult to shop for credit life insurance on-line: we were not able to uncover any recent rate quotes or sample policies.

Table 2: Hypothetical Credit Life Valuation	
Assumptions: ¹²¹	
Male, 35	Sex, Age
\$15,000	Amount of car loan
4	Years to repay
\$2,917	Interest/finance charges ¹²²
\$265	Cost of credit life
\$8,172	Average Balance owed at death, if death occurs ¹²³
0.00175	Annual probability of death ¹²⁴
0.0072	Total probability of death during 4 year life of loan
Results	
\$58.84	<i>Expected</i> balance owed at death
\$20.98	Expected interest/finance charge ¹²⁵
\$79.82	Total Expected Payout from Credit Life
Ratio: Premium Cost/Expected Payout = 3.3:1 ¹²⁶	

Suppose a 35 year old male in average health borrows \$15,000 to purchase a car, with no down payment. According to the Wisconsin Department of Financial Institutions, a typical credit life insurance policy costs the borrower \$265. That amount protects an average balance owed—over the 48-month life of the loan--of \$8,170. The average 35 year old male stands a 0.72% (0.0072) chance of dying before age 39. Even assuming that the entire interest and finance charges would still be owed if the borrower died, the purchase of credit life insurance would prevent an expected monetary loss of only \$79.82. Of course, one should not expect that premiums would be equal to the expected payout, since such actuarially-fair

¹²¹ Wisconsin Dept. of Financial Institutions, http://www.wdfi.org/ymm/brochures/credit/credit_insurance.htm, viewed Aug. 6, 2011.

¹²² Wisconsin DFI apparently assumes an effective annual interest rate of 9.4%.

¹²³ Assumes borrower dies, on average, at month 24, half-way through the life of the loan. (We inflate the value of credit life insurance by not discounting future cash flows to present value. Were this amount to be discounted to its present value—as seems appropriate—it would be 20 percent smaller.)

¹²⁴ Source: <http://www.ssa.gov/oact/STATS/table4c6.html> for annual death probabilities.

¹²⁵ Wisconsin DFI apparently assumes that the entire stream of interest payments are protected by credit life, which implies that the appropriate number is $\$2,917 \times 0.0072 = \20.98 . But this is clearly conservative. A borrower who dies at month 24, owes only the interest on the remaining balance outstanding, which is roughly one-half of the total interest. (Again, since the interest would have been paid over the 24 months following the borrower's death, the present value of the remaining interest payments, as of the date of death is only \$797.80, when discounted at the borrowing rate of 9.4 percent. That amount discounted to the date the loan is signed is only \$667.)

¹²⁶ With (appropriate) discounting of the principal and interest payments insured by credit life, this ratio would be only 5:1%.

pricing could not cover any of the other costs associated with running the insurance company. But at just over three to one, the ratio of expected payout to premium cost is extraordinarily low, not as low as the one to five ratio that Sydnor found for low deductibles in homeowners' insurance, but still much too low to result from anything approaching rational behavior. Only someone who assigns astronomically high value to the wealth or consumption of his heirs should find this kind of ratio appealing. Even then, as noted earlier, there are typically much cheaper ways to protect against this kind of risk than through credit life.

Further proof of the problematic nature of credit life comes from data on industry loss ratios, which are calculated by dividing incurred losses by earned premiums.¹²⁷ According to state-by-state data compiled by the National Association of Insurance Commissioners (NAIC) in 2009, the loss ratio on credit life insurance averaged 44.1% for the US as a whole in the period 2003-2007.¹²⁸ Louisiana, Nebraska, South Dakota and Nevada all had loss ratios below 33%, and even the best states—Virginia, New York and Vermont—had loss ratios of only about 55%. Compared with a loss ratio of over 90% for group life insurance,¹²⁹ it's pretty clear that credit life purchasers are not getting a good return for the premiums they pay. And these low loss ratios continue, despite the NAIC's proclamation, in 1959, of a resolution that "provided that any loss ratio for credit life insurance below 50 percent would be considered to produce an excessive rate,"¹³⁰ and of attempts to enforce such a minimum over the succeeding 20 years.

To recap: credit life looks to be a bad deal for consumers for several reasons. First, even in principle, it's not clear why borrowers should want it, although a strong bequest motive could explain some of the demand for credit life. Second, there are often substantially cheaper ways of covering the same risks covered by credit life. Third, the worst versions of credit life are virtually certain losers for insureds, and even average policies look to be a bad deal, unless consumers place extraordinarily high

¹²⁷ If a credit life insurer pays out \$100 in losses in a given year and collects \$150 in premiums, its loss ratio is 2/3. From a consumer's perspective, the higher the loss ratio, the better, other things equal. Low loss ratios suggest that the premiums consumers pay are too high relative to the coverage they receive for incurred losses. (An actuarially-fair product would have a loss ratio of 1, which would of course leave no room to cover expenses).

¹²⁸ This is the weighted five-year aggregated loss ratio, using states' credit life losses as weights and was computed from data in the NAIC report. Correcting for fade rates(???) or using a shorter 3-year window does not make a substantial difference. The standard deviation of the loss ratio across states was 8.6%.

¹²⁹ The highly profitable nature of credit life is underscored by the virtual absence of any underwriting requirements for such policies. See, e.g., *U.S. Credit Life Ins. Co. v. McAfee*, 630 P.2d 450 (Wash. Ct. App. 1981)(insurer's failure to ask about policy holder's medical history did not bar recovery by insured's estate, even though policyholder knew she had cancer when she applied for credit life policies).

¹³⁰ NAIC Report, *supra* n. 109 at 69.

value on protecting their heirs. Finally, the very low ratio of claims paid to premiums collected implies that consumers are not getting enough back for their premium dollars.

3. Behavioral Economics and Credit Life Anomalies

Credit life insurance thus presents regulators with two related anomalies: first, why is it purchased when it apparently provides consumers with such meager benefits at such a high cost; and second, how are sellers able to earn such high profits over such a long period of time, something that should be impossible in a competitive market? Presumably, the market is not actually competitive—but why not?¹³¹

We stress that nobody really knows the answer to these questions. The evidence that credit life is dramatically over-priced is strong, but explanations for the over-pricing are largely speculative. Credit life has attracted little scholarly attention (even less than extended warranties), and we are unaware of any studies analyzing the motives for its purchase. Thus, all we can do is speculate.

Consumers' willingness to buy credit life at supra-competitive prices might be a function of the complexity of the transaction and the cognitive limitations of most borrowers. After all, valuing credit life insurance requires working through not only expected values and present values/discounting, but also risk and insurance, all of which are computationally troublesome to many consumers. It's also possible that the availability heuristic, affective clouding, and anxiety might color consumers' decisions to buy credit life, which insures against the consequences of a "loaded" event—one's own death. In addition, behavioral research confirms what life insurance agents have always known: people respond to "accountability" priming.¹³² While these explanations are plausible, as are many others, we stress that there is no empirical work that we know of that attempts to measure or explain consumers' deviations from rational behavior in this context.

Moreover, none of these plausible explanations seem capable of explaining the second anomaly. Given the large number of sellers and the fungibility of the product itself, market forces should drive the price of credit life close to the cost of providing it. Even if consumers find the product difficult to understand, or are motivated by anxiety about their own death, they should still find cheaper policies

¹³¹ The UK Competition Commission report on "Payment Protection Insurance" (PPI, the British equivalent of Credit Life), concluded that there was a marked lack of competition in this market. *Competition Commission Report*, *supra*, n. 110 at 78 (describing lack of competition in market for PPI). The report did not invoke—or even allude to—any behavioral explanations for the lack of competition it observed in the British PPI market.

¹³² Tetlock research.

preferable to more expensive ones, so a seller willing to cut prices by a small amount should be able to generate a substantial increase in business. Overpricing, then, should not be a stable equilibrium; but as the sources cited earlier¹³³ make clear, the problem has persisted for at least the last 50-60 years, if not longer.

Our preferred explanation for the joint anomalies relies on a marriage of industrial organization and behavioral economics: the “shrouding” model of Gabaix and Laibson we discussed earlier.¹³⁴ Credit life is typically sold as an add-on to the financing of a primary purchase (a house, car, or other substantial consumer durable), by the entity making (or financing) the original sale—the car dealership, retailer, etc.¹³⁵ We take some comfort from the fact that the situational monopoly problem in credit life has been understood for a long time. Writing in 1958, Philip H. Peters, a Vice President at John Hancock Life Insurance, diagnosed the problem as follows:

[A]buses [of consumers] are possible because *borrowers who take out personal loans or who buy on time are a captive insurance market*. Their lack of knowledge, their need or their diffidence makes them receptive when the lender or dealer suggests that the loan be insured, and they are usually unable to defend themselves against excessive charges or other overreaching. In these circumstances, competition among insurance companies does not protect the borrower. Insurers are competing for the lender’s patronage, not the borrower’s; the lender is interested in a high premium because his commission or dividend will be higher if the premium is larger.¹³⁶ (Emphasis supplied)

That Peters’ story is so close to the modern one suggests that behavioral economics is not strictly necessary to explain the problems that plague the market for credit life insurance. But can behavioral economics be useful in shaping policy interventions to correct the problems diagnosed above? Our answer is a definite “Maybe.”

Just as with extended warranties, the shrouded pricing diagnosis leads to a simple prescription: banning the sale of credit life insurance by anyone connected with selling the associated credit. As we

¹³³ See sources cited *supra* n. 109.

¹³⁴ Gabaix & Laibson, *supra* note 9.

¹³⁵ We lack data for the US, but the UK Competition Commission Report suggests that stand-alone sales of PPI “are very small compared to the total number of PPI policies sold by distributors. . . . [T]he stand-alone market accounts for less than 0.5 per cent of total P[ersonal]L[oan]PPI sales, and less than 0.1 per cent of total C[redit]C[ard]PPI sales[]. . . . [Even at] a little under 9 per cent[], the extent of M[ortgage]PPI policies sold on a stand-alone basis is still very small.” *Id.* at 56. We strongly suspect the same is true for the US.

¹³⁶ *How Should Credit Life Insurance be Regulated?*, 1958 INS. L. J. 529, 530 (1958). Neither Peters nor the UK Competition Report, *supra* n. 110, invoke consumer irrationality to explain the absence of competitive pricing in Credit Life.

have already noted, the U.K. Competition Commission proposed just this kind of reform. Although they did so without the benefit of behavioral economic analysis, the behavioral analysis provides further support. (Hence the “maybe” rather than a clear “yes.”) As with extended warranties, price regulation is another potential solution, but the market for term life insurance is so robust and so competitive that it would be much better simply to shift to that market whatever real demand (as opposed to swindling) there is for credit life insurance.

C. Low deductible health insurance

Like the homeowners insurance investigated by Sydnor, health insurance is commonly sold with low deductibles that do not make good sense in expected utility terms. Indeed, the standard economic case against low deductible health insurance is even stronger than that against low deductible homeowners’ insurance. The difference comes from the impact that health insurance has on prices for medical care, as Martin Feldstein explained back in the early 1970s.¹³⁷ Homeowners’ insurance pays for goods and services that most people, most of the time, buy with their own money and, thus, the size of the deductible in homeowners insurance has no measurable impact on the prices that people pay for anything other than the homeowners insurance itself (with the interesting possible exception of a regional construction market after a natural disaster).

The health care market is very different in this regard. Even in the 1970s most people bought most of their most expensive medical care through health insurance,¹³⁸ and the “out of pocket” share of all U.S. health care spending has continuously declined since then.¹³⁹ Buying health care through insurance increases the price of care (while reducing the perceived price to the consumer), which reduces social welfare by attracting excess resources to the health care sector.¹⁴⁰ Negotiated prices and other aspects of managed health care have counteracted this price effect of health insurance to some degree, but we are not aware of any serious argument that managed care will ever be able to make the price effect go away.¹⁴¹

¹³⁷ Feldstein, *supra* n. 26

¹³⁸ *Id.*

¹³⁹ See Center for Medicare Services, National Health Expenditure Data Fact Sheet, at Table 3, “National Health Expenditures, Levels and Average Annual Growth from Previous Year Shown, by Source of Funds, Selected Calendar Years 1960-2009,” p. 3 (showing that the increase in out of pocket spending per year has consistently been smaller than the increase in total health care spending in the U.S.), available at (https://www.cms.gov/NationalHealthExpendData/25_NHE_Fact_sheet.asp) (tables are in the “NHE tables” in the downloads section at the bottom of the page).

¹⁴⁰ Feldstein, *supra* note -- at

¹⁴¹ Recent working paper on Medicaid HMO reducing costs by price effects not quantity.

This means that low deductibles in health insurance are a bad deal (in expected utility terms) on an individual basis for the same reasons as low deductibles in homeowners insurance, and an even worse deal collectively because of the distorting effect on health care prices, with all of the resulting impact on the allocation of goods and services in the larger economy.¹⁴²

Despite the strong economic case against low deductibles in health insurance, people persist in purchasing health insurance with low deductibles. It is not just cognitively challenged Homer Simpsons who do this. We are willing to bet that most academics and professionals reading this article have a health insurance plan with a lower deductible (if any) than their homeowners and auto insurance policies and that, if the plan has a deductible at all, the deductible does not apply to their most likely health expenses: office visits and prescription medications. These expenses almost certainly are subject to co-pays, but the amount of those co-pays will be small enough to make the office visits and most prescriptions a financial non-event. Some readers may blame their employers for giving them bad choices, but we think that employers are providing the low deductible plans that people prefer.

From an expected utility perspective, the truly foolish form of health insurance is a low deductible policy with an annual or lifetime cap. That form of health insurance provides too much of the least valuable form of coverage and not enough of the most valuable. Yet, such policies were widely sold to employer groups until the Affordable Care Act prohibited lifetime and annual caps. And, despite the prohibition, the very worst examples of this insurance – “mini-med” policies with very low annual caps –

¹⁴² There is an argument that, at least for high income individuals, a low deductible, employer-provided health plan makes sense because of the tax exclusion. We do not think this argument works. The argument goes as follows: Even if the extra premium paid for the low deductible policy is not “worth it” in expected utility terms, the fact that the extra premium is paid out of pre-tax wages, while the deductible is paid out of post-tax wages, changes the analysis. So, for example, if the annual premium for a policy with an annual \$250 deductible is \$1000 more than the annual premium for a policy with a \$1000 deductible, I am better off spending that extra \$1000, pretax, on health insurance, because the government will take \$350 in taxes if I don’t. So, because of income taxes, the low deductible policy “really” costs me only an additional \$650, and that is worth it in order to avoid paying an additional \$750 in expenses below the deductible. There are three responses to this tax argument. First, it is sensitive to the marginal tax rate and, thus, doesn’t apply equally all the way down the wage scale. Second, it makes an implicit assumption that the tax discount on the premium is enough to make the expected value of the lower deductible equal to or greater than the discounted premium. That is a really complicated question to which there is not an obvious answer unless you are certain that you will spend the full deductible either way and, even then, the argument requires ignoring the systemic impact of low deductibles on health care prices. Finally, most employers (at least most universities) provide their employees a mechanism to set aside money on a pre-tax basis that can be used to pay for expenses within the deductible (and also co-pays and co-insurance and even some non-covered expenses). Those alternative mechanisms take the tax argument almost completely away. (We say “almost” because of the hassle factor of using these accounts.)

are still part of some very large employers' plans because of waivers given by the Department of Health and Human Services.¹⁴³

What is going on? There has been remarkably little behavioral research on health insurance choices, so, as with credit life insurance, our explanations represent hypotheses based on behavioral decision research largely conducted in other contexts.

Two obvious explanations for low deductibles are the loss and regret aversion already discussed in relation to extended warranties and homeowners insurance.¹⁴⁴ Of these two, the loss aversion explanation seems likely to be stronger explanation for the preference for low deductibles in health insurance. (Regret aversion provides a better explanation for lifetime and annual caps,¹⁴⁵ but we are not analyzing those health insurance features here.) The key feature of loss aversion is the declining marginal *disutility* of losses, meaning that the first dollar of loss hurts the most and each additional dollar of loss hurts progressively less.¹⁴⁶ Loss aversion leads people to prefer to take their losses all at once rather than in a series of smaller amounts. In technical terms, people prefer to *aggregate* their losses rather than face them as set of *segregated* losses of the same total amount.¹⁴⁷

Our sense is that people (except the “young invincibles”)¹⁴⁸ expect to consume health care repeatedly, so that choosing a high health insurance deductible represents a choice to experience a series of losses with comparative certainty. By contrast, they expect a consumer product to fail relatively infrequently, if at all, so that choosing not to buy an extended warranty represents a choice to be exposed only to the possibility of a single loss. So, too, with choosing a higher home insurance deductible, because damage to people's homes or valuable personal property is much less frequent than consuming health care services. As a result, choosing a low deductible health insurance policy is more likely to aggregate losses than buying a low deductible home insurance policy or extended warranty.

The health insurance context has other features that also explain the strong preference for low deductibles. Receiving health insurance as an employee benefit, with the employee's share (if any)

¹⁴³ NYT story on mini-med waivers.

¹⁴⁴ See Cutler & Zeckhauser, *supra* note --- (explaining in the context of health insurance that prospect-theoretic preferences for outcomes, e.g., loss aversion coupled with risk seeking on losses, make individuals eager to avoid small losses”).

¹⁴⁵ See Braun and Muermann, *supra* n. 38.

¹⁴⁶ See Johnson et al, *supra* n. 24 at ___ for a chart and excellent explanation of this point, which is a central feature of prospect theory.

¹⁴⁷ *Id.*

¹⁴⁸ See Baker & Siegelman, *supra* note --

deducted directly from wages, favors choosing a low deductible plan, by mentally distancing the employee from the higher premium associated with the low deductible. Also, by law all employees must pay the same amount for a health plan, regardless of age or other predictor of health risk. In that situation, lower deductibles represent a transfer of wealth from lower to higher risk employees, with most of the benefits of that risk transfer going to employees with *moderate* health problems.¹⁴⁹ All other things being equal, moderate risk employees are likely to be older, more influential, and more likely to pay attention to the details of their health plans than low risk employees. Thus, employers may be more inclined to take the preferences of employees with moderate health problems into account in designing the plans. (Our intuition is that very high risk employees, or employees with very high risk family members, are not likely to be doing things to call their situation to their employer's attention.)

In addition, some people may understand a low deductible health insurance policy as a commitment savings device. Because there is greater concern about the long term consequences of skimping on health care than of skimping on repairing a consumer good, a house, or a car, such a commitment savings device is likely to be seen as more valuable for health care than for accidents to consumer products or houses or cars.¹⁵⁰

There are two other institutional differences between health insurance and other kinds of insurance that, although they cannot explain how low deductible health insurance policies became popular, can help explain why low deductible policies are difficult to dislodge once widely in place. First, low deductible policies make life easier for health care providers, who are likely to have some influence on the health insurance choices of their patients. It is easier to collect a predictable, small copayment from a patient, and the balance from an insurer, than it is to figure out whether an expense is within a deductible and then collect full or partial payment from the patient (who may or may not pay the bill).¹⁵¹

¹⁴⁹ Raising the deductible does not have as large an impact, relative to benefits, for beneficiaries with very expensive medical problems, because those employees can count on exhausting the deductible relatively quickly, and the levels of deductibles that are common in employment based plans is low compared to the costs of an expensive health care problem.

¹⁵⁰ Cf. *Benefit-based Copays in the Real World: The Employer Perspective*, 12 S353 (November 2006); John J. Mahoney, *Reducing Patient Drug Acquisition Costs Can Lower Diabetes Health Claims*, 11 Am. J. Managed Care S170 (August 2005) (reducing out of pocket expenses for diabetes drugs and devices reduced pharmacy costs and emergency room visits). [Note that we have not carefully analyzed these reports nor looked widely for counter-examples.]

¹⁵¹ A 1970s era childhood job of one of the authors was stuffing the envelopes for the monthly bills sent out from a Marcus Welby style family practitioner office, before the widespread dissemination of low deductible health insurance that covered physician visits. If Dr. Dad did not get paid on the day of an appointment, it was often difficult to get paid at all, and always difficult to get paid in a timely manner.

The business staff in health care offices let patients know what kinds of insurance they like; it seems likely that this feedback affects patients' choices.¹⁵² Second, because so many ordinary health care expenses are generally not subject to deductibles, people do not know what health care services cost and, thus, they don't know what to expect if they switch to a high deductible health insurance plan. This lack of knowledge taps into ambiguity aversion.¹⁵³

In addition to these more familiar behavioral and institutional explanations, health insurance may implicate a very different behavioral mechanism that Phillip Tetlock has called sacred value protection. Experimental research by Philip Tetlock and others has explored how people struggle "to protect sacred values from secular encroachments" and, thus, actively resist "reducing all values to a single utility metric."¹⁵⁴ As part of this effort, people are motivated to "deny that we can compare certain things – in particular, things of finite value with things that we are normatively obligated to treat as infinitely important," leading to what Tetlock calls "taboo trade-offs."¹⁵⁵ What is and is not "sacred" changes over time and place. For example, at the time of the U.S. Civil War it was acceptable for the family of a young man who was drafted to pay another man to serve in his place. By the time of World War I, that was taboo.¹⁵⁶

Health, especially the health of a loved one, likely represents a sacred value for many people, and the perceived connection between health and health care may well be close enough to make health care itself something approaching a sacred value. If so, choosing between health care and money could be a taboo tradeoff. As experimental research and introspection both confirm, even being asked to contemplate a taboo trade-off can be experienced as morally corrosive.¹⁵⁷ Accordingly, it stands to reason that people will pay to avoid having to face such a trade-off. Buying a low deductible health insurance

¹⁵² Cf., Rebecca Adkins Fletcher, *The Political-Economy of Health Care Reform: Contextualizing Health Care Access and Affordability among Economic Insecurities and Disparities for Working Families and Women* (April 2011 draft) (describing the different treatment that workers with "good" and "bad" insurance received from physicians' office staff).

¹⁵³ See Tom Baker, Alon Harel, and Tamar Kugler, *The Virtues of Uncertainty in Law*, at ___ (collecting literature on ambiguity aversion).

¹⁵⁴ Philip E. Tetlock, Ori V. Kristel, S. Beth Elson, Melanie C. Green, Jennifer S. Lerner, *The Psychology of the Unthinkable: Taboo Trade-Offs, Forbidden Base Rates, and Heretical Counterfactuals*, 78 *J. of Personality and Social Psychology* 853, 853-54 (2000). See also Jon Baron on "protected values."

¹⁵⁵ Philip E. Tetlock, Ori V. Kristel, S. Beth Elson, Melanie C. Green, Jennifer S. Lerner, *The Psychology of the Unthinkable: Taboo Trade-Offs, Forbidden Base Rates, and Heretical Counterfactuals*, 78 *J. of Personality and Social Psychology* 853, 854 (2000).

¹⁵⁶ *Id.*

¹⁵⁷ Philip E. Tetlock, Ori V. Kristel, S. Beth Elson, Melanie C. Green, Jennifer S. Lerner, *The Psychology of the Unthinkable: Taboo Trade-Offs, Forbidden Base Rates, and Heretical Counterfactuals*, 78 *J. of Personality and Social Psychology* 853, 854 (2000).

policy may provide that benefit for some people. Removing decisions about the health care of loved ones (which we are normatively obligated to treat as infinitely important) from the realm of money (by definition a thing of finite value) can appear worthy in itself, by helping to preserve a sacred value. This idea of insurance as a sacred value protection technology fits well with prior research on insurance that has noted the use of religious images in insurance advertising and public relations.¹⁵⁸

Because health care is so expensive, we doubt that choosing a larger deductible actually poses a significant risk of requiring a taboo trade-off in the case of a serious health problem, the cost of which would certainly exceed any reasonable deductible. Nevertheless, the underlying dynamic of a taboo has explanatory power. As anthropologists have explained, a taboo separates incommensurable realms of activity.¹⁵⁹ An insurance policy with a low deductible and small co-pays separates the realms of money and health care all the way down, so that there are few, if any, health care encounters that are fully monetized. This separation of realms may explain why shopping for a health care service on the basis of price strikes so many people as bizarre, even a bit repugnant, and why the idea of negotiating over a fee with a physician is, quite literally, unimaginable for many people. Doctors do sometimes cut their fee, but it is an act of grace toward the patient as a person in need, not as a business encounter with a sovereign consumer.

Avoiding a taboo trade-off is not as obvious a motivation for a single individual choosing health insurance only for him or herself, but our sense is that many people experience discomfort in thinking about even their own health care in relation to money and, thus, would be willing to pay at least something extra to avoid that. Cutler and Zeckhauser report that the health economist Victor Fuchs makes a similar point, without the anthropological overlay: “in a stressful time of medical need, people do not want to make decisions about whether additional medical care is worth the money”¹⁶⁰ Whether this preference reflects the kind of moral qualm present in the sacred value protection model or not, there is something about health care that makes people uneasy thinking about it in terms of money, as the widespread condemnation of “death panels” and many other examples reflect.

¹⁵⁸ See, e.g., Brian Glenn, “God and the Red Umbrella: Risk, Responsibility and the Politics of Mutual Assistance in America” *Connecticut Insurance Law Journal* 10 (2): 277-307, 2004; Tom Baker “Constructing the Insurance Relationship: Sales Stories, Claims Stories and Insurance Contract Damages,” *Texas Law Review* 72:1395-1433; Viviana Zelizer, *Morals and Markets: The Development of Life Insurance in the United States* (1979).

¹⁵⁹ See Alan Page Fisk and Philip E. Tetlock, *Taboo Trade Offs: Constitutive Prerequisites for Political and Social Life*,

¹⁶⁰ Cited in Cutler & Zeckhauser, *supra* n. 29 at __.

Whatever the psychologically and institutionally best explanations, there is no shortage of understandable reasons for choosing, or sticking with, a low deductible health insurance plan, even if that choice is not optimal in either expected utility or social welfare terms.¹⁶¹ Does this mean that low deductible health insurance policy is “good” insurance that a behavioral economist would endorse, notwithstanding the standard economic account? That, we are not embarrassed to admit, is a very difficult question for which we do not yet have an answer.¹⁶² What we can say is the following.

First, even if we do not know whether behaviorally informed economists will eventually conclude that a low deductible health insurance policy is “good” insurance, behavioral economics already provides a clear basis for distinguishing between low deductible insurance policies, on the one hand, and extended warranties and credit life insurance, on the other. This distinction is not based on differences in the motivations for purchasing the insurance, but rather on the application of the shrouded pricing model. Extended warranties and credit life insurance present a shrouded pricing problem. Low deductible insurance policies do not. The “bad” insurance (the low deductible) is sold as a package with the “good” insurance (insurance against larger losses) in a competitive market. At a minimum, that means there is no obvious need to regulate the additional price charged for a low deductible, whether in homeowners or health insurance.

Second, Sydnor’s equilibrium analysis for homeowners’ insurance seems likely to apply in the health insurance context. In other words, low deductibles likely serve, at least in part, as a risk separating device and, thus, people buying health insurance with the low deductibles may not be subsidizing those who do not.¹⁶³ If so, views about risk-based pricing for health insurance – and the larger question of how a society should share the cost of health care – may have a bigger impact on what regulators do about low

¹⁶¹ This does not mean that people always choose low deductible health plans. Low deductible health plans are more expensive, and excessive discounting and budget constraints both cut in the other direction. These explanations do suggest, however, that people will be willing to give up other features, such as a large provider network and choice of doctors, in favor of a low deductible, an intuition that is supported by very recent survey research by Janet Schwartz and collaborators using conjoint analysis. See Janet Schwartz, Nordin Hadler, Joel Huber, Tom Emerick, and Dan Ariely, *Choosing among employer sponsored plans: Are people choosing widely?* [under review]

¹⁶² We are in good company. See Cutler & Zeckhauser, *Anomalies*, supra note – (“We note that these types of “behavioral explanations” make normative analysis difficult. Say that loss aversion affected behavior, implying that even small per-visit charges strongly discourage use. Would such copayments represent an effective rationing tool, or would it be imposing noticeable pain without collecting much revenue?”)

¹⁶³ See, e.g., David M. Cutler & Richard J. Zeckhauser, “*Adverse Selection in Health Insurance*,” in Allen M. Garber, ed. 1 *FRONTIERS IN HEALTH POLICY RESEARCH* 1 (1998) (demonstrating that withdrawal of employer subsidy for high-cost plan led to adverse selection and its ultimate collapse; the employer had to provide the subsidy, precisely because low-risk insureds could not be induced to cross-subsidize the high-risks in equilibrium). Mitchell & Pauly on Penn plan; others?

deductible health insurance policies than any concern about people wasting money on a deductible that is too low.¹⁶⁴ If you think that everyone should pay the same price, then you should be concerned about the risk-separating implications of low deductible insurance. If you think that risk-based pricing makes sense, you may welcome such “risk classification by design.”¹⁶⁵

Finally and most importantly, in contrast to the homeowners insurance, extended warranties, and credit life insurance contexts, what is really at stake in decisions about health insurance deductibles and other aspects of health insurance design has little or nothing to do with insurance per se. What is at stake, instead, is the health care that people do (or do not) buy with health insurance, especially the cost and quality of that care. We are in the very early days of the blossoming of research on health insurance plan design and health insurance choices and on the impact of those choices and designs on health care consumption. That is the research that matters for deciding what, if anything, to do about low deductibles for health insurance policies. We predict that behavioral economics – with a stress on both the *behavioral* and the *economics* – will be an important part of the explanation for the observed behavior and the design of regulatory interventions, if any are needed.

V. Conclusion

As these three examples illustrate, the insurance field provides a useful testing ground for behavioral economics. Expected utility theory offers clear predictions about the kind of insurance a rational person should buy; experimental and empirical work reveals stable patterns of behavior that diverge from these predictions; and behavioral decision research provides a variety of explanation for this gap between prediction and practice.

We have focused on three kinds of insurance that people often buy, even though a reasonably informed, rational person would not buy them: extended warranties, credit life insurance, and low deductibles in health insurance. Many of the behavioral explanations for the gap between expected utility theory and insurance purchasing practice make sense in terms of emotional risk management. On this view, buying these kinds of insurance comes to look more like a conscious, understandable choice to buy something with a real, but non-financial value, and less like a cognitive processing mistake that we should correct or ignore. If correct, this emotional risk management explanation supports a consumer

¹⁶⁴ See Tom Baker, *Health Insurance, Risk and Responsibility after the Affordable Care Act*, 159 U. PENN. L. REV. 1577 (2011) (explaining that the Affordable Care Act discourages “risk classification by design”).

¹⁶⁵ *Id.*

sovereignty justification for these forms of insurance that leads directly to a light touch, disclosure approach to their regulation.

At the same time, the emotional risk management explanation appears to undercut the value of expected utility theory as a guide to insurance regulation. In this view, expected utility theory produces predictions that are not simply empirically wrong and, thus, remain as potential guides to the ends of insurance regulation. Rather, expected utility theory produces predictions that, at least in this context, are normatively wrong and, thus, are not appropriate guides to the ends of insurance regulation.

We conclude that this line of reasoning is itself demonstrably wrong, at least in the case of extended warranties and credit life insurance. It fails to take into account the equilibrium analysis of the shrouded pricing model, the supply-induced demand nature of these products, and the practical difficulties inherent in the choice/mistake distinction upon which the reasoning depends. A more complete behavioral economic analysis leaves expected utility theory in place as a guide to the ends of the regulation of these forms of insurance and employs the behavioral part of that analysis in the realm of means: to explain why a welfare reducing equilibrium exists and to suggest legal reforms that, in contrast to disclosure, might actually improve welfare.

The low deductible health insurance story remains unfinished. The stakes are high. Forty years after Martin Feldstein's equilibrium analysis, it's pretty clear that he was right. Widespread, low deductible health insurance has contributed to high prices for health care, an allocation of resources to the health care sector of the economy that cannot be optimal, and a growth rate in that sector that, as a matter of simple math, cannot be sustained. Unfortunately, the shrouded pricing model does not apply to low deductibles and, thus, cannot supply an easy fix that improves social welfare and (less important to society but more important to the present project) reconciles behavioral decision research and expected utility theory. For health insurance, our message is stay tuned to the behavioral economics station for the next installment.

University of Pennsylvania Law Review

Founded 1852

Formerly
American Law Register

VOL. 159

JUNE 2011

No. 6

ARTICLE

HEALTH INSURANCE, RISK, AND RESPONSIBILITY AFTER THE PATIENT PROTECTION AND AFFORDABLE CARE ACT

TOM BAKER[†]

The Affordable Care Act embodies a new social contract of health care solidarity through private ownership, markets, choice, and individual responsibility, with government as the insurer for the elderly and the poor. The new health care social contract reflects a “fair share” approach to health care financing. This approach largely rejects the actuarial fairness vision of what constitutes a fair share while pointing toward a new responsibility to be as healthy as you can. This new responsibility reflects the influence of health economics and

[†] William Maul Measey Professor of Law and Health Sciences, University of Pennsylvania Law School. Thank you to Deborah Hellman, Kristin Madison, Amy Monahan, Dan Schwarcz, and the students in my health insurance regulation seminar for helpful conversation; Robert Ahdieh, Abbe Gluck, Allison Hoffman, and David Hyman for comments; and Bill Draper for research assistance. This Article benefited from an early presentation as the Hawley Lecture at the University of Iowa College of Law and from the faculty workshop at Emory Law School. Research for this Article was supported by a grant from the Alfred P. Sloan Foundation.

health ethics. There are challenges to achieving the solidarity through individual responsibility envisioned in the Act—most significantly “risk classification by design” and non-compliance with the mandates—but the Act contains regulatory tools that the states, the new Exchanges, and the Department of Health and Human Services can use to address these challenges. This Article provides a high level overview of the distribution of health insurance risk and responsibility after the Affordable Care Act and describes how the Act reforms the key institutions that perform that distribution: Medicare, Medicaid, the large-group health insurance market, and the individual and small-group health insurance market.

INTRODUCTION	1578
I. DISTRIBUTING HEALTH CARE RISK:	
THE FOUR-LEGGED STOOL	1580
A. <i>Medicare</i>	1581
B. <i>Medicaid</i>	1584
C. <i>The Individual and Small-Group Market</i>	1585
D. <i>The Large-Group Market</i>	1592
II. DISTRIBUTING RISK AND RESPONSIBILITY	
AFTER THE AFFORDABLE CARE ACT	1593
A. <i>The Fair Share Approach to Responsibility</i>	
<i>for the Cost of Health Care</i>	1597
B. <i>The Responsibility to Be as Healthy as You Can</i>	1602
III. CHALLENGES TO THE NEW HEALTH CARE SOCIAL CONTRACT	1607
A. <i>Risk Classification by Design</i>	1608
1. The Minimum Coverage Requirements	1611
2. The Exchange Certification Requirement	1611
3. The Medical-Loss Ratio Requirements	1612
4. The Risk Adjustments	1614
B. <i>Noncompliance with the Mandates</i>	1615
1. The Penalties Are Better Powered than	
Many People Realize	1616
2. The Exchanges Can Tolerate Noncompliance....	1619
CONCLUSION: THE MORAL OPPORTUNITY OF INSURANCE.....	1621

INTRODUCTION

With the passage of the Patient Protection and Affordable Care Act (PPACA)¹ and the Health Care and Education Reconciliation Act

¹ Pub. L. No. 111-148, 124 Stat. 119 (2010) (to be codified as amended in scattered sections of 21, 25, 26, 29, and 42 U.S.C.).

of 2010 (HCERA),² health insurance in the United States is on track to become a form of social insurance. While all insurance is social—so that “the loss lighteth rather easily upon many than heavily upon few”³—to be considered social insurance in the traditional sense, the insurance must be compulsory and easily available, and the price must bear some relation to the ability to pay.⁴

Parts of the U.S. health insurance system already meet those requirements: most significantly Medicare (for the elderly and formerly working disabled); Medicaid (for certain categories of the poor, including all children in low income families); and workers’ compensation (for employment-related illness and injury).⁵ U.S. income tax and employment law strongly encourage the provision of general health benefits through employment, making employment-based health insurance a de facto obligation for most large employers and many small employers.⁶ But the legal choice to offer health insurance remains that of the employer, and individuals’ only health insurance obligations are to pay Medicare taxes and to participate in the financing of Medicaid through the payment of their ordinary state and federal taxes. The Affordable Care Act will make large employers’ obligations de jure starting in 2014, and it will create a legal obligation to obtain health insurance for employees’ entire lifetime, not just for old age or in the event of total disability.

The Affordable Care Act embodies a social contract of health care solidarity through private ownership, markets, choice, and individual responsibility. While some might regard this contract as the unnatural union of opposites—solidarity on the one hand and markets, choice, and individual responsibility on the other—those familiar with insurance history will recognize in the Act an effort to realize the dream of America’s early insurance evangelists: a “society united on

² Health Care and Education Reconciliation Act of 2010, Pub. L. No. 111-152, 124 Stat. 1029 (to be codified in scattered sections of 20, 26, and 42 U.S.C.).

³ An Act Concerning Matters of Assurances Used Among Merchants, 1601, 43 Eliz., c. 12, pmb. (Eng.).

⁴ See I.M. RUBINOW, SOCIAL INSURANCE 3 (1913) (“[S]ocial insurance is the policy of organized society to furnish that protection to one part of the population, which some other part may need less, or, if needing, is able to purchase voluntarily through private insurance.”).

⁵ See *infra* Part I.

⁶ See Alain C. Enthoven & Victor R. Fuchs, *Employment-Based Health Insurance: Past, Present, and Future*, HEALTH AFF., Nov.–Dec. 2006, at 1538, 1538-39 (explaining that “[t]he exemption of employer payments for health insurance from employees’ taxable income, combined with substantial efficiency advantages of group over individual insurance” has led to the prominence of employment-based insurance).

the basis of mutual insurance.”⁷ Public ownership and pure, tax-based financing are technically easier and almost certainly cheaper routes to health care solidarity, but they come at a cost to the status quo that Congress was not prepared to pay.

This Article explores the contours of the solidarity and individual responsibility embodied in the Act. Part I explains the four main health care financing and risk distribution institutions reflected in the Act—Medicare, Medicaid, the individual and small employer market, and the large-group market—with an emphasis on how the Act changes those institutions and how they are financed. Part II focuses on the distribution of risk and responsibility within and among those institutions. I will argue, first, that the new health care social contract extends the fair-share approach to health care financing while rejecting the actuarial-fairness vision of what constitutes a fair share and, second, that the Act points toward the recognition of a new responsibility to be as healthy as you can. This responsibility reflects the influence of health economics and health ethics, and it is part of the embrace of risk first described in the insurance-as-governance literature.⁸ Part III identifies challenges to achieving solidarity through individual responsibility envisioned in the Act—most significantly what I will call “risk classification by design.” Part III also explores the regulatory tools the Act puts into the hands of the states, the exchanges, and the Department of Health and Human Services (HHS) in order to address these challenges.

I. DISTRIBUTING HEALTH CARE RISK: THE FOUR-LEGGED STOOL

Since the 1970s, the United States has had three relatively well functioning health care risk distribution mechanisms and one poorly functioning one. The three better-functioning mechanisms are Medicare, Medicaid, and the large-group market. (All three have long-term cost problems, but this is an issue that the Affordable Care Act does not address.) The poorly functioning mechanism is the individual and small-group market. We can think of U.S. health care risk distribution as a wobbly stool. Some people spill things while sitting on it. Others fall off.

⁷ D.R. Jacques, *Society on the Basis of Mutual Life Insurance*, 16 MERCHANTS' MAG. & COM. REV. 152, 158 (1847).

⁸ See generally Tom Baker & Jonathan Simon, *Embracing Risk* (reviewing the line of scholarship that “proceed[s] from an implicit belief that risk is a positive force that can be directed toward socially useful ends”), in *EMBRACING RISK: THE CHANGING CULTURE OF INSURANCE AND RESPONSIBILITY* 1, 20 (Tom Baker & Jonathan Simon eds., 2002).

Consistent with this metaphor, the Affordable Care Act makes only incremental changes to Medicare, Medicaid, and the large-group insurance market (though the Medicaid change is historic in terms of U.S. social welfare policy). The Affordable Care Act dramatically reforms the individual and small-group insurance market with the aspiration of stabilizing the four-legged stool. Understanding these changes is a necessary first step to understanding the new health care social contract. I will begin with Medicare and Medicaid, which are the easy parts to explain at the general level. I will then turn to the individual and small-group market, and I finish with the large-group market.

A. Medicare

The Affordable Care Act made no fundamental changes to Medicare, which is the health insurance component of the Social Security program. Accordingly, health insurance for the eligible disabled (those who paid, or were dependents of someone who paid, Social Security taxes for forty quarters before becoming totally disabled) and seniors (who paid, or were married to someone who paid, Social Security taxes for forty quarters) will continue to consist of four parts:

- Part A, which covers inpatient care, hospice care, and some home health services⁹ and is financed entirely by a flat percentage tax on wages paid over the lifetime;¹⁰
- Part B, which covers other medically necessary or preventive services¹¹ and is funded in part by a flat percentage tax on wages paid over the lifetime (73%) and in part by premiums paid when enrolled (25%), that are based in part on income and are otherwise uniform regardless of age, health status, or any other factors;¹²
- Part C, Medicare Advantage, which is a private-sector alternative to Parts A and B that allows individuals to obtain their health care benefits, typically including prescription drug benefits, from the health care financing companies

⁹ *Medicare Part A (Hospital Insurance)*, MEDICARE.GOV, <http://www.medicare.gov/navigation/medicare-basics/medicare-benefits/part-a.aspx> (last visited Mar. 15, 2011).

¹⁰ PATRICIA A. DAVIS, CONG. RESEARCH SERV., R41436, MEDICARE FINANCING 2-3 (2011).

¹¹ *Medicare Part B (Medical Insurance)*, MEDICARE.GOV, <http://www.medicare.gov/navigation/medicare-basics/medicare-benefits/part-b.aspx> (last visited Mar. 15, 2011).

¹² DAVIS, *supra* note 10, at 2 fig.1, 4.

active in the large-group market explained below¹³ and is funded in much the same way as parts A, B, and D;¹⁴ and

- Part D, which covers prescription drugs¹⁵ and is funded by premiums that vary according to the type of plan but are otherwise uniform regardless of age, health status, or any other factors.¹⁶

The Affordable Care Act changes Medicare financing and risk distribution in three main ways:

- increasing the progressivity of Medicare financing by raising the wage tax on higher-income taxpayers,¹⁷ adding an income-based component to Part D premiums,¹⁸ and freezing the thresholds for income-based increments to Part B premiums;¹⁹
- changing the cost-sharing formula for Part D so that individuals will gradually pay a smaller percentage of the costs of medication at the point of sale (meaning that a greater percentage of the costs will be paid in the form of Part D premiums);²⁰ and

¹³ *Medicare Advantage (Part C)*, MEDICARE.GOV, <http://www.medicare.gov/navigation/medicare-basics/medicare-benefits/part-c.aspx> (last visited Mar. 15, 2011).

¹⁴ DAVIS, *supra* note 10, at 2.

¹⁵ *What is Part D (Medicare Prescription Drug Coverage)?*, MEDICARE.GOV, <http://www.medicare.gov/navigation/medicare-basics/medicare-benefits/part-d.aspx> (last visited Mar. 15, 2011).

¹⁶ DAVIS, *supra* note 10, at 4-5.

¹⁷ The payroll tax on high-income taxpayers will be increased starting in 2013. PPACA § 9015(a)(1)(A), 26 U.S.C.A. § 3101(b)(2) (West Supp. 1A 2010). High-income taxpayers are those whose wages or self-employment income exceeds \$200,000 for individuals or \$250,000 for married couples filing jointly. *Id.* The payroll tax will increase by 0.5% from 1.45% to 1.95% on wages. *Id.* The increase will be from 2.9% to 3.4% on self-employment income. *Id.* § 9015(b)(1)(A), 26 U.S.C.A. § 1401(b).

¹⁸ Part D premium subsidies for high-income beneficiaries were reduced beginning in 2011. *Id.* sec. 3308(a)(1), § 1860D-13(a)(7), 42 U.S.C.A. § 1395w-113(a)(7) (West Supp. 1B 2010). If the modified adjusted gross income (MAGI) of beneficiaries exceeds \$80,000 for individuals and \$160,000 for couples, 42 U.S.C. § 1395r(i)(2) (2006), the monthly amount of the premiums shall be increased by the monthly adjustment amount. PPACA sec. 3308(a)(1), § 1860D-13(a)(7), 42 U.S.C.A. § 1395w-113(a)(7). The Commissioner of Social Security is delegated to carry out and disclose necessary income-related increases in the base beneficiary premium. *Id.* sec. 3308(a)(1), § 1860D-13(a)(7)(D), 42 U.S.C.A. § 1395w-113(a)(7)(d).

¹⁹ The Act freezes the threshold for income-related Medicare Part B premiums for 2011 through 2019. *Id.* sec. 3402(4), § 1839(i)(6), 42 U.S.C.A. § 1395r(i)(6).

²⁰ See HCERA sec. 1101, § 1860D-42(c), 42 U.S.C.A. § 1395w-152(c) (providing for rebates of \$250 to those who exceeded the Part D initial coverage limit in 2010). In addition, the Act phases down the coinsurance rate to 25% by 2020:

- reducing federal payments to Medicare Advantage plans,²¹ providing bonuses for quality ratings,²² and obligating these plans to maintain a medical-loss ratio of at least 85%.²³

In addition, the Act expands coverage for preventive health services and eliminates cost sharing for services designated as cost effective by the U.S. Preventive Services Task Force.²⁴ As I will explain in Part II, this new coverage, if extended along the lines of the parallel aspects of the insurance market reforms in the Act, has the potential to represent a significant change in Medicare's distribution of risk and responsibility.²⁵

- For brand-name drugs, the Act mandates a Medicare gap coverage discount program by no later than January 1, 2011, HCERA sec. 1101(b)(2), § 1860D-14A(a), 42 U.S.C.A. § 1395w-102(a), which requires manufacturers to provide a 50% discount on the negotiated price, PPACA sec. 3301(b), § 1860D-14A(g)(4)(A), 42 U.S.C.A. § 1395w-102(g)(4)(A). This is in addition to federal subsidies providing 25% of the cost by 2020. HCERA sec. 1101(b)(3)(C), § 1860D-2(b)(2)(D)(ii), 42 U.S.C.A. § 1395w-102(b)(2)(D)(ii).
- For generic drugs, the Act provides federal subsidies of 75% of the cost by 2020. HCERA sec. 1101, § 1860D-2(b)(2)(C)(ii), 42 U.S.C.A. § 1395w-102(b)(2)(C)(ii).
- The Act provides a \$250 rebate to Medicare beneficiaries who reach the Part D coverage gap in 2010. HCERA sec. 1101(a)(1), § 1860D-42(c)(1), 42 U.S.C.A. § 1395w-152(c)(1).

²¹ According to the Medicare Payment Advisory Committee, private Medicare Advantage (MA) plans on average are paid an estimated 13% more per beneficiary than what is paid per beneficiary in traditional Medicare plans. *Efforts to Reduce Payments to Medicare Advantage Plans Expected from Obama Administration, Congress*, MED. NEWS TODAY (Nov. 26, 2008), <http://www.medicalnewstoday.com/articles/130859.php>. To deal with the problem of overpayment, the Act calls for substantial changes to the calculation formula. All counties or similar jurisdictions are ranked in order of their average fee-for-service (FFS) spending, regardless of their territory or population. HCRA sec. 1102(b), § 1853(n)(1)-(2), 42 U.S.C.A. § 1395w-23(n)(1)-(2). The federal payments (MA benchmarks) will be an applicable percentage of a county's average FFS spending, with higher payments (the MA benchmark as 115% of FFS rates) for areas with low FFS spending and lower payments (the MA benchmark as 95% of FFS rates) for areas with high FFS spending. *Id.* sec. 1102(b), § 1853(n)(2)(B), 42 U.S.C.A. § 1395w-23(n)(2)(B). The new formula will be phased in during the next two to six years and will be fully phased in by 2017. *Id.* sec. 1102(b), § 1853(n)(3), 42 U.S.C.A. § 1395w-23(n)(3).

²² Beginning in 2010, the MA benchmarks will be increased if the plans receive four or more stars, based on the current five-star quality rating system; qualifying plans in qualifying areas receive double bonuses. *Id.* § 1102(c), § 1853(o), 42 U.S.C.A. § 1395w-23(o).

²³ *Id.* sec. 1103, § 1857(e)(4), 42 U.S.C.A. § 1395w-27(e)(4). Beginning in 2014, MA plans that fail to have the minimum medical-loss ratio shall remit partial payments to the Secretary of HHS. *Id.* The Secretary shall suspend plan enrollment for two years if the medical-loss ratio is less than 85% for three consecutive years and terminate the plan contract if the medical-loss ratio is less than 85% for five consecutive years. *Id.*

²⁴ PPACA sec. 4003(a), § 915, 42 U.S.C.A. § 299b-4 (West Supp. 1A 2010).

²⁵ PPACA increases Medicare payments for certain preventive services to 100% of actual charges or fee schedule rates, including preventive services "recommended with a grade of A or B by the United States Preventive Services Task Force for any indication or population and are appropriate for the individual." PPACA secs. 4104, 10406,

B. Medicaid

In form, the Act changed Medicaid only incrementally, but these changes are very significant in historical terms. The Act, for the first time in U.S. history, explicitly recognizes a national entitlement to health care for all of the poor—including able-bodied, working-age individuals—to be financed through general tax revenues. The Affordable Care Act thus abandons the concept of the deserving poor that has long been one of the main features of U.S. social welfare policy, including policies on access to health care.²⁶ Starting in 2014 all lawful U.S. residents with family incomes of less than 133% of the federal poverty level (FPL) will be entitled to Medicaid.²⁷ Before the Act, Medicaid was available on a national basis only to pregnant women, children, parents of dependent children, and the elderly and disabled. These individuals had to meet state-determined income ceilings that varied by category, though there was a national floor for some categories: 100% of the index for the elderly, disabled, and children aged 7 to 19, and 133% of the index for pregnant women and children 6 years of age or younger.

After the Act, states remain free to expand Medicaid coverage beyond the new national floor; thus, categorical differences may persist at the state level.²⁸ But the new incentive for states to establish “basic health programs” for individuals with incomes in the range of 133%–200% of the poverty index,²⁹ together with the economies of scale potentially available from combining these basic programs with Medicaid, creates the possibility for a nearly uniform national entitlement to free health care for individuals in families with incomes up to 200% of the poverty index. Almost all of the new Medicaid costs will be borne by the federal government and paid for out of general reve-

§ 1833(a)(1)(T), 42 U.S.C.A. § 1395l(a)(1)(T) (West Supp. 1B 2010). In addition, the Act provides coverage for an “annual wellness visit.” *Id.* sec. 4103(a), § 1861(s)(2)(FF), 42 U.S.C.A. § 1395x(s)(2)(FF). The United States Preventive Services Task Force was created by PPACA sec. 4003(a), § 915(a), 42 U.S.C.A. § 299b-4(a).

²⁶ See generally FRANCES FOX PIVEN & RICHARD A. CLOWARD, *REGULATING THE POOR: THE FUNCTIONS OF PUBLIC WELFARE* 343-406 (updated ed. 1993) (emphasizing the longstanding practice in the United States of enforcing the idea of work when providing public relief to the poor).

²⁷ PPACA sec. 2001(a)(1)(C), § 1902(a)(10)(A)(i)(VIII), 42 U.S.C.A. § 1396a(a)(10)(A)(i)(VIII).

²⁸ See *id.* sec. 2001(e)(1)(A)–(B), § 1902(a)(10)(A)(ii), (hh)(1), 42 U.S.C.A. § 1396a(a)(10)(A)(ii), (hh)(1) (allowing states to extend coverage to individuals “whose income . . . exceeds 133 percent of the poverty line”).

²⁹ *Id.* § 1331(a)(1), (e)(1)(B), 42 U.S.C.A. § 18051(a)(1), (e)(1)(B).

nues.³⁰ States that had previously expanded coverage to individuals who are newly eligible nationally will receive federal funds on a phased-in basis so that they will receive the same percentage of assistance as other states by 2019.³¹

C. The Individual and Small-Group Market

The Affordable Care Act makes the most dramatic changes to the individual and small-group insurance market, aiming to create:

- a single health insurance pool in each state;³²
- populated by all lawful residents in the state who do not have health benefits through a government program or a large employer;³³
- serviced by health insurance plans that provide all essential health care benefits and compete on the basis of cost and quality;³⁴ with
- guaranteed access and identical premiums for all, subject to a few narrowly tailored exceptions that do not include health status.³⁵

The practical challenges to achieving this goal are addressed in Part III. Here I explain only how the market is supposed to work, in order to identify the explicit choices about the distribution of health care risk and responsibility embodied in the Act.

For present purposes, the key elements of the individual and small-group market reforms are the following:

- the mandates
- the subsidy
- minimum coverage requirements
- open enrollment and guaranteed renewal

³⁰ See HCERA sec. 1201(1)(B), § 1905(y)(1), 42 U.S.C.A. § 1396d(y)(1) (setting the amount of federal matching funds provided to states for newly eligible individuals at 100% from 2014 through 2016 and decreasing assistance only slightly to 90% by 2020).

³¹ PPACA sec. 1201(2)(b), § 1905(z)(2), 42 U.S.C.A. § 1396d(z)(2).

³² *Id.* § 1312(c), 42 U.S.C.A. § 18032(c). Initially, the Act creates two separate pools in each state—the individual pool and the small group pool—but states are permitted to combine the pools, a result that is most consistent with the solidarity objectives of the Act and that, I predict, will be administratively easier and less costly in the long run. *Id.* § 1312(c)(3), 42 U.S.C.A. § 18032(c)(3). This is the reason that I treat the individual and small-group market as a single leg of my metaphorical four-legged stool.

³³ *Id.* § 1312(c), 42 U.S.C.A. § 18032(c).

³⁴ *Id.* § 1302, 42 U.S.C.A. § 18022.

³⁵ *Id.* sec. 1201(4), § 2701(a), 42 U.S.C.A. § 300gg(a) (West Supp. 1A 2010).

- limits on individual risk-based pricing
- risk adjustments
- health exchanges

The paragraphs that follow briefly explain each of these elements in order to set the stage for the risk and responsibility analysis.

The Mandates. The Act obligates all lawful citizens to obtain “minimum essential coverage”³⁶ and all large employers—i.e. those with more than 100 employees—to start providing minimum essential coverage to their employees in 2014.³⁷ The structure of these mandates makes obtaining coverage through the individual and small-group market the residual health care financing mechanism for people who do not qualify for a government health benefit program (Medicare, Medicaid, and Veterans benefits) or work for a large employer. The individual mandate is an important part of the solidarity equation because it requires everyone to be in the health insurance risk pool, addressing the adverse selection problem that would follow from other provisions of the Act that make it possible for high-risk people to enter the health insurance pool.³⁸

The Subsidies. The individual mandate obligates individuals to obtain a health plan. The subsidies encourage them to purchase a plan and reduce the likelihood that they will qualify for the hardship exceptions.³⁹ Beginning in 2014, people with incomes up to 400% of the FPL will be eligible for financial assistance for coverage through the state health insurance exchanges: Those with incomes under 133% of the FPL will be covered under the newly expanded Medicaid program.⁴⁰ Those with incomes up to 400% of the FPL will qualify for tax credits to reduce their premiums.⁴¹ They will also qualify for limited cost sharing under their plans to enable them to pay less out of pocket.

³⁶ *Id.* § 1501(b), 26 U.S.C.A. § 5000A(a).

³⁷ *See id.* § 1304(b)(1), 42 U.S.C.A. § 18024(b)(1) (West Supp. 1B 2010) (defining “large employer” under the Act to be those with “at least 101 employees”); *id.* § 1513(a), 26 U.S.C.A. § 4980H(a)(1) (West Supp. 1A 2010) (penalizing “large employers” who do not provide “minimum essential coverage”). The fact that the “minimum essential coverage” definition for large employers is almost content free is a challenge to the solidarity goal that I will address in Part III.

³⁸ *See infra* Section III.A.

³⁹ *See* HCERA § 1002(b)(2), PPACA § 1501(b), 26 U.S.C.A. § 5000A(e) (exempting from the mandate certain individuals who cannot afford coverage).

⁴⁰ PPACA sec. 2001(a)(1)(C), § 1902(a)(10)(A)(i)(VIII), 42 U.S.C.A. § 1396a(a)(10)(A)(i)(VIII) (West Supp. 1B 2010).

⁴¹ HCERA § 1001(a)(1), 26 U.S.C.A. § 36B(b)(3)(A)(i) (West Supp. 1A 2010).

et.⁴² Both the tax credits and reduction in cost sharing will apply on an income-based sliding scale and similarly will be structured to correspond to the actuarial categories of the plans.⁴³ General federal revenues will fund the subsidies, which thus represent a major ability-to-pay component of the new health care social contract.

Minimum Essential Coverage Requirements. The minimum essential coverage requirements set a floor for contract quality standards on the health plans that may be offered in the individual and small-group market beginning in 2014. These standards have three primary components. First, plans must cover “essential health benefits,” which are a package of benefits that the HHS Secretary will define.⁴⁴ Second, the plan must limit annual cost sharing (e.g., deductibles and co-insurance) to the amount authorized under the Affordable Care Act’s Health Savings Accounts (HSAs).⁴⁵ In subsequent years, the limitation will be indexed to the annual limit on HSAs for self-only coverage and double that amount for any other plan.⁴⁶ Third, the plan must meet one of four “actuarial value” requirements, which vary by level of coverage (bronze, silver, gold and platinum) and which set a percentage ceiling on the aggregate cost sharing of all the individuals in the plan.⁴⁷ The “actuarial value” of a plan refers to the percentage of the total costs, to be paid by the plan, of covered services provided to all of the plan’s participants, in the aggregate. For example, a silver-level plan must have an actuarial value of at least 70%, meaning that it cannot impose aggregate cost sharing of more than 30% of the total cost of covered benefits on the participants in the plan.⁴⁸ In addition, the state-based exchanges may have discretion to include additional requirements based on their authority to determine whether “making available such [a] health plan through such [an] Exchange is in the interests of quali-

⁴² PPACA § 1402(c)(1)(A), 42 U.S.C.A. § 18071(c)(1)(A) (West Supp. 1B 2010).

⁴³ See HCERA § 1001(a)(1)(C), (b)(1)(A), PPACA § 1402(c)(1)(B), 42 U.S.C.A. § 18071(c)(1)(B) (coordinating reductions with actuarial value limits).

⁴⁴ *Id.* § 1302(a)–(b), 42 U.S.C.A. § 18022(a)–(b).

⁴⁵ *Id.* § 1302(c)(1)(A), 42 U.S.C.A. § 18022(c)(1)(A).

⁴⁶ *Id.* § 1302(c)(1)(B), 42 U.S.C.A. § 18022(c)(1)(B).

⁴⁷ *Id.* § 1302(a)(3), 42 U.S.C.A. § 18022(a)(3).

⁴⁸ See *id.* § 1302(d)(1)(B), 42 U.S.C.A. § 18022(d)(1)(B) (defining a silver-level plan as one that covers seventy percent of a policyholder’s costs or “benefits that are actuarially equivalent to seventy percent of the full actuarial value of the benefits provided under the plan”).

fied individuals and qualified employers in the State or States in which such Exchange operates.”⁴⁹

These minimum quality standards are designed to ensure that everyone actually receives adequate health care benefits when they fulfill their responsibility to be insured. In addition, by reducing the range of variation among plans, the minimum standards reduce the room for what I call “risk classification by design”—the creation of separate risk pools as individuals self-select into different health care products according to their self-assessed health risk status, or what economists refer to as “separating equilibria.”⁵⁰ I will address risk classification by design, which is one of the most important challenges to the solidarity equation, in Part III.

Open Enrollment and Guaranteed Renewal. The open enrollment⁵¹ and guaranteed renewal requirements⁵² mean that all health insurance plans in the individual and small-group market must accept everyone who chooses to apply for or renew health insurance. These requirements eliminate the traditional authority of health insurance companies to choose whom they will insure—an authority that insurance companies have had no realistic choice to exercise in any way other than to exclude from the health insurance pool those people who most need to be in the pool.⁵³ It is important to note that making

⁴⁹ *Id.* § 1311(e)(1)(B), 42 U.S.C.A. § 18031(e)(1)(B). The Act also contains requirements regarding transparency and quality improvement that the exchanges are to enforce. *See, e.g., id.* § 1311(e)(2), 42 U.S.C.A. § 18031(e)(2) (requiring the exchanges to collect information about premium increases); *id.* § 1311(g), 42 U.S.C.A. § 18031(g) (requiring periodic reporting to the exchanges of activities by qualified health plans in order to promote health via market-based incentives). States that require plans to provide coverage for health care services that go beyond the essential benefits must pay for the cost of those additional services. *Id.* § 1311(d)(3)(B)(ii), 42 U.S.C.A. § 18031(d)(3)(B)(ii).

⁵⁰ As Alma Cohen and Peter Siegelman explain, “Since insurers cannot distinguish between high-risk and low-risk agents, the two groups must be offered the same prices for insurance. Given that the two groups face the same prices, their different risks will lead them to act differently. In particular, high-risk agents can be expected to purchase more insurance.” Alma Cohen & Peter Siegelman, *Testing for Adverse Selection in Insurance Markets*, 77 J. RISK & INS. 39, 43 (2010).

⁵¹ *See* PPACA sec. 1201(4), § 2702(a)–(b)(1), 42 U.S.C.A. § 300gg-1(a)–(b)(1) (West Supp. 1A 2010) (requiring that every health insurance issuer accept all applicants, but allowing issuers to limit acceptances to certain “open or special enrollment” periods).

⁵² *See id.*, § 2703(a), 42 U.S.C.A. § 300gg-2(a) (“[I]f a health insurance issuer offers health insurance coverage in the individual or group market, the issuer must renew or continue in force such coverage at the option of the plan sponsor or the individual, as applicable.”).

⁵³ *See* Tom Baker, *Containing the Promise of Insurance: Adverse Selection and Risk Classification*, 9 CONN. INS. L.J. 371, 376-78 (2003) (explaining the “competitive power of

it too easy for high-risk individuals to join the insurance pool actually poses a challenge to the solidarity equation by creating the possibility that people will violate the mandate unless and until they really need serious health treatment. This is yet another challenge that I will address in Part III.

Limits on Individual Risk-Based Pricing. In the traditional, actuarial approach to private market insurance, insurance is understood as a series of bilateral contracts between insurance companies and their policyholders, and those contracts are understood as wagers, the odds (and therefore the price) of which should be set according to the likelihood that the policyholder will “win” by making a claim.⁵⁴ If people have the choice whether to buy insurance or not, and if insurance companies have the authority to decide on an individual basis how much to charge for their products, then an insurance company that fails to set prices on this basis will not last long. The result is that those people who most need to be in the pool cannot afford to join the pool because their premiums will be too high.⁵⁵ Accordingly, achieving health care solidarity through the private market requires limiting insurers’ authority to decide on an individual basis how much to charge for their products.

The Act allows health plans in the individual and small-group market to vary their prices on the basis of only four factors: whether the applicant is an individual or family, the geographic region in which the applicant lives, age, and tobacco use.⁵⁶ For the latter two factors, there are limits on the pricing differentials—3 to 1 for age-based pricing differentials and 1.5 to 1 for tobacco-use pricing differentials—meaning that the price for the oldest group in the pool may not be more than three times the price for the youngest group and the price for the heaviest tobacco users may not be more than one-

risk classification,” which “produces a classification ‘arms race,’ in which insurers either maintain their classification edge or face the loss of low risks to the competition and the migration of the high risks to their insurance rolls”); see also Deborah A. Stone, *The Struggle for the Soul of Health Insurance*, 18 J. HEALTH POL. POL’Y & L. 287, 298 (1993) (noting the common insurance convention that “people are [considered] uninsurable for life insurance if their mortality is five or more times the standard mortality”).

⁵⁴ See Tom Baker, *Risk, Insurance, and the Social Construction of Responsibility* (“[W]hen it comes to health, disability, property, liability, and term insurance, if your withdrawals equal your deposits, you have, in at least some respects, a very unfortunate life.”), in *EMBRACING RISK*, *supra* note 8, at 33, 36.

⁵⁵ See Stone, *supra* note 53, at 308 (“The logic and methods of actuarial fairness mean denying insurance to those who most need medical care.”).

⁵⁶ PPACA sec. 1201, § 2701(a)(1)(A), 42 U.S.C.A. § 300gg(a)(1)(A).

and-a-half times the price for comparable non-users.⁵⁷ In addition, the Act permits the sale of special, high-deductible policies to people under the age of thirty, and, presumably, these policies will constitute a separate risk pool.⁵⁸ (Such policies represent an example of risk classification by design explicitly permitted in the Act.) Finally, the Act authorizes wellness programs for small employer plans that may provide substantial rebates or other benefits to participants (up to 30% of the total premium, including the employer share, and potentially increasing to 50% at the discretion of the Secretaries of Labor, Health and Human Services, or the Treasury).⁵⁹ The wellness programs have the potential to lead to de facto differential prices based on participation in the programs, but the programs may not be “a subterfuge for discriminating based on a health status factor.”⁶⁰ From a risk and responsibility perspective, these pricing factors and the wellness programs are among the most interesting aspects of the Act, as discussed shortly.

Risk Adjustments. Risk adjustments are financial transfers among health plans based on the aggregate risk of the individuals who choose to participate in each plan.⁶¹ Plans that end up with a disproportionately high-risk membership are supposed to receive risk adjustment payments from plans that end up with a disproportionately low-risk membership so that the price that individuals pay for their insurance does not depend on their health risk, whether it is due to risk classification by design or to other sorting mechanisms that correlate with risk.⁶²

The Exchanges. The exchanges are the marketplace through which individuals and small groups will purchase health care plans. Among other responsibilities, the exchanges must ensure that the plans listed

⁵⁷ *Id.*

⁵⁸ *See id.* § 1302(e)(2)(A), 42 U.S.C.A. § 18022(e)(2)(A) (West Supp. 1B 2010) (defining eligibility for certain catastrophic coverage plans as extending to those under the age of thirty).

⁵⁹ *Id.* sec. 1201(4), § 2705(j)(3)(A), 42 U.S.C.A. § 300gg-4(j)(3)(A) (West Supp. 1A 2010).

⁶⁰ *Id.*, § 2705(j)(3)(B), 42 U.S.C.A. § 2705(j)(3)(B) (West Supp. 1B 2010). While the Act warns against misuse, it does not establish criteria for how states should evaluate when wellness programs amount to “subterfuge.” *Id.*

⁶¹ *See id.* § 1343(a), 42 U.S.C.A. § 18063(a) (creating a state-based risk adjustment mechanism for plans in the individual and small-group market). For a recent empirical study of the importance of risk adjustment to redressing classification by design, see Karen Eggleston & Anupa Bir, *Measuring Selection Incentives in Managed Care: Evidence from the Massachusetts State Employee Insurance Program*, 76 J. RISK & INS. 159, 171-73 (2009).

⁶² PPACA § 1343(a), 42 U.S.C.A. § 18063(a).

on it comply with statutory requirements.⁶³ The exchanges are also likely to be asked to administer the risk adjustments.⁶⁴ Important, unanswered questions about the exchanges include how active exchanges should be in helping consumers make choices and whether states should exercise the option of allowing the federal government to create and operate the exchanges.

In summary, the changes to the individual and small-group market appear to be designed to make that market function as if all of the individuals who bought insurance in each exchange were the members of a very large single employment group with many choices for health benefits, analogous in many ways to the Federal Employee Health Benefit Program (FEHBP).⁶⁵ One very important difference is that purchasers of individual coverage on the exchange will pay the full price themselves, using after-tax dollars (subject to the subsidies). As with “cafeteria plans” in the large-group market, there is a potential for risk classification by design. Indeed, because of the very large number of options available on the exchange, some degree of risk classification by design seems inescapable, notwithstanding the risk adjustments and other regulatory tools that I will discuss in Part III.

⁶³ See *id.* § 1311(e)(1), 42 U.S.C.A. § 18031(e)(1) (“An Exchange may certify a health plan as a qualified health plan if . . . such plan meets the requirements for certification as promulgated by the Secretary . . . and . . . the Exchange determines that making available such health plan . . . is in the interests of qualified individuals and qualified employers . . .”).

⁶⁴ The Act directs the states to administer the risk adjustment process. *Id.* § 1343(a), 42 U.S.C.A. § 18063(a). I predict that the states will assign the task to the exchanges for efficiency reasons, though it is possible that the task will be carried out by the state insurance regulator (though almost certainly in close cooperation with the exchange).

⁶⁵ Extensive information about the FEHBP can be found at the website maintained by the U.S. Office of Personnel Management. *Federal Employees Health Benefit Program*, U.S. OFFICE PERSONNEL MGMT., <http://www.opm.gov/insure/health/> (last visited Mar. 15, 2011); see also Stuart M. Butler & Robert E. Moffit, *The FEHBP as a Model for a New Medicare Program*, HEALTH AFF., Winter 1995, at 47, 48-51 (explaining that FEHBP enrollees “can choose from a variety of health plans, ranging from traditional fee-for-service plans, to insurance plans sponsored by employee organizations or unions, to managed care plan”); Harry P. Cain II, *Moving Medicare to the FEHBP Model, or How to Make an Elephant Fly*, HEALTH AFF., July–Aug. 1999, at 25, 35 (comparing the FEHBP to Medicare and arguing that “the FEHBP has outperformed Medicare every which way—in containment of costs both to consumers and to the government, in benefit and product innovation and modernization, and in customer satisfaction”). But see Alain C. Enthoven, *Effective Management of Competition in the FEHBP*, HEALTH AFF., Fall 1989, at 33, 34 (arguing that because of adverse selection problems, in the 1980s some FEHBP “plans . . . gain[ed] or los[t] market share not because they [were] more or less efficient, but because they . . . attracted a less or more costly clientele”).

D. *The Large-Group Market*

The Act makes few changes to the large-group market, consistent with the belief that the market has been functioning acceptably well in providing health care access to most people working for large organizations.⁶⁶ The large-group market is and will remain lightly regulated by the Department of Labor under the ERISA and HIPAA statutes.⁶⁷ The main change introduced by the Act is that large employers—defined as an entity with more than 100 employees—must provide “minimum essential coverage” to their employees starting in 2014.⁶⁸

For large employers that already provide health care benefits (most already do), the new mandate will not impose much in the way of new obligations because—perhaps surprisingly—the Act exempts the large-group market from the “essential health benefits” requirements that will apply in the individual and small-group market.⁶⁹ Large-group market plans do, however, have to meet the same annual cost-sharing limits as health plans in the small-group market,⁷⁰ meaning that employees’ out-of-pocket expenditures for covered health care expenses cannot exceed the maximum amount allowed for Health Savings Accounts⁷¹ and no more than \$4000 of this cost sharing may be in the form of a deductible.⁷² In addition, large-group market plans will have to comply with some of the Affordable Care Act mandates such as the elimination of annual and aggregate limits on coverage,⁷³ coverage

⁶⁶ See Address Before a Joint Session of the Congress on Health Care Reform, 2009 DAILY COMP. PRES. DOC. 693, at 3 (Sept. 9, 2009) (“[I]f you are among the hundreds of millions of Americans who already have health insurance through your job or Medicare or Medicaid or the VA, nothing in this plan will require you or your employer to change the coverage or the doctor you have.”). But see Amy B. Monahan & Daniel Schwarcz, *Will Employers Undermine Health Care Reform by Dumping Sick Employees?*, 97 VA. L. REV. 125, 146-53 (suggesting that current regulation of the large-group market may fail to prevent employers from engaging in risk classification and “dumping” high-risk employees).

⁶⁷ See Monahan & Schwarcz, *supra* note 66, at 142-53 (summarizing pre- and post-Affordable Care Act large-group regulation).

⁶⁸ See sources cited *supra* note 37; see also PPACA § 1411(e)(4)(B)(iii), (f)(2)(A), 42 U.S.C.A. § 18081(e)(4)(B)(iii), (f)(2)(A) (outlining procedure for notifying an employer when the employer does not provide minimum essential coverage and may be liable for employees’ health care subsidies as well as procedure for appeal of such determinations).

⁶⁹ *Id.* sec. 1201(4), § 2707(a), 42 U.S.C.A. § 300gg-6(a) (West Supp. 1A 2010).

⁷⁰ See *id.*, § 2707(b), 42 U.S.C.A. § 300gg-6 (subjecting a “group health plan” to the cost-sharing limits set forth in PPACA § 1302(c)).

⁷¹ *Id.* § 1302(c)(1), 42 U.S.C.A. § 18022(c)(1) (West Supp. 1B 2010).

⁷² *Id.* § 1302(c)(2)(A)(ii), 42 U.S.C.A. § 18022(c)(2)(A)(ii). For plans that cover a single individual, the limit is \$2000. *Id.* § 1302(c)(2)(A)(i), 42 U.S.C.A. § 18022(c)(2)(A)(i).

⁷³ *Id.* secs. 1001(5), 10101(a), § 2711, 42 U.S.C.A. § 300gg-11 (West Supp. 1A 2010).

for preventive services,⁷⁴ dependent coverage,⁷⁵ wellness programs,⁷⁶ non-discrimination on the basis of health status,⁷⁷ and reporting.⁷⁸

The Act also regulates the content of large-group market plans indirectly. If an employer's plans are of such low quality that employees start to buy individual health plans on the exchanges, the employer will be penalized.⁷⁹ In addition, states will have the option of giving large employers the choice to include plans offered through the exchanges as part of their employer-sponsored plan, allowing employees to use pretax dollars to buy health plans on the exchange.⁸⁰ "Large" employers that are not very large are likely to encourage states to make that option available.

II. DISTRIBUTING RISK AND RESPONSIBILITY AFTER THE AFFORDABLE CARE ACT

After the Affordable Care Act takes full effect, the health care costs of the U.S. population will be distributed as follows.⁸¹

Most health care costs associated with old age and total disability—apart from long-term care—will be distributed through the Medicare

⁷⁴ *Id.* sec. 1001(5), § 2713, 42 U.S.C.A. § 300gg-13.

⁷⁵ HCERA sec. 2301(b), PPACA sec. 1001(5), § 12714, 42 U.S.C.A. § 300gg-14.

⁷⁶ PPACA sec. 1204, § 2705(j), 42 U.S.C.A. § 300gg-4(j).

⁷⁷ *Id.*, § 2705(a), 42 U.S.C.A. § 300gg-4(a).

⁷⁸ *Id.* sec. 1001(5), § 2717, 42 U.S.C.A. § 300gg-17.

⁷⁹ HCERA sec. 1003(d), §§ 1513(a), 10106(e), 26 U.S.C.A. § 4980H(b). Amy Monahan and Daniel Schwarcz argue that this penalty may not be enough to induce employers to design plans that will be sufficiently appealing to high-risk workers, raising the possibility that employers will "dump" such workers on to the exchanges. *See* Monahan & Schwarcz, *supra* note 66, at 181-88 (providing a road map for an employer that was considering such an approach). But, read carefully, their article contains a regulatory solution that is within the discretion of the Secretary of Health and Human Services to implement. *Id.* at 189-93.

⁸⁰ *See* PPACA § 1312(f)(2)(B), 42 U.S.C.A. § 18032(f)(2)(B) (West Supp. 1B 2010) (allowing such an option starting in 2017).

⁸¹ This discussion focuses on explicit health risk distribution mechanisms, omitting the health care financing provided through government-supported research, health construction and equipment, public health measures, and nonreimbursed state and local hospital expenditures. As calculated by the Office of the Actuary of the U.S. Centers for Medicare and Medicaid Services, expenditures in these omitted categories totaled about 7% of national health expenditures. *See* U.S. CENSUS BUREAU, STATISTICAL ABSTRACT OF THE UNITED STATES: 2010, at 98 tbl.128 (129th ed. 2009) (reporting \$146.2 billion of \$2.24 trillion in national health expenditures in 2007). This discussion also omits the health care costs of military families and veterans. These costs are distributed through general federal taxes. In 2007, Defense Department health benefits were \$31.7 billion, and Veterans health benefits were \$33.8 billion. *Id.*

A Consumer Choice Engine for the Health Benefit Exchanges: H for Helpful and E for Easy

Principal Investigator

Eric Johnson, Norman Eig Professor,
Director, Center for the Decision Sciences,
Uris Hall 514, 3022 Broadway, New York,
NY 10027 ejj3@columbia.edu

Tom Baker, William Maul Measey
Professor of Law and Health Sciences,
Penn Law School and Wharton
tombaker@law.upenn.edu

Ran Hassin, professor of psychology,
Hebrew University
ran.hassin@huji.ac.il

Grantee Organization: Columbia University

Requested Start Date: 07/01/11

Requested End Date: 07/31/12

Project Goal

Bring judgment and decision-making (JDM) and behavioral economic (BE) research to bear on the design of the new Health Insurance Exchange web portals so they function as more effective consumer choice engines and provide data that will be useful for JDM and BE research.

Objectives

(1) Develop single cost measures, identify key plan attributes, and develop quality measures for health exchange choice. (2) Answer a set of practical research questions (relating to exchange design) identified jointly with the federal Office of Insurance Exchange. (3) Work with that Office and state counterparts to incorporate those findings into the specifications for the actual Exchange design. (4) Work with these same agencies to incorporate experimental design and data capture capacities into the specifications for the exchange web portals.

Proposed Activities

(1) Scientifically motivated experimental research that could be useful for the exchange design but that is of theoretical importance in and of itself. (2) Continued engagement with OIE to increase opportunities for future research. (3) Rapid turn-around applied/translational research using the Center for Decision Sciences platform to answer questions that arise in the course of our engagement with OIE.

Expected Products

Publications in high ranking JDM and BE journals. Templates and best practices for Exchange web portals. Health exchanges designed to facilitate future research.

Expected Outcomes

Incorporation of new and existing JDM and BE knowledge into the design of health insurance exchanges.
Foundation for future research: Experimental and data capture capacities built into health exchanges.

**A Consumer Choice Engine for the Health Benefit Exchanges:
H for Helpful and E for Easy¹**

The Patient Protection and Affordable Care Act obligates each of the states to create, by January 2014, a Health Benefit Exchange that will have a variety of functions similar to the Massachusetts Health Connector² (Baker forthcoming 2011; Duggan & Kocher 2010; Holland & Kingsdale 2010). The Act also authorizes the Secretary of Health and Human Services to create and operate an exchange to serve the residents of states that do not create an exchange. Among other responsibilities, each exchange must maintain a web portal through which individuals can purchase a health plan that satisfies their legal obligation to have health insurance.

These new exchanges present three opportunities for behavioral economics and judgment and decision making research. First, we are working closely with the HHS office in charge of coordinating the state exchanges (the Office of Insurance Exchanges in the Center for Consumer Information and Insurance Oversight) on an applied research program intended to help the states design the web portals to serve as “consumer choice engines” to make the health insurance choice more tractable. Second, OIE is open to designing the portals in a manner that will allow for randomized variation and testing of hypotheses. Third, the natural variation in the ultimate design of the state-based exchanges creates the potential for research that exploits the variations, provided that the exchanges capture the data necessary for such research. Working with OIE, we will attempt to persuade the states to design the exchanges to capture such data.

This proposal seeks short term, seed money that will serve as bridge financing to allow us to begin our applied research while we work with OIE and the states to obtain government support for the research. On Friday, April 22, 2011 we had a meeting with senior OIE staff and a senior White House information technology expert in which we obtained (a) complete buy-in to the research plan and (b) an invitation to jointly present the plan with OIE to the innovator state exchanges on May 5.³ OIE is awarding grants to the states to develop the exchanges and will recommend to the innovator states that they designate a portion of their federal grant money to support this research. We anticipate that

¹ With apologies to Thaler & Sunstein’s “Prescription Drugs: Part D for Daunting,” in Nudge

² <https://www.mahealthconnector.org/portal/site/connector/>

³ Prior to the meeting Joel Ario, the Director of OIE, had a telephone conversation with Cass Sunstein, in which Sunstein indicated his support for the research.

this funding process will take six months. Hence the need for the bridge financing reflected in this grant application.

1&2: The Research Question, Why It is Important, and the State of the Research

In presenting our research plan to OIE we identified the following decision support challenges and design principles.

Challenges	Exchange Design Principles
1. Capacity: People’s capacity to process complex information is very limited 2. Goal Neglect: People overemphasize the present over the long term 3. Differences: People have different needs, knowledge, desire for knowledge, preferences, etc. 4. Scientific knowledge: Information comes from multiple domains, none of which fully understand health/insurance behaviors or choices.	Principle I: Smart & customized choice sets, and defaults within the sets Principle II: Simplify and increase visibility of information related to long terms goals Principle III: Smart & customized information presentation (multi-layered sites) Principle IV: Exchanges should collect data and use targeted randomization to learn how to better meet these challenges.

The first three challenges proceed directly from judgment and decision making research. We identified the fourth challenge as a result of the background investigation for the research. Far too little is known about, for example, (a) what features of health plans matter to (different types of) consumers and why, (b) how to measure the quality of health plans, (c) the context in which consumers make choices among health plans, and (d) how open consumers will be to accepting smart defaults in a government exchange environment.

Together with senior OIE personnel, we identified the following set of applied research questions proceeding from the challenges and principles:

1. What is the optimal set size (features/plans) to facilitate choice? At the point of final choice, how many factors should be presented to allow for manageably informed comparison?
2. Would people like the option of a shortcut to making a choice, recognizing that any shortcut will involve expert direction (i.e., nudges)? What will make them like shortcuts more?
3. How to best structure the shortcuts? Asking people about preferences (e.g., money vs. quality); general questions about their life (e.g., age, gender, weight); or specific questions about health?
4. What is the best way to frame randomization within the shortcuts? As taking turns?
5. What are the most important attributes upon which plan differ? How are the attributes best presented to facilitate reasoned choice?
6. What are the elements of existing, expert measures of plan and provider quality? Who has developed good consumer measures? (E.g. Trip Advisor, Rotten Tomatoes) How can they be adapted to health plan choice context? How are expert/consumer measures best presented?

7. How would reminders of quality affect decisions?
8. What are the effects of quality measures on decisions, how are they best presented, and how can we use 1—7 to increase their use (informed decisions)?
9. Others to emerge from process

These questions are important because the Affordable Care Act and, indeed, the entire private market approach to health insurance is predicated on the capacity of consumers to make reasoned choice among plans. Yet, the (limited) research that has been conducted on health insurance choice (most significantly in the Medicare Part D and group employee context) suggests that consumers are poorly equipped to make such choices. (E.g., Abuluck 2009, Cummings et al 2008, Heiss & McFadden)

...

4. The Research Methodology

We will use web-based experimental research techniques developed by and employed in the Center for Decision Science at Columbia to test how consumers use (a) cost, (b) plan attribute, and (c) quality information in making health insurance decisions. We will then use these techniques to develop and test choice architectures that make the decision process easier and more effective. This will require us to develop an understanding of what it “effective” means in this context.

Existing exchange-like websites provide customers with many components of financial information (e.g., monthly cost, deductible, copay for different services, annual out of pocket max, etc.). Given people’s documented limited capacity to deal with information of this sort, we suggest that cost information be condensed into one summarizing number: The expected yearly cost given one’s health status. Understanding the moving pieces that go into this number and testing ways of packing and unpacking this number will be an initial, practically important part of the research.

Plans also differ in other attributes, such as the size of the network, whether there is a gatekeeper, how the cost sharing arrangements work, and the provisions for medical treatment outside of the consumer’s home area. Understanding these attributes and testing ways of presenting them is a second, practically important part of the research.

We also suggest adding two quality measures. One is yet to be developed by health scientists with whom we will work (measuring quality of health care turns out to be a complicated issue). The other is simple and powerful: we suggest that users rate health plans in the same way that moviegoers rate their movies on rottentomatoes.com, and facebook

users rate everything. Understanding and testing these two categories of quality measures is a third, practically important part of the research.

These four measures provide four information points for each decision: Cost, Attributes, Expert Quality Rating (EQR), and Lay Quality Ratings (LQR).⁴

What will we measure? There will be two main dependent variables in this project. The first is *likelihood of making a decision*. The premise behind The Patient Protection and Affordable Care Act is that having health plan is better than not having one. We adopt this assumption. Thus, an important goal of our designs is to increase participation. In all experiments, participants will have an option of not making a decision. Proportion of decisions overall, then, will be one measure of the effect of varying the presentation of the information points. Second, in the proposed experiments (but not necessarily in real life) we can make sure that some options are better than others, that is – that there are dominated and dominating options. Our second dependent variable, then, will consist of measuring how people assess, and whether they choose, the dominating/dominated options. (OIE would like us to develop a third dependent variable, relating to satisfaction with the use of the interface. We are open to doing this, though we have not yet thought through carefully how.)

Experiment 1: In this experiment, which is actually a pretest of the effects of our Cost measure, we will compare decisions made with current templates to decisions made with similar templates, simply replacing the various cost measures with our unified Cost measure. Participants will be randomly allocated to conditions, and we predict increased participation rate in the experimental condition, and higher likelihood for choosing the dominating options. This hypothesis reflects the longstanding understanding that simple information is easier to process than complex information.

Experiment 1: In this experiment, which is actually a pretest of the effects of our Cost measure, we will compare decisions made with current templates to decisions made with similar templates, simply replacing the various cost measures with our unified Cost measure. Participants will be randomly allocated to conditions, and we predict increased participation rate in the experimental condition, and higher likelihood for choosing the dominating options. This hypothesis reflects the longstanding understanding that simple information is easier to process than complex information.

⁴ We are not suggesting that the exchange website should be limited to this information. In our dialogue with OIE we propose that the website will be multilayered to allow those of us who want and can use more detailed information to use it. What we propose and examine here is the most basic level of these websites.

Experiment 2: In this experiment, which is actually a pretest of the effects of our Attributes measures, we will compare decisions made with the template created in Experiment 1, to decisions made with a similar template that also includes a (simple) set of questions intended to elicit attribute preferences and presents the choice according to those preferences. Participants will be randomly allocated to conditions, and we predict increased participation, and better decisions, in portals that include quality measures.

Experiment 3: In this experiment, which is actually a pretest of the effects of our Quality measures, we will compare decisions made with the templates created in Experiments 1 and 2 to decisions made with a similar template that also includes our LQR and EQR. Participants will be randomly allocated to conditions, and we predict increased participation, and better decisions, in portals that include quality measures.

5: Outputs

The outputs of the project will be white papers providing decision support information to OIE and the state exchanges, in addition to articles in referred journals reporting the results of the experimental research, and, it is hoped the following public policy outcomes: (a) improvements in the usability of the exchange portals, (b) the capacity for randomization built into the portal design, and (c) the capacity for data capture built into the portal design.

...

References

- Abaluck, J. (2009). Choice inconsistencies among the elderly: evidence from plan choice in the Medicare Part D program.
- Baker, Tom (forthcoming 2011), Health Insurance, Risk and Responsibility After the Affordable Care Act, -- Pennsylvania L. Rev –
- Cummings, J. R., Rice, T., & Hanoch, Y. (2008). Who Thinks That Part D Is Too Complicated?: Survey Results on the Medicare Prescription Drug Benefit. *Medical Care Research And Review*, 66(1), 97-115.
- Duggan, Mark and Bob Kocher (2010), The Economics, Opportunities and Challenges of Health Insurance Exchanges, *The Economists' Voice*: Vol. 7 : Iss. 5, Article 3.
- Fehr, E., & Fischbacher, U. (2003). The nature of human altruism. *Nature*, 425, 785-791.
- Gilovich, T., Griffin, D., & Kahneman, D. (2002). *Heuristics and Biases: The Psychology of Intuitive Judgment*. New York, NY: Cambridge University Press.
- Heiss, F., & McFadden, D. (n.d.). Mind the Gap! Consumer Perceptions and Choices of Medicare Part D Prescription Drug Plans. Research Findings in the Economics of Aging. en.scientificcommons.org
- Holland, Patrick and John Kingsdale (2010), Health Benefit Exchanges: An Implementation Timeline for State Policymakers.
- Johnson, E. J., & Goldstein, D. G. (2003). Do Defaults Save Lives? *Science*, 302, 1338-1339.

- Johnson, E. J., Haubl, E. J., & Keinan, A. (2007). Aspects of endowment: A query theory account of loss aversion for simple objects. *Journal of experimental Psychology: Learning, Memory, and Cognition*, 33, 461-474.
- Kahneman, D. (1973). *Attention and Effort*. Englewoods Cliff, NJ: Prentice-Hall.
- Klayman, J., & Ha, Y. (1987). Confirmation, disconfirmation, and information in hypothesis testing. *Psychological Review*, 94, 211-228.
- Kleiman, T., & Hassin, R. R. (2011). A Conflict State of Mind: Non-conscious Goal Conflict Attenuates Confirmation Tendencies. *under review*.
- Kleiman, T., & Hassin, R. R. (in press). Nonconscious goal conflict.
- Morewedge, C. D., & Kahneman, D. (2010). Associative processes in intuitive judgments. *Trends in Cognitive Science*, 14, 435-440.
- Snyder, M., & Swann, W. B. (1978). Hypotheses testing processes in social interaction. *Journal of Personality and Social Psychology*, 36, 1202-1212.
- Thaler, R., & Sunstein, C. R. (2009). *Nudge: Improving decisions about health, wealth, and happiness*. London, England: Penguin Books.
- Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. *Science*, 185(4157), 1124-1131.
- Wason, P. C. (1960). On the failure to eliminate hypotheses in a conceptual task. *The Quarterly Journal of Experimental Psychology*, 12, 129-140.



APRIL 2010

EXPLAINING HEALTH CARE REFORM: Questions About Health Insurance Exchanges

The Patient Protection and Affordable Care Act (PPACA), signed into law in March 2010, made broad changes to the way health insurance will be provided and paid for in the United States. PPACA created a new mechanism for purchasing coverage called Exchanges, which are entities that will be set up in states to create a more organized and competitive market for health insurance by offering a choice of health plans, establishing common rules regarding the offering and pricing of insurance, and providing information to help consumers better understand the options available to them. Initially Exchanges will serve primarily individuals purchasing insurance on their own and smaller employers; states will have the option of opening Exchanges to larger employers a few years after implementation.

This summary provides responses to questions about the purpose and function of Exchanges and how they relate to regulation of the insurance market. Certain details of how provisions in the law will actually be implemented will not be available until regulations are issued by various government agencies, primarily the Department of Health and Human Services (DHHS).

Who will have access to Exchanges?

PPACA requires most individuals to have health insurance beginning in 2014. It authorizes entities known as American Health Benefit Exchanges, which states will establish by January 1, 2014, to make plans available to qualified individuals and employers. Qualified individuals include U.S. citizens and legal immigrants who are not incarcerated, and who do not have access to affordable employer coverage. PPACA also provides for separate Small Business Health Options Program (SHOP) Exchanges from which small businesses with up to 100 employees can obtain coverage for their employees. Prior to 2016, states can limit Exchanges to businesses with 50 or fewer workers, and, beginning in 2017, states can allow businesses with more than 100 employees to purchase coverage from an Exchange.

The Congressional Budget Office estimated that in 2019, approximately 24 million people would purchase their own coverage through the Exchanges, plus an additional 5 million people whose employers allow all their workers to choose among the plans in the Exchanges.

How will Exchanges be structured?

An Exchange must be a governmental agency or nonprofit entity that is established by a state. States are required to establish separate exchanges for individuals (American Health Benefit Exchanges) and small business employees (Small Business Health Options Program, or SHOP, Exchanges) by January 1, 2014. States can choose to establish a single Exchange serving both individuals and small businesses, or provide coverage through separate entities. States may form regional Exchanges or allow more than one Exchange to operate in a state as long as each Exchange serves a distinct geographic area.

If a state fails to set up an Exchange by January 1, 2014, the DHHS Secretary will establish and operate an Exchange in the state, either directly or through an agreement with a nonprofit entity.

Funding to establish Exchanges will be available to states from within one year of enactment (i.e., 2011) until January 1, 2015, when states must ensure that their Exchanges are self-sustaining. States are required to allow Exchanges to charge assessments or user fees to participating health insurance issuers or to provide other means of generating funding.

The federal Office of Personnel Management (OPM) is required to contract with insurers to offer at least two multi-state plans in each Exchange, including at least one offered by a non-profit entity. Each multi-state plan must be licensed in each state and must meet the requirements of a qualified health plan. These multi-state plans will be offered separately from the Federal Employees Health Benefits Program (which OPM administers) and will have a separate risk pool.

In addition, federal funds will be made available to establish non-profit, member-run health insurance companies (called Consumer Operated and Oriented Plans, or CO-OPs) in each state.

What functions will Exchanges perform?

The law requires that, at a minimum, Exchanges will:

- certify whether health plans are qualified to be offered in the Exchange, including examining their premium increases;
- require of plans and make public disclosure of the following information in plain language: claims payment policies and practices; periodic financial disclosures; data on enrollment, denied claims, and rating practices; information on cost sharing and payments for out-of-network coverage; and enrollee and participant rights;
- require qualified health plans to make available timely information about the amount of cost sharing for specific items or services;
- operate a toll-free telephone assistance hotline;
- maintain an Internet website where enrollees can obtain standardized comparative information about the health plans;
- assign a rating to each health plan in the Exchange based on the relative quality and price of their benefits;
- use a uniform enrollment form and a standardized format for presenting health benefits plan options;
- inform people about the eligibility requirements for the Medicaid, CHIP or other State or local public programs and coordinate enrollment procedures with them;
- make available an electronic calculator to determine the actual cost of coverage after any premium tax credit and any cost-sharing reduction has been applied;
- grant certifications for individuals who are exempt from the individual responsibility penalty if there is no affordable qualified health plan available through the Exchange or the individual's employer;
- establish a Navigator program to award grants to entities to promote public education about and enrollment in Exchanges.

In order to be certified by the Exchange as a qualified health plan, plans must meet marketing requirements (to assure that they will not discourage enrollment of those with significant health needs), ensure a sufficient choice of providers, include essential community providers that serve the low income, be accredited on clinical quality measures including consumer assessment surveys, and use a standard format for presenting health benefits plan options. In addition, qualified plans in the Exchanges must abide by insurance market regulations relating to guaranteed issue, premium rating, and prohibitions on pre-existing condition exclusions.

In carrying out their activities, Exchanges are to consult with stakeholders such as enrollees, enrollment facilitators, representatives of small businesses and self-employed individuals, State Medicaid offices, and advocates for enrolling hard-to-reach populations.

What subsidies will be available to Exchange participants?

To help low to moderate income individuals purchase coverage through the Exchanges, subsidies for premiums, in the form of refundable and advanceable tax credits, will be available starting in 2014 for individuals and families with incomes from 133% to 400% of the federal poverty level (FPL). The premium credits will be tied to the second lowest cost Silver plan in the area and will be set on a sliding scale so that the premium contributions are limited to percentages of income for specified income levels (e.g., for incomes up to 133% FPL, the premium contribution will be limited to 2% of income). (The poverty level is \$22,050 for a family of four in 2009 and early 2010. See "What benefits will be offered through the Exchanges," below, for information about the Silver coverage level. See also the Kaiser Family Foundation report on *Explaining Health Care Reform: Questions About Health Insurance Subsidies*.)

Generally, subsidies will not be available to people with access to health coverage through an employer. If, however, an employer health plan does not have an actuarial value of at least 60%—meaning that the plan covers at least 60% of the cost of covered benefits in the aggregate for a standard population—or if an employee's share of the employer premium exceeds 9.5% of income, the employee may enroll in a plan in the Exchange and be eligible for premium and cost-sharing subsidies. Employers offering minimum essential coverage will be required to provide "free choice vouchers" to employees with incomes less than 400% FPL and whose contribution for the employer coverage exceeds 8% but does not exceed 9.8% of their income, which they can use to enroll in an Exchange.

Beginning in 2014, PPACA also provides for reduced cost sharing for families with incomes at or below 250% of poverty by making them eligible to enroll in health plans with higher actuarial values (a higher actuarial value means that the insurer, on average, pays a larger share of covered expenses¹). PPACA also specifies reduced out-of-pocket limits for people with incomes at or below 400% of poverty (see the Kaiser Family Foundation report *Explaining Health Care Reform: Questions About Health Insurance Subsidies*).

What benefits will be offered through the Exchanges?

The qualified plans that participate in the Exchanges will be required to offer a uniform benefits package which would be offered at four levels of value, making comparisons across plans easier. The law requires the DHHS Secretary to define this uniform benefit package, referred to as the essential health benefits, which must include at least the following general services: ambulatory patient services, emergency services, hospitalization, maternity and newborn care, mental health benefits and substance use disorder services, prescription drugs, rehabilitative and habilitative services and devices, laboratory services, preventive and wellness services and chronic disease management, and pediatric services including oral and vision care. States may require qualified health plans to offer additional benefits, but PPACA says that the State must defray the cost of any additional benefits by making payments either to the enrollee or to the health plan.

The scope of these benefits must be equal to the scope of benefits provided under a typical employer plan, as determined by the DHHS Secretary. The four levels of coverage, which vary depending on how much the insurer pays, include:

- Bronze: benefits equivalent to 60% of the full actuarial value of plan benefits,
- Silver: benefits actuarially equivalent to 70% of full value,
- Gold: benefits actuarially equivalent to 80% full value, and
- Platinum: benefits actuarially equivalent to 90% of full value.

Qualified health insurers must offer at least one plan at the Silver level and one plan at the Gold level in each Exchange in which their plans are offered.

Plans may offer catastrophic coverage that doesn't meet one of the four levels of coverage, but only to enrollees under the age of 30 or those who would otherwise be exempt from the requirement to purchase coverage because the premium exceeds 8% of their income. These plans would offer less coverage but at a lower premium—their coverage level would be set at the HSA current law levels except that prevention benefits and coverage for three primary care visits would be exempt from the deductible.

Qualified plans in the Exchanges are not allowed to design benefits or reimbursement in a way that discriminates against individuals because of their age, disability, or expected length of life. Exchanges must allow the offering of limited scope dental benefits for adults, either separately or in conjunction with a qualified health plan, if the plans provide pediatric dental benefits meeting certain requirements.

States can also create a Basic Health Plan for uninsured individuals with incomes between 133% and 200% of poverty in lieu of those individuals receiving premium subsidies to purchase coverage in the Exchanges, effective January 1, 2014. States that offer the Basic Health Plan must ensure that the benefits are at least equivalent to the essential health benefits and premiums are not higher than those in the Exchanges.

States are allowed to prohibit abortion coverage in qualified health plans offered through an Exchange if the state enacts a law to do so. Plans that do provide abortion coverage beyond that permitted with federal funds (to save the life of the woman and in cases of rape or incest) must create allocation accounts to segregate subsidies for premium payments and cost-sharing amounts for abortion services from premium and cost-sharing subsidies for all other services so that no federal premium or cost-sharing subsidies are used to pay for abortion coverage. At least one of the multi-state health plans in an Exchange is required to not provide abortion services beyond those permitted with federal funds.

¹ See the Kaiser Family Foundation *Glossary of Key Terms in Health Reform* at www.kff.org/healthreform/upload/7909.pdf.

Conclusion

The Exchanges established by PPACA are designed to be settings in which qualified individuals and families and small businesses can purchase health insurance coverage that meets certain rules relating to affordability, required benefits, and market standards. People who do not have access to employer or public coverage will find choices in the Exchanges, with standardized benefit options that make comparisons easier. Premium and cost-sharing subsidies will be available to help low- and modest-income people finance their coverage. The Exchanges also will provide settings in which insurers and plans can be monitored to assure that they conform to consumer protection rules that go beyond current insurance market regulations.

Resources

Alliance for Health Reform/Commonwealth Fund – Health Insurance Exchanges: See How They Run. Webcast provided by kaisernetwork.org: www.kaisernetwork.org/health_cast/hcast_index.cfm?display=detail&hc=3134

Center on Budget and Policy Priorities – Health Insurance “Connectors” Should Be Designed to Supplement Public Coverage, Not Replace It: www.cbpp.org/1-29-07health.htm

Community Catalyst – Revisiting Massachusetts Health Reform: 18 Months Later: www.communitycatalyst.org/doc_store/publications/revisiting_MA_health_reform_dec07.pdf

Congressional Budget Office, Letter to Honorable Nancy Pelosi, March 20, 2010: www.cbo.gov/doc.cfm?index=11379&zzz=40593

Heritage Foundation – The Significance of Massachusetts Health Reform: www.heritage.org/research/healthcare/wm1035.cfm

Institute for Health Policy Solutions – What Health Insurance Exchanges or Choice Pools Can and Can't Do About Risks and Costs: <http://allhealth.org/briefingmaterials/WhatHealthInsuranceExchangesorChoicePoolsCanandCantDoAboutRisksandCosts-1459.pdf>

Kaiser Commission on Medicaid and the Uninsured – President Obama's Campaign Position on Health Reform and Other Health Care Issues: www.kff.org/uninsured/kcmu112508oth.cfm

Kaiser Family Foundation – Health Reform documents including summary of the law, implementation timeline, premium subsidy calculator, other reports: <http://healthreform.kff.org/>

Kaiser Family Foundation – How Private Health Coverage Works: www.kff.org/insurance/7766.cfm

Kaiser Family Foundation/National Governors Association – Webcast, Creating a Marketplace for Expanding Coverage: www.kaisernetwork.org/health_cast/hcast_index.cfm?display=detail&hc=2063

Kaiser Family Foundation – State Health Facts (State Insurance Rules): www.statehealthfacts.org/comparecat.jsp?cat=7

Massachusetts Connector: www.mahealthconnector.org/portal/site/connector/

The Patient Protection and Affordable Care Act, and the Health Care and Education Reconciliation Act, full text and summaries from the Democratic Policy Committee: http://dpc.senate.gov/dpcdoc-sen_health_care_bill.cfm

Urban Institute – Health Insurance Exchanges: Organizing Health Insurance Marketplaces to Promote Health Reform Goals: www.urban.org/UploadedPDF/411875_health_insurance_marketplaces.pdf

This publication (#7908-02) is available on the Kaiser Family Foundation's website at www.kff.org.