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LAW AS PRODUCT AND BYPRODUCT

*Bruce H. Kobayashi & Larry E. Ribstein**

Public lawmakers possess misaligned incentives for legal innovation. Private lawmaking provides a potential solution to this problem. However, several problems must be solved before private lawmakers can effectively respond to the shortcomings of public laws. In examining these problems, this paper makes three important contributions to the literature on private lawmaking. First, we discern a fundamental tension between the need for legal certainty and the private lawmakers' loss of property rights when government adopts their proposals as law that hampers private lawmaking. Second, we show how private lawmakers' limited ability to profit from payments correlated with the use of laws they draft explains why private lawmaking occurs mainly as a byproduct of political rent-seeking activities. These laws may not meet the needs of those who use the laws as well as products being designed for sale directly to the users. Third, we show that government may need to play a significant role in creating a private market for law, which limits the extent to which such a market can avoid the problems with public and byproduct laws. We conclude that, while private lawmaking may be a theoretically tempting alternative to relying on public legislatures, under current conditions, its reality may be disappointing.

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INTRODUCTION

Lawmaking has generally been considered the province of government agents subject to political control. At the same time, policymakers and scholars have long recognized the potential shortcomings of government-enacted laws. Powerful interest groups may successfully promote laws opposed by—or block laws favored by—society in general. Also, public lawmakers have weak incentives to produce socially valuable legal innovations, in part because they share little of the public benefits of producing laws.¹ Thus, public lawmaking can simultaneously underproduce desirable laws and overproduce undesirable ones. This paper considers whether, and under what conditions, private lawmaking can usefully fill gaps in and substitute for publicly produced laws—particularly those laws that enhance private ordering.

Laws that assist private ordering might seem less important than public regulatory and criminal law because of the ubiquitous role played by private contracts in filling gaps in the former, but not the latter, setting. However, innovative statutory standard forms that

* Professor of Law, George Mason University School of Law and Mildred van Voorhis Jones Chair in Law, University of Illinois College of Law. The authors acknowledge very helpful comments from Robert Ahdieh, Omri Ben-Shahar, Bob Bone, Robert Cooter, Mark Grady, Gillian Hadfield, Erin O'Hara O'Connor, Mark Patterson, Eric Talley, Andrew Verstein, as well as from participants at the George Washington University School of Law program, "Financing Innovation: Our Economic Future"; a Berkeley Law and Economics Workshop; the International Society of New Institutional Economics 2011 Annual Conference; Midwest Law & Economics Association 2011 Annual Meeting; Conference on Regulatory Competition in Contract Law and Dispute Resolution, Munich, Germany; Washington University School of Law Advanced Corporate Law Colloquium, Fordham University School of Law, and Yale Law School's Wasserman Workshop in Law and Finance.

¹ Gillian Hadfield & Eric Talley, On Public vs. Private Provision of Corporate Law, 22 J. L. ECON & ORG. 414, 439 (2006).

provide expanded sets of default rules for contracts can add significant social value by reducing errors in formulating contracts that cause ambiguity and reduce predictability.² This is particularly important in long-term, open-ended relationships like business associations, which call for complex governance structures that can enable the parties to adjust to future unknowable circumstances.³ Standard forms are also useful in clarifying the effect of contracts on parties whose express agreement is costly to obtain, informing the world at large of contract terms, and providing the basis for interpretive case law and privately provided forms.⁴

Since innovative statutory standard forms can reduce costs and add value to private transactions, it is critical to have an adequate and appropriate supply of such forms. Yet, if public law drafters have weak and misaligned incentives to innovate, they may miss opportunities to provide useful clarity and certainty for firms by failing to produce the right number and types of statutory standard forms for business relationships. For example, if left to public lawmakers, standard forms may lag behind new technologies and business methods, and therefore become misaligned with prevailing contracting practices. This may, in turn, stall the development of private contracting, as parties must balance the benefits of innovation against the costs of misalignment with prevailing law.

Given the problems of lawmaking by government and the need for such laws to support private ordering, it is worth exploring the potential for private alternatives to government-drafted laws. Private lawmakers could have stronger and better-aligned incentives to produce efficient laws than do public legislators.⁵ Thus, private lawmaking can be a potential solution to both the underproduction and the malproduction of law. Enhancing private lawmaking, therefore, could be the type of systemic change that stimulates growth by encouraging welfare-enhancing laws.⁶

² See Charles J. Goetz & Robert E. Scott, *The Limits of Expanded Choice: An Analysis of the Interactions Between Express and Implied Contract Terms*, 73 CAL. L. REV. 261, 263 (1985); see also Bruce H. Kobayashi & Larry E. Ribstein, *Private Lawdrafting, Intellectual Property, and Public Laws* 7 (George Mason Law & Econ. Working Paper No. 13-20, 2012).

³ Larry E. Ribstein, *Statutory Forms for Closely Held Firms: Theories and Evidence from LLCs*, 73 WASH. U. L. Q. 369, 375–76 (1995) (noting particularly the value of standard forms in filling in end-period terms).

⁴ *Id.*

⁵ See Hadfield & Talley, *supra* note 1, at 417–19.

⁶ See Henry N. Butler & Larry E. Ribstein, *Legal Process and the Discovery of Better Policies for Fostering Innovation and Growth*, in RULES FOR GROWTH: PROMOTING INNOVATION AND GROWTH

Indeed, private parties such as lawyers already draft and promote laws for adoption by legislatures. However, such private lawmaking can exaggerate the public choice problems of public lawmaking by directly promoting laws that do not reflect the preferences of society.⁷ Moreover, even in the absence of direct incentives, parties often engage in these law-drafting efforts as a byproduct of other activities. These byproduct incentives also are often associated with political rent-seeking rather than solely, or even primarily, intended to produce an attractive product for the market for laws. For example, litigants produce precedents, but only as a byproduct of dispute resolution; trade groups produce and lobby for laws that serve the group's, rather than society's, interests; lawyers help write laws that enhance their ability to earn legal fees; and the National Conference of Commissioners on Uniform State Laws (NCCUSL) cartelizes state laws. Thus, both direct and byproduct private law drafting often share with public law drafting some of the problems of the political process. The result may also be the same, weak and misaligned incentives for producing efficient laws.⁸

The drawbacks of byproduct lawmaking raise the question of the potential for private lawmaking that is not dependent upon byproduct incentives and could bypass political rent-seeking. We posit the existence of a private firm, which we dub "Hammurabi, Inc.," that makes money by drafting and selling laws.⁹ In such a market, the lawmaker's incentives come from capturing a share of the reduc-

THROUGH LEGAL REFORM 463 (The Kauffman Task Force for Law, Innovation and Growth ed. 2011) (discussing the importance of such systemic changes), available at <http://www.kauffman.org/uploadedfiles/Rules-for-Growth.pdf>; see also Gillian K. Hadfield, *Producing Law for Innovation*, in RULES FOR GROWTH: PROMOTING INNOVATION AND GROWTH THROUGH LEGAL REFORM 23, 26 (Kauffman Task Force for Law, Innovation and Growth ed., 2011), available at <http://www.kauffman.org/uploadedfiles/Rules-for-Growth.pdf>; Gillian K. Hadfield, *Legal Infrastructure and the New Economy*, 8 I/S: J. L. & POL'Y INFO. SOC'Y 1, 57-58 (2012).

⁷ See Brendon Greeley & Alison Fitzgerald, *Pssst . . . Wanna Buy a Law? When a Company Needs a State Bill Passed, the American Legislative Exchange Council Can Get it Done*, BUSINESSWEEK, December 1, 2011, <http://www.businessweek.com/magazine/pssst-wanna-buy-a-law-12012011.html> (discussing the activities of the American Legislative Exchange Council in drafting and promoting privately produced statutes for adoption by state legislatures).

⁸ See Gabriel V. Rauterberg & Andrew Verstein, *Index Theory: The Law, Promise and Failure of Financial Index Theory*, 30 YALE J. REG. 1 (2013) (examining direct and byproduct incentives to produce and maintain financial indexes).

⁹ Although the use of *Inc.* implies a corporate, for-profit firm, as discussed below, we are agnostic on the particular structure of the law-drafting firm, including whether it is organized as a corporation, partnership, or LLC, or as a for-profit or nonprofit.

tion in transaction costs and other social gains generated by the use of the firm's legal innovation.

This paper's main contribution is showing how the promise of private parties' supplementing public law drafting is compromised by two main problems. First, private laws may lack a critical attribute of public laws; the certainty of enforcement that can be provided mainly by government. Second, where government adopts privately produced rules and gives them the force of law, this may limit the private law drafters' intellectual property rights in their creations. This follows from the law acquiring its power from the government's authority to enforce its provisions against unwilling parties. Once a provision acquires this power of law, those who are subject to it must be assured of being able to prosecute or defend actions charging violations. Combining these two points, private parties may lack incentives to produce precisely those most necessary rules—the rules that are deemed worthy of public enforcement as law.

Private lawmaking might be encouraged by clarifying the existence of private property rights in materials that are adopted as law. In other words, we consider how to move private creation of law from *byproduct* to *product*. The beginning point is for Congress to allow private law drafters to maintain effective intellectual property right protection after they sell their works to the government. To mitigate due process concerns, these rights can be subject to a fair use defense or limited license that would allow the royalty-free use by those bound by the law. This would effectively unbundle the lawmaking process and have government outsource some of its lawmaking function to private parties while retaining its exclusive power to enforce the law.

However, several problems with this approach to private lawmaking could limit its usefulness. First, how would a system of private lawmaking and government enforcement be implemented? This involves questions concerning the property rights private lawmakers would retain and the government's role as a potential intermediary in selling the laws to individuals and firms.

Second, it is important to consider whether this system would improve the law as compared with the current system of public and byproduct lawmaking. In particular, as long as the government retains a key role in determining which private law proposals are enacted and enforced—that is, as long as the demand side of the equation is fixed—what is the chance that the adopted laws will improve? Giving private parties intellectual property rights in law and enabling them to sell their products to potential users might improve lawmak-

ers' incentives over those of public and byproduct lawmakers. Problems of political rent-seeking by governments in purchasing laws might be addressed to some extent by jurisdictions' incentives to compete with other jurisdictions for residents and business.¹⁰ However, this conclusion must remain somewhat speculative until private lawmakers' property rights are clarified and a market in private law has a chance to develop.

Finally, given the potential problems with a hybrid system of private law drafting and government enforcement, it is worth considering the feasibility of relying exclusively on private enforcement and not having privately drafted provisions adopted as law. As noted above, this approach would cost lawmakers the law's critical feature of likely enforcement, which in many situations can make the law cheaper and more effective than other enforcement mechanisms, such as reputational incentives or spontaneous coordination. However, in some situations, private parties may be able to achieve a level of coordination comparable to the certainty of enforcement we attribute to the law.¹¹ Thus, in some circumstances, it may be feasible for the parties to avoid choosing between property rights and certainty of enforcement by pursuing purely private enforcement mechanisms. The availability of alternatives to laws increases the importance of examining the costs of formal law drafting, including the certainty/property rights dilemma discussed in this paper.

This article proceeds as follows. Part I discusses the problems of public law drafting, particularly including the weak incentives of public law drafters. Part II discusses the alternative of private lawmaking, focusing on the problems resulting from the weak property rights of law drafters whose proposals are adopted as law. Part III compares the idealized approach to private law drafting with the current approach—private lawmaking as a byproduct of political rent-seeking. Part IV discusses how a private lawmaking market might be developed, focusing on a number of potential questions and problems with this market.

¹⁰ See ERIN A. O'HARA & LARRY E. RIBSTEIN, *THE LAW MARKET* 12 (2009). Of course, such competitive forces also serve to improve the current public and byproduct lawmaking system. *Id.*

¹¹ See Gillian K. Hadfield & Barry Weingast, *What is Law? A Coordination Model of the Characteristics of Legal Order* 4 J. LEGAL ANALYSIS 471, 502–05 (2012), <http://jla.oxfordjournals.org/content/4/2/471.full.pdf+html>.

I. PROBLEMS WITH PUBLIC LAWMAKING

As discussed in the Introduction, statutory standard forms can reduce firms' transaction costs as compared with private contracts for which there are no standard forms. Ideally, legislatures would produce statutes suited to diverse business types in order to minimize the total of these transaction costs and the costs of promulgating and enforcing the statutes. The optimal number and content of statutes may depend on factors such as firms' demand for statutory default provisions and the need to avoid confusion from a proliferation of forms.

The actual number and quality of statutes produced depends, however, on legislators' incentives. Public lawmaking entails a political competition among interest groups.¹² Politicians have an incentive to produce new laws in order to either attract or avoid losing interest group support. Interest groups, in turn, are motivated to some extent by the benefits they earn when these new laws attract revenues and residents from other states in interstate competition.¹³

Interest group pressure may, however, give legislators only weak incentives to produce efficient and innovative new laws that meet firms' needs. First, the state may be unable to capture the benefits of a new statute. Even a high quality and innovative new standard business form may face insuperable competition from a dominant existing law, such as Delaware's corporate law. Also, because governments generally lack property rights in their laws,¹⁴ they may not be able to gain enough from making the law competitive to justify investing in innovation.

Second, even if governments have incentives to enact efficient and innovative statutes, individual legislators may have weak personal incentives to draft these statutes. Public legislators gain from legislative innovations only up to the point that these innovations enable them to gain reelection.¹⁵ At the same time, legislators risk reputational harm from failed experiments and backlash from interest groups injured by the innovation.¹⁶

¹² Gary S. Becker, *A Theory of Competition Among Pressure Groups for Political Influence*, 98 Q. J. ECON. 371, 372 (1983).

¹³ See O'HARA & RIBSTEIN, *supra* note 10, at 8.

¹⁴ There are exceptions. The United Kingdom protects government works through Crown Copyrights. See Bruce H. Kobayashi & Larry E. Ribstein, *Law's Information Revolution*, 53 ARIZ. L. REV. 1169, 1177 (2011) (discussing some implications of protecting government works with intellectual property rights).

¹⁵ See Hadfield & Talley, *supra* note 1, at 417 ("But the rewards [legislators] face—satisfying voters and campaign contributors and hence achieving reelection—do not create the kind of marginal incentives that lead to efficient offerings.").

¹⁶ Douglas J. Cumming & Jeffrey G. MacIntosh, *The Role of Interjurisdictional Competition in Shaping Canadian Corporate Law*, 20 INT'L REV. L. & ECON. 141, 145–46 (2000); see also Susan Rose-Ackerman, *Risk Taking and Reelection: Does Federalism Promote Innovation?*, 9 J. LEGAL STUD. 593, 605–06 (1980).

Although this analysis indicates that states cannot gain an edge through innovation, significant statutory variation nevertheless exists in some contexts. For example, we document the existence of significant variation in LLC statutes.¹⁷ These differences may be attributed to the legislators' incentives to engage in social wealth-reducing innovation at the behest of powerful interest groups. Lawyers in particular have political power resulting from their control of the judiciary and the organizational advantages that have likely tilted many aspects of the law in lawyers' favor.¹⁸ Lawyers could instigate innovations that complicate the law and thereby create business for lawyers while simultaneously imposing costs on the rest of society.¹⁹ In other words, legal innovation may exist under the current regime but may not be welfare-enhancing. We explore the incentives underlying the production of such lawmaking below in Part III.

II. PRIVATE LAWMAKING

Given the problems of public lawmaking, we consider whether there is a potential for a purely private market in law drafting by our private law-drafting firm, Hammurabi, Inc. Hammurabi ideally would have the same robust profit-making incentives of actors in any other private market. Depending on the "buy" side of the market for law, and particularly the amount and type of jurisdictional competition,²⁰ Hammurabi could have more of an incentive than public or byproduct lawmakers to draft laws that serve the interests of potential users or that transfer wealth from one group to another.

This Part presents a theoretical analysis of private law drafting. We focus on business association standard form contracts, but our model can be generalized to include statutes for other types of contracts, market structures, or private relationships. For example, marriage and other domestic relationships are amenable to statutory standard forms analogous to those for business associations.²¹ Subpart A presents a basic theory of socially optimal legal innovation based on the objective of reducing parties' mis-

¹⁷ See Bruce H. Kobayashi & Larry E. Ribstein, *Delaware for Small Fry: Jurisdictional Competition for Limited Liability Companies*, 2011 U. ILL. L. REV. 91, 102–03 (2011).

¹⁸ BENJAMIN H. BARTON, *THE LAWYER-JUDGE BIAS IN THE AMERICAN LEGAL SYSTEM* 1–3 (2011).

¹⁹ See Gillian Hadfield, *The Price of Law: How the Market for Lawyers Distorts the Justice System*, 98 MICH. L. REV. 953 (2000).

²⁰ See *infra* Part IV.C.

²¹ See Larry E. Ribstein, *A Standard Form Approach to Same-Sex Marriage*, 38 CREIGHTON L. REV. 309, 316–18 (2005); Larry E. Ribstein, *Incorporating the Hendrickses*, 35 WASH. U. J. L. & POL'Y 273, 275 (2011) [hereinafter Ribstein, *Hendrickses*].

match costs.²² This analysis indicates the potential advantage of private laws that supplement the inadequacies of public lawmaking discussed in Part I. Subparts B and C discuss problems associated with private lawmaking—greater uncertainty of enforcement, which gives rise to higher expected reorganization costs, and the lack of effective intellectual property rights in privately produced works that may be adopted as law. These problems create a fundamental tension between creating products that may have little or no market value because of enforcement uncertainty, and creating more valuable products that, when adopted as law, result in the creators having weak or no property rights.

A. *Mismatch Costs*

As discussed in the Introduction, statutory standard forms can assist in various ways in private ordering. By the same token, contracting parties that have no close-fitting standard form may choose the next best option of using an ill-fitting form that forces them to incur greater costs.²³ A key objective of providing additional public and private standard forms is to reduce these costs, which we refer to as “mismatch costs.”

The following example will assist in visualizing mismatch costs. Assume the situation that existed at the middle of the twentieth century in the U.S., where there were only two types of statutes suited for closely held firms: the Uniform Partnership Act (UPA) as adopted by all states and the corporate statute. The corporate statute provides for limited liability but has the wrong tax consequences and significantly constrains small firms’ flexibility. The general partnership statute gives parties broad freedom to structure their relationship but forces the firm’s owners to assume vicarious liability for the firm’s debts. Although the parties could form a limited partnership in which passive investors have limited liability, one who exercises the power of a general partner in such a firm necessarily takes on vicarious liability. Most states did not provide for a flexible form of business that limits the personal liability of managing owners of small firms for the firm’s debts. Assume that each individual firm has a preferred structure; given that general partnership and close corporation statutes were the only existing statutes, firms faced a choice of whether to incur high mismatch costs because the existing statutes did not give the firm its preferred set of rights or to try to draft for its desired provisions. The firm would likely be unable to avoid the high mismatch costs, however, because drafting for a

²² See Kobayashi & Ribstein, *supra* note 2 (presenting an explicit model of private and public lawmaking).

²³ See Goetz & Scott, *supra* note 2, at 272 (“[P]arties may adapt to a risky environment by using safe but inexact formulations. When this occurs, the potential gains from trade are not fully exploited.”) (footnote omitted).

desired structure is problematic for two key reasons. First, a court is unlikely to enforce the parties' contractual expectation of limited liability against a third party who neither expressly nor impliedly agreed to the liability limitation if the firm organizes under the existing general partnership statute. Second, the tax consequences of the parties' contract ultimately depend on tax law rather than the parties' agreement. Thus, a firm opting for limited liability under the existing corporation statute will face entity level taxation.

A firm's mismatch costs of organizing under an ill-fitting statute increase rapidly with the differences between the statute and provisions ideally suited to the firm's needs. For example, the mismatch costs of using the existing partnership statute are large because of the significance of owners' limited or personal liability for the firm's debts. Other factors equal, all firms that want the liability and tax terms listed above will prefer to organize and operate under the new LLC statute, compared to forming under the existing UPA. The new statute accordingly may increase social wealth by reducing firms' transaction costs.

B. *Reorganization Cost*

An alternative to the choice between statute and customized contract presented in Subpart A is for private lawmakers to promulgate a standard form for a relationship that—like a limited liability company, or “LLC”—provides the desired characteristics of limited liability, partnership taxation, and members' direct participation in management. The private form critically lacks the characteristics of “law,” by which we mean a rule that reliably determines how a court or administrative agency will act when confronted with the provision. Snyder cites Justice Holmes' statement that “a legal duty so called is nothing but a prediction that if a man does or omits certain things he will be made to suffer in this or that way by judgment of the court; and so of a legal right.”²⁴ Consistent with this definition, we assume statutes adopted as law by a legislature are enforced with a greater certainty than privately produced provisions not adopted as law.

Continuing our example from Subpart A, assume our private lawmaker Hammurabi, Inc. promulgates sets of provisions that are similar to LLC statutes and therefore include the relevant characteristics of management flexibility, limited liability, and partnership taxation. Assume further that the private form is *not* adopted as law. Hammurabi, Inc.'s privately produced provisions would then impose not only mismatch costs on some firms but also “reorganization costs” that adopting firms will incur if the provisions are ultimately not enforced.

²⁴ David V. Snyder, *Private Lawmaking*, 64 OHIO ST. L.J. 371, 373 n.1 (2003) (citing Oliver Wendell Holmes, Jr., *The Path of the Law*, 10 HARV. L. REV. 457, 458 (1896)).

Reorganization costs are likely higher than mismatch costs under the existing statute because they include not only the costs of having to reorganize under an existing mismatched law or statute, but also include additional costs associated with the disruption of business plans, as well as legal fees, penalties, and liabilities. For example, relying on limited liability, the firm might fail to enter into nonrecourse arrangements with its creditors, with the result that its members face personal liability when courts refuse to enforce contractual limited liability. Further, relying on the partnership tax, the members may fail to minimize corporate taxes by characterizing distributions as wages rather than dividends.²⁵ Firms' expected costs of organizing under the private form thus equal the sum of its expected reorganization and mismatch costs. It follows that the additional value of a statute over an identical set of private provisions is the savings of expected reorganization costs resulting from the higher probability of enforcement of a government-promulgated form.

Because reorganization costs exceed mismatch costs, even firms that would rather organize under a new *statute* that more closely fits their needs than the existing statute may not prefer an equivalent new *private provision* because of the risk of non-enforcement and consequent reorganization costs. There is a critical probability of enforcement of private terms below which firms will prefer organizing as a mismatched firm under the existing statute over the new better-fitting private provision. Table 1 summarizes this tradeoff.

²⁵ See Ribstein, *supra* note 3, at 376–80 (noting that statutory forms differ from nonstatutory private forms in part in clarifying the enforcement of mandatory rules).

Table 1. Cost of Organization

Firms that prefer LLC-type provisions to existing UPA provisions operating under . . .

	Expected Mismatch Costs	Expected Reorganization Costs	Expected Total Costs
1a. Existing statute (UPA) and firm forgoes its preferred provisions.	High.	None.	High mismatch costs, no reorganization costs.
1b. Existing statute (UPA) and firm attempts to contract for preferred provisions.	Lower than 1a (when enforced). Provisions enforced with probability $\ll 1$.	High, incurred when contracted for non-standard provisions are not enforced.	Lower mismatch costs if enforced, high reorganization costs if not.
2. Non-law LLC provisions.	Lower than existing statute (when enforced). Provisions enforced with probability < 1 .	High, incurred when private provisions are not enforced.	Lower mismatch costs if enforced, high reorganization costs if not.
3. New public LLC statute.	Lower than existing statute.	Low, given greater certainty of enforcement compared to non-law provisions.	Lower mismatch costs than organizing under existing statute, lower reorganization costs than non-law provisions.

A similar tradeoff applies to a firm organized under the current statute and facing high mismatch costs that attempts to contract for provisions that better match its preferred contract. The firm's preferred contract presents a variety of problems related to enforcement given the limited availability of a suitable standard form. Non-standard contract terms may not be clear because neither statutes nor judicial decisions instruct courts how to fill the inevitable gaps that arise because of the unpredictability of future events over a long-term relationship. For example, a party may attempt to seize benefits from the relationship that the contract neither expressly forbids nor clearly permits. Although the situation might be appropriate for application of partnership-type fiduciary duties, it may not be clear whether or how a court will apply such duties to a relationship whose default rules differ from a general partnership. Therefore, the firm will also face significant reorganization costs if it tries to contract for its preferred non-standard provisions.

To see the distinction between mismatch and reorganization costs, consider a firm that can organize under provisions perfectly matched to its needs so that mismatch costs are zero. If these provisions are enacted as law, we assume there is a low probability that the firm will incur reorganization costs. This firm has no mismatch costs and low reorganization costs when it adopts the statute. A firm that adopts identical private provisions that are not embodied in law has no mismatch costs if the private provisions

are enforced, but it has higher expected reorganization costs because of the lower probability these provisions will be enforced.

As discussed above, holding mismatch costs constant, firms prefer a provision that is enforced as law (i.e., a statute) to one that is not because the greater certainty of enforcement lowers their expected reorganization costs. Put another way, firms lose from adopting a new provision instead of organizing as a mismatched firm under the existing statute when their expected reorganization costs exceed the expected reduction in mismatch costs. It follows that the value of a privately produced set of non-law provisions becomes negative when the probability of enforcement is below a critical value.

Our analysis recognizes that a government-adopted statute may not always have certainty of enforcement because it may not be clear how courts will interpret the statute or apply it to particular situations. However it is enough for present purposes that the adoption of a statute increases the probability of enforcement compared to a privately produced provision that is not embodied in the statute. We also recognize that parties may achieve a degree of coordination in some situations that is comparable to that produced by “law.”²⁶ Again it is only necessary for present purposes that adoption as law increases the probability of enforcement compared to an equivalent private law. As discussed below, these differences between law and non-law are factored into the calculation of expected reorganization costs, which in turn determine parties’ demand for law.

Against this background, consider a firm that wants the features of an LLC—including limited liability, partnership taxation, and flexible management—prior to the promulgation of state LLC statutes. The firm’s preferred set of provisions includes features that differ from existing general partnership provisions. If the firm operates under the general partnership law it will incur high mismatch costs because it must forgo either limited liability or partnership taxation, but it will not face reorganization costs because of certainty of enforcement. However, if the firm decides to adopt Hammurabi, Inc.’s privately produced provisions that have the above characteristics of an LLC, the firm will bear lower mismatch costs than if it organizes under the general partnership statute. However, it will face significant expected reorganization costs if enforcement of these provisions is uncertain.²⁷

²⁶ See Hadfield & Weingast, *supra* note 11, at 7.

²⁷ If the firm operates in a different jurisdiction, the statute may not be enforced as law in that jurisdiction. This would be comparable to the firm’s adopting a private non-law agreement. Thus, the choice of law rule must be factored into whether a given provision is “law.”

C. *Private Law and Intellectual Property Rights*

Subpart B shows that the adoption of a private lawmaker's work as law may significantly increase the value of the proposal. Subpart C shows that, simultaneously with its increase in value, adoption as law may cause the loss of the drafter's rights in its intellectual property.

The property rights issue can be illustrated by examining the leading case of *Veeck v. Southern Building Code Congress International*.²⁸ Veeck posted the building codes of two small North Texas towns, Anna and Savoy, on his website RegionalWeb, which provided information about North Texas. However, Veeck could not reproduce the actual town codes at low cost. He instead posted the source of these codes, the Standard Building Code written by Southern Building Code Congress International, Inc. (SBCCI), which the towns had copied verbatim. Veeck had obtained this code on a computer disk from SBCCI for a fee under a software licensing agreement and copyright notice which prohibited copying and distribution. Veeck's website identified the codes as those of Anna and Savoy but did not mention that the posted codes were written by SBCCI and copied from an SBCCI disk.

The code author in *Veeck* exemplifies the sort of private law drafter that is the focus of this paper. The court described SBCCI as a non-profit organization with 14,500 members, including government bodies, construction contractors, business and trade associations, students, and educational institutions.²⁹ Its main activity was developing and promoting standard building codes. Since SBCCI sought to promote use of these codes, it allowed governments to enact them into law by reference at no charge and without a licensing agreement, and freely granted permission to make a limited number of copies of the codes. SBCCI's revenues from sales of the codes to both non-members and, at discount, to members, helped fund its nine million annual budget.³⁰

The central issue in *Veeck* is whether SBCCI retained property rights in its code once it had been adopted as law. The case arose when SBCCI demanded that Veeck stop infringing its copyrights, and Veeck sought a declaratory judgment that he did not violate the Copyright Act.³¹ The Fifth Circuit held that Veeck did not infringe SBCCI's copyright by printing the law of Anna and Savoy.³² The court reasoned that although SBCCI had a

²⁸ *Veeck v. S. Bldg. Code Cong. Int'l*, 293 F.3d 791 (5th Cir. 2002) (en banc); *see also* *Bldg. Officials & Code Admin. v. Code Tech., Inc.*, 628 F.2d 730 (1st Cir. 1980); *see also infra* Part IV.C (discussing the precise scope of the public's guaranteed access and commensurately of the authors' property rights in law).

²⁹ *Veeck*, 293 F.3d at 793.

³⁰ *Id.* at 794.

³¹ *Id.* at 791.

³² *Id.* at 817.

valid copyright in its *model codes*, the identical words adopted as *laws* entered the public domain.³³

Veeck has important implications for any copyrighted work that is adopted as law. Parties may write contracts for themselves, or hire lawyers to do so, whose language copyright law protects.³⁴ Copyright law similarly protects standard forms that contracting parties can adopt for their specific purposes and thereby save some of the costs of drafting customized contracts from scratch.³⁵ But, *Veeck* holds that when the language of the private contract becomes “law”—that is, as part of a judicial ruling or when the standard form is adopted as a statute—the authors are at risk of losing a significant portion of the copyright protection they might have had.³⁶

In the absence of effective intellectual property rights, private producers of “law” face free riding by potential users of their work and will be unable to set prices. More precisely, any demand for a copy of a privately produced statute would be based solely on potential users’ costs of accessing the statute, which likely would be the same for all firms and statutes. Thus, under *Veeck*, SBCCI will not be able to profitably sell its model codes once they are adopted as law because users and competing distributors such as *Veeck* and other jurisdictions can freely copy them. This leaves little incentive for firms like SBCCI to produce and update such

³³ *Id.* at 793.

³⁴ *Am. Family Life Ins. Co. of Columbus v. Assurant, Inc.*, 2006 WL 4017651, *6 (N.D. Ga. Jan. 11, 2006) (holding that plaintiff’s “narrative” style insurance policy may be protectable under copyright law); *see also* Melville B. Nimmer & David Nimmer, NIMMER ON COPYRIGHT § 2.18(e) (1978) (noting that “there appear to be no valid grounds why legal forms such as contracts, insurance policies, pleadings and other legal documents should not be protected under the law of copyright”); Kenneth A. Adams, *Copyright and the Contract Drafter*, N.Y. L.J., Aug. 23, 2006, at 2, 4.

³⁵ *See, e.g., Cont’l Casualty Co. v. Beardsley*, 253 F.2d 702, 706 (2d Cir. 1958) (holding that exact copying of forms violated copyright, though this is a somewhat weak copyright).

³⁶ Even if *Veeck* were reversed, both the federal government and the states could assert sovereign immunity from the enforcement of federal intellectual property rights, and Congress’s ability to abrogate states’ sovereign immunity is limited. *See Coll. Sav. Bank v. Fla. Prepaid Postsecondary Educ. Expense Bd.*, 527 U.S. 666, 670 (1999). However, states and the federal government cannot infringe intellectual property rights without consequence. Intellectual property owners could, among other things, require that jurisdictions agree to waive sovereign immunity as a condition of having access to their products in the first place, and licensing jurisdictions could be sued for contract damages if they violate the terms of this license. Patent and copyright holders could seek compensation from non-licensing states through inverse condemnation suits. In addition, intellectual property holders could seek injunctive relief under the *Ex Parte Young* doctrine. *See Ex Parte Young*, 209 U.S. 123 (1908); *see also* Peter S. Menell, *Economic Implications of State Sovereign Immunity from Infringement of Federal Intellectual Property Rights*, 33 LOY. L.A. L. REV. 1400, 1406–07 (2000); Eugene Volokh, *Sovereign Immunity and Intellectual Property*, 73 S. CAL. L. REV. 1161, 1164–65 (2000). *But see* John C. O’Quinn, *Protecting Private Intellectual Property from Government Intrusion: Revisiting SmithKline and the Case for Just Compensation*, 29 PEPP. L. REV. 435, 452 (2002) (discussing *SmithKline Beecham Consumer Healthcare, L.P. v. Watson Pharms. Inc.*, 211 F.3d 21 (2d Cir. 2000), and potential limits of regulatory takings); Alicia Ryan, *Contract, Copyright, and the Future of Digital Preservation*, 10 B.U. J. SCI. & TECH. L. 152, 176 (2004).

codes in the first place. Even if the law drafter who cannot set prices had sufficient incentives to produce statutes because of her cost advantages in distributing the work, she would lack incentives to innovate by differentiating products.³⁷

Formal intellectual property rights are not, however, the only possible way to provide adequate incentives to private law drafters. Law drafters may have informal contractual mechanisms for protecting intellectual property rights to certain types of legal information products. For example, private forms may be protected as trade secrets secured by non-competition and confidentiality agreements. However, enforcement of these rights may be limited by policy concerns about lawyer independence and public access to law.³⁸ Moreover, trade secret protection ends upon disclosure, which is generally necessary to generate interpretations of the form. A more potent informal protection of private forms is through first-mover advantages from proposing private standard forms that firms adopt even before the forms are embodied in a statute. Numerous cases and other legal analyses interpreting the form may create network effects that give the form some of the advantages of law.³⁹ For present purposes, it is unnecessary to evaluate the precise effect of these informal protections, so long as formal intellectual property rights can provide additional protection in some situations and therefore encourage the production of some forms that would not be produced in the absence of this protection.

The obvious problem raised by the discussion so far is the fundamental tension inherent in property rights in private law. On the one hand, the risk that courts will not enforce the private model law's terms raises the expected cost of using the model law and thus lowers the price firms are willing to pay for the term. On the other hand, actual or potential court enforcement or interpretation of the contract terms both increases the form's value and jeopardizes the author's property rights in it because under *Veck* forms adopted as law enter the public domain. Law drafters facing the risk of losing their property rights may have little incentive to produce private provisions for profit, particularly including those provisions that might be most valuable because they are likely to be adopted as laws.

To illustrate the fundamental tension facing private law drafters created by the need for certainty and the loss of property rights when a private law proposal is adopted as law, suppose that a legislature adopts privately produced provisions as law and thereby increases the certainty of enforce-

³⁷ See Kobayashi & Ribstein, *supra* note 14, at 1182.

³⁸ *Id.*

³⁹ See, e.g., Marcel Kahan & Michael Klausner, *Standardization and Innovation in Corporate Contracting (or "The Economics of Boilerplate")*, 83 VA. L. REV. 713 (1997); see also Michael Klausner, *Corporations, Corporate Law, and Networks of Contracts*, 81 VA. L. REV. 757 (1995). But see Bruce H. Kobayashi & Larry E. Ribstein, *Choice of Form and Network Externalities*, 43 WM. & MARY L. REV. 79 (2001) (showing the weakness in lock-in effects for LLCs).

ment. If the law drafter can continue to enforce its intellectual property rights, adoption of the private form as law will increase the demand for this set of provisions even as adoption effectively costs the law drafter its copyright protection. As a result of the loss of copyright, other jurisdictions and providers could adopt or sell the set of provisions contained in the new statute without having to pay the drafter a licensing fee. This would reduce or eliminate the law drafter's incentive to produce statutes except to the limited extent that it can profit by efficiently distributing the statute. In short, the rewards from private authorship of a set of provisions in the absence of effective property rights protection are negatively correlated with the degree to which the products have the valuable feature of certain enforcement attributed to law. Given these limitations on property rights, law drafters would have weak incentives to create private forms that are likely to be adopted as law.

This analysis assumes that law drafters, like other intellectual property creators, seek to maximize profits from the sale of their inventions. As discussed next, private law drafters may, however, act as agents for interest groups who are trying to use the political process to engineer wealth transfers. We have shown that these affect the types of laws produced by the "byproduct" law drafters. It follows that byproduct law drafters may or may not have better incentives than government legislators.

III. LAW AS A BYPRODUCT

Parts I and II show why both public lawmakers and private law drafters may lack incentives to produce optimal legislative innovation. This Part shows how a type of private law drafting—by non-politicians as a byproduct of other activities—can help fill this gap. Byproduct law drafters derive their gains from political or other activities rather than from selling their model laws on the open market. Accordingly they have an incentive to engage in law drafting even if they cannot share in the political entity's revenues or lack intellectual property rights in their products. Byproduct law drafting thus helps explain why investments in law drafting occur despite the incentive issues discussed in Part I. But byproduct law drafters' incentives can skew their laws away from social welfare compared to laws produced by purely private law drafters with property rights in their laws. Subpart A examines byproduct law drafters' incentives and discusses some types of byproduct law drafters. Subparts B and C discuss specific examples of byproduct laws in connection with corporations and limited liability companies.

A. *Byproduct Law Drafters*

Byproduct law drafting enables public law drafters to outsource drafting costs to private interest groups, who, for their part, have a political incentive to offer readymade laws to public legislators. Byproduct law drafters do not offer statutes directly for sale to the market for standard forms, as in the standard model of private law drafting, but instead engage in drafting as a way to enhance their lobbying or other business activities.⁴⁰

The differences between byproduct laws and laws produced for sale in a market for private law derive from the law drafters' incentives. Sellers of standard forms sold in a conventional market would seek to share in the combined producer and buyer surplus from commercial exchange. Bargaining over this surplus in an efficient market for forms increases social wealth. In contrast, the benefits to byproduct law drafters do not depend solely on what users of the forms would pay for the laws. Rather, byproduct law drafters have an incentive to forego profits in a commercial market for law in favor of causing a redistribution of social wealth to their group. This incentive will likely skew byproduct laws away from the mix of forms that would exist in an efficient market for private forms.⁴¹ Thus, although byproduct law drafters can add value to public law drafting, byproduct laws are only a second-best solution to public law drafters' weak incentives compared to private law drafters who sell their forms in a market for law.

This difference between byproduct and purely private lawmaking was clearly recognized by one of the dissenting opinions in *Veeck*. Judge Wiener answered the majority's argument that code preparers could and would continue their work without copyright protection:

Continued maintenance of a revenue source from sales of codes to individual owners, architects, engineers, materials suppliers, builders and contractors as well as libraries and other more attenuated purchasers, all of whom buy copies of the codes directly from SBCCI, serves another public interest. I refer to the continuation of SBCCI's independence from the self interest of its dues-paying members, who otherwise might be in a position to command more influence were SBCCI forced to obtain too great a share of its revenue from such supporters. Clearly, SBCCI's receipts from sales of the codes substantially reduces [sic] the po-

⁴⁰ Hadfield & Talley also briefly consider the role of interest groups such as the legal profession in generating incentives for states to produce corporate law, noting that this does not detract from their fundamental point that public providers do not face profit-maximization incentives. Hadfield & Talley, *supra* note 1, at 417. We expand on this insight by directly comparing the incentives of these byproduct law drafters, with a pure private model of law drafting.

⁴¹ The presence and amount of skewing depends on the circumstances. For example, in contrast to the pure private model of drafting involved in *Veeck*, a key supplier of municipal building codes is the International Code Council supported by the insurance industry, fire marshals, construction industry, and others with high stakes in public safety and therefore strong incentives to act in the public interest. See INTERNATIONAL CODE COUNCIL, <http://www.iccsafe.org> (last visited Mar. 7, 2013). We are indebted to Omri Ben-Shahar for this example.

tential for greater dependence on its membership, presumably allowing SBCCI to operate without becoming entirely beholden for its existence to self-interested entities.⁴²

This argument recognizes that laws drafted by private parties incentivized by property rights would be more likely to reflect firms' actual needs than byproduct laws, which are aimed at redistributing social wealth to the interest groups who drafted the laws.⁴³ The following sections discuss some of the groups who participate in the political process by drafting laws as a byproduct of their other activities. Subpart B discusses examples of particular byproduct laws.

1. Lawyers as Law Drafters

Lawyers play an important role in state law drafting apart from their role in litigation.⁴⁴ There is significant evidence of lawyers' participation in law drafting activities.⁴⁵ Indeed, professional rules establish lawyers' "participation in activities for improving the law, the legal system or the legal profession" as a professional norm.⁴⁶

Lawyers' work as law drafters is a byproduct of their other professional activity. Lawyers have special advantages as law drafters, including their legal expertise and membership in bar associations that help coordinate political activity. Lawyers also earn reputational benefits from using their law reform work to advertise their expertise and can influence the application and interpretation of law by doing remunerative or reputation-building work writing forms, manuals, and treatises.⁴⁷

⁴² *Veeck v. S. Bldg. Code Cong. Int'l*, 293 F.3d 791, 817 (5th Cir. 2002) (en banc).

⁴³ Byproduct law drafters' incentives, like those of all groups, depend to some extent on the group's governance structure. Thus, a nonprofit law-drafting entity may embrace social welfare objectives to a greater extent than a for-profit entity. See Kevin E. Davis, *The Role of Nonprofits in the Production of Boilerplate*, 104 MICH. L. REV. 1075, 1083–84 (2006). However, this is far from clear. Moreover, there may be important incentive differences within the nonprofit and for-profit categories. For purposes of this paper, we assume only that the entity is designed to maximize certain benefits for the group, which may differentiate the social welfare effects of selling the group's products in a market for laws from those of producing laws as a byproduct of some other activity.

⁴⁴ Lawyers also engage in law drafting directly through their compensated work on behalf of clients. When they are acting only as agents whose interests are aligned with those of clients, lawyers are part of the interest group efforts. See *infra* Part III.C.

⁴⁵ See Carol R. Goforth, *The Rise of the Limited Liability Company: Evidence of a Race Between the States, but Heading Where?*, 45 SYRACUSE L. REV. 1193, 1224–25 (1995); Jonathan R. Macey & Geoffrey P. Miller, *Toward an Interest-Group Theory of Delaware Corporate Law*, 65 TEX. L. REV. 469, 473 (1987).

⁴⁶ MODEL RULES OF PROF'L CONDUCT R. 6.1(b)(3).

⁴⁷ See Larry E. Ribstein, *Lawyers as Lawmakers: A Theory of Lawyer Licensing*, 69 MO. L. REV. 299, 329 (2004).

Two aspects of the legal infrastructure of the U.S. favor lawyers' participation in law drafting. First, lawyer licensing by each state helps motivate lawyers to engage in legal innovation. Licensing gives lawyers a kind of quasi-property right in their licensing state's law by conferring an exclusive right to represent clients in the licensing state and to practice in that state's courts.⁴⁸ These rights enable lawyers licensed in a particular state to share in legal innovations' benefits of attracting people to locate in the state and litigate in the state's courts. Second, state choice of law rules enhance licensing's effect by linking the application of a state's law to whether the client resides in or litigates in the courts of the licensing state.⁴⁹ The combination of lawyer licensing and choice of law rules gives lawyers monopoly rights in law and so enables them to internalize the benefit of improving the law. Licensing complements the reputational and other benefits discussed above by encouraging lawyers to seek these benefits through law drafting efforts rather than in other ways.

Lawyers have an incentive to shape laws to favor lawyers' interests. Unlike sellers who profit from sales of their products and therefore seek to tailor their laws to buyers' demands, lawyer law drafters have a particular interest in laws favoring lawyers. For example, it has been argued that Delaware lawyers seek to make Delaware law excessively lawyer-friendly.⁵⁰ More generally, lawyers may seek excessively complex laws that increase the need for and cost of lawyers⁵¹ or laws that directly enhance the value of a law license by excluding non-lawyers from various types of legal work.⁵²

Jurisdictional competition can mitigate the negative effects of lawyers' byproduct role. Lawyers cannot make their states' laws too lawyer-friendly without driving potential clients to states with less lawyer-friendly laws. Alignment of lawyers' incentives with social welfare varies depending on a variety of circumstances and conditions. If, for example, the choice of law rule is based on plaintiff's choice of forum, as with most product liability cases, lawyers might maximize their own and the state's interest by maximizing plaintiffs' interests rather than the parties' mutual interests. Lawyers' incentives also may depend on the nature of their practice. Laws promoting litigation may help tort lawyers, who can draw out-of-state defendants into pro-litigation courts, while hurting transactional lawyers, whose clients can choose where to reside depending on the applicable law.⁵³ And lawyers' incentives may vary with their state's power in the market for state law. Where a state like Delaware has significant market power, the pressure

⁴⁸ *Id.*

⁴⁹ See O'HARA & RIBSTEIN, *supra* note 10, at ch. 4.

⁵⁰ See Macey & Miller, *supra* note 45, at 478–79.

⁵¹ See Barton, *supra* note 18, at 261; Hadfield, *supra* note 19, at 962.

⁵² See Barton, *supra* note 18, at 293.

⁵³ See O'HARA & RIBSTEIN, *supra* note 10, at 8.

from state competition eases and lawyers are freer to indulge their incentive to seize a larger portion of a fairly stable pie.

2. Uniform Laws

The National Conference of Commissioners on Uniform State Laws (NCCUSL), the official promulgator of uniform law proposals in the U.S., is a particularly influential law-drafting group. Law drafting is a byproduct of NCCUSL's main objective, lobbying by its politically-connected members for state law uniformity. NCCUSL was organized during the nineteenth century codification boom, when legislators sought to reduce legal disorder as well as to protect their authority from competition by other states and growth of the "federal common law."⁵⁴ NCCUSL's motto, "Diversity of thought, uniformity of law,"⁵⁵ reflects its objective.

The fact that NCCUSL's law drafting is a byproduct of its uniformity objective skews its products in two important ways from what would be produced in an ideal private market for law. First, NCCUSL not only does not seek to produce legal innovation but actively tries to squelch it by achieving and maintaining uniformity. Even if individual NCCUSL proposals are innovative, their likely long-run effect will be to reduce innovation.

Second, NCCUSL's structure, which has been designed to further its uniformity objective, may actually encourage inefficient byproduct law drafting and so reduce the amount of efficient uniformity that would emerge without NCCUSL.⁵⁶ NCCUSL is organized as a private legislature with representatives from every state, enabling it to reflect all states' views (i.e., "diversity of thought") in its uniform law proposals and to present at least the appearance of political legitimacy. But it also forces NCCUSL to delegate responsibility for drafting its laws to drafting committees that are small enough to be able to agree on specific language. The drafting committees, in turn, provide a venue conducive to interest group negotiations. NCCUSL committee members undertake time-consuming drafting work at least partly because they represent interest groups that are seeking to gain from having NCCUSL lobby for their specific interests or positions. Negotiations between the drafting committees and NCCUSL's legislative body further compromise the group's objectives.⁵⁷

⁵⁴ Larry E. Ribstein & Bruce H. Kobayashi, *Economic Analysis of Uniform State Laws*, 25 J. LEG. STUD. 131, 135–36 (1996).

⁵⁵ UNIF. LAW COMM'N., www.uniformlaws.org (last visited Mar. 6, 2013).

⁵⁶ Bruce H. Kobayashi & Larry E. Ribstein, *The Non-Uniformity of Uniform Laws*, 35 J. CORP. L. 327, 329 (2009).

⁵⁷ See Ribstein & Kobayashi, *supra* note 48, at 142–43; see also Alan Schwartz & Robert E. Scott, *The Political Economy of Private Legislatures*, 143 U. PA. L. REV. 595, 602 (1995).

In addition to the unique law drafting problems added by the uniform law drafting process, NCCUSL enhances lawyers' law drafting powers discussed above. NCCUSL was founded by the American Bar Association as part of lawyers' move to gain respect and power for the legal profession.⁵⁸ Lawyers exercise power in NCCUSL as both part of the general legislative body and as advisers to the drafting committee. This may help explain the complexity, vagueness, and mandatory nature of many uniform laws, which maximize the need for legal advice, drafting, and planning.⁵⁹

As with other private and byproduct law drafting, jurisdictional competition disciplines state adoption of uniform law proposals. States will be unwilling to adopt uniform law proposals to the extent that these laws might drive people and firms to other states or inhibit the states' efforts to attract business from other states. Thus, we have shown that states make generally reasonable choices as to which NCCUSL proposals to adopt.⁶⁰ But uniform law proposals also might resist jurisdictional competition because of NCCUSL's potent lobbying and because these proposals facilitate the formation of state law drafting cartels.⁶¹

3. Law Drafting by Interest Groups

Interest groups can write laws themselves rather than supporting legislators who engage in this activity. Interest groups' lawmaking activity can be coordinated by third-party organizations such as the American Legislative Exchange Council.⁶² In this situation, the law can be considered a byproduct of the interest group's lobbying effort. Indeed, this can be a very effective form of lobbying because it puts finished legislation into the hands of state legislators who typically lack lawmaking expertise and resources.⁶³ The fact that interest groups sometimes bear drafting costs may increase the amount of innovation in the public law drafting process. The tradeoff, as with other byproduct laws, is that any innovation added by a law drafting group reflects the interests of that group, and therefore may enhance, rather than reduce, political rent-seeking.

⁵⁸ LAWRENCE M. FRIEDMAN, *A HISTORY OF AMERICAN LAW* 652–54 (2d ed. 1985).

⁵⁹ See Ribstein & Kobayashi, *supra* note 54, at 143–44.

⁶⁰ *Id.* at 132.

⁶¹ *Id.* at 146–48.

⁶² See Greeley & Fitzgerald, *supra* note 7.

⁶³ *Id.*

4. Industry groups

Industry groups write many model law proposals and codes designed to deal with problems specific to themselves.⁶⁴ Indeed, commercial law began with rules written by merchant guilds and continues to be developed by trade groups.⁶⁵ The Bernstein study of the diamond industry provides a modern example.⁶⁶ Securities exchanges write laws regarding trading and listing of shares. U.S. exchanges have a special self-regulatory role under the securities laws, while in the U.K. exchange rules are themselves the main regulation of securities. Several organizations write codes and standards that are used by the groups and referenced by law drafting bodies.⁶⁷ These laws, as well as customs developed by particular industries, are designed to fit the group's norms and business practices and may be enforced via reputational sanctions.

Industry groups can internalize their rules' costs and benefits vis-à-vis group members. A relatively small or monolithic industry's rules may fully reflect the interests of all of the firms in the industry. However, even in this situation the rules may not reflect the interests of the industry's customers or others affected by the rules. For example, consider an industry code that reduces market competition that would have resulted in more consumer-friendly practices.⁶⁸ Thus, like other byproduct laws, industry group laws and codes may be mechanisms for political redistribution of wealth. Moreover, while industry groups create law proposals, these proposals do not obtain the critical property of laws until the government enacts or enforces them as such. Embodiment in law engages government agents who may distort the industry group's objectives. For example, judicial decisions may

⁶⁴ See Davis, *supra* note 43, at 1078–83. These efforts are part of a broader category of the production of standardized contract provisions. *Id.* These provisions are not intended to be laws and therefore are outside the focus of this paper.

⁶⁵ Scott E. Masten & Jens Prüfer, *On the Evolution of Collective Enforcement Institutions: Communities and Courts* 7–9 (Univ. of Michigan Law & Econ., Empirical Legal Studies Center Paper No. 11-013, 2011), available at <http://ssrn.com/abstract=1773486>.

⁶⁶ See Lisa Bernstein, *Opting out of the Legal System: Extralegal Contractual Relations in the Diamond Industry*, 21 J. LEG. STUD. 115 (1992) (exploring the reasons that the diamond industry's system of private governance has developed and endured within the diamond trade).

⁶⁷ *Veeck v. S. Bldg. Code Cong. Int'l, Inc.*, 293 F.3d 791, 796, n.6 (5th Cir. 2002). Several of these groups were listed as amici in *Veeck*: Building Officials and Code Administrators International (BOCA), International Code Council, International Conference of Building Officials, American Medical Association, American National Standards Institute (ANSI), American Society of Association Executives (ASAE), American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), American Society of Mechanical Engineers (ASME), National Fire Protection Association (NFPA), Texas Municipal League, and Underwriters Laboratories, Inc. (UL).

⁶⁸ See, e.g., *Am. Soc'y of Sanitary Eng'g*, 106 F.T.C. 324 (1985) (refusal to issue a new standard or to modify the existing standard to cover a production was restraint of trade).

reflect lawyers' interests in complicating the law and promoting litigation rather than the industry's interests in clarification and simplification.⁶⁹

Industry groups may be active in standard-setting organizations, such as those that set accounting standards.⁷⁰ Although these organizations are not themselves industry groups, they may function in as such because they are exclusively populated by people with the specific expertise necessary to formulate the standards.

5. Litigants as Law Drafters

Parties to private litigation, in effect, contribute to legal innovation as a byproduct of their disputes when they have judges resolve their disputes. Litigants may have to incur extra court and attorney fees to support the production of formal legal opinions. Yet, since judicial decisions are law, the litigants do not receive property rights in return for their investments in litigation. Moreover, courts⁷¹ and state legislatures⁷² have resisted litigants' efforts to restrict public access to legal proceedings through confidentiality agreements and protective orders. Some litigants may be willing to bear the extra costs of law drafting as the price of better law and decision making. The resulting process, accordingly, may produce efficient law even if it is a byproduct of the separate activity of dispute resolution.⁷³ However, the inability to capture the spillover benefits of precedent, coupled with the extra costs of producing judicial decisions and the potential loss of confidentiality, often induces the parties to settle⁷⁴ or to resolve disputes through private arbitration.

⁶⁹ See Lisa Bernstein, *Merchant Law in a Merchant Court: Rethinking the Code's Search for Immanent Business Norms*, 144 U. PA. L. REV. 1765, 1806–07 (1996).

⁷⁰ See Lawrence A. Cunningham, *Private Standards in Public Law: Copyright, Lawmaking and the Case of Accounting*, 104 MICH. L. REV. 291, 297–99 (2005).

⁷¹ See Arthur R. Miller, *Confidentiality, Protective Orders, and Public Access to the Courts*, 105 HARV. L. REV. 427, 501–02 (1991); see, e.g., *Brown v. Advantage Eng'g, Inc.*, 960 F.2d 1013, 1014 (11th Cir. 1992); *Wilson v. Am. Motors Corp.*, 759 F.2d 1568, 1571 (11th Cir. 1985) (refusing to seal court records).

⁷² See FLA. STAT. ANN. § 69.081 (West 1996) (prohibiting orders that conceal information relating to “public hazards”); see also TEX. R. CIV. P. ANN. 76(a) (West 1990) (creating a presumption that court records, including unfiled discovery materials and settlement agreements, are open to the public); Lloyd Doggett & Michael J. Mucchetti, *Public Access to Public Courts: Discouraging Secrecy in the Public Interest*, 69 TEX. L. REV. 643, 684–86 (1991); Miller, *supra* note 71, at 443 (listing enacted and proposed state statutes and rules).

⁷³ Paul H. Rubin, *Why is the Common Law Efficient?*, 6 J. LEGAL STUD. 51, 61 (1977).

⁷⁴ See Owen M. Fiss, *Against Settlement*, 93 YALE L. J. 1073, 1073–75 (1984); see also Ezra Friedman & Abraham L. Wickelgen, *Chilling, Settlement, and the Accuracy of the Legal Process*, 26 J.L. ECON. & ORG. 144, 144 (2010); Bruce H. Kobayashi, *An Economic Analysis of Relitigation Rules in Intellectual Property Litigation* (Searle Ctr. on Law, Regulation, and Econ. Growth, Working Paper,

Given private parties' limited incentives to create common law, our theory predicts that private law drafting with respect to common law would have the features we attribute to byproduct laws. The common law may be directly the byproduct of interest groups actively seeking to make law.⁷⁵ For example, class action plaintiffs are a special type of litigants involved in creating law. Given class members' presumed inability to coordinate, the key interested party is the lawyer who instigates a suit on behalf of the class. Indeed, a prominent former class action lawyer, William Lerach, famously bragged that he had no clients.⁷⁶ Class action lawyers can be viewed as entrepreneurs who use litigation to create an asset in the form of a recovery or settlement.⁷⁷ The legal resolutions entailed in class actions are, in effect, sold to law drafters (i.e., courts) rather than in broad commercial market for legal forms. This produces innovations skewed toward the lawyer-entrepreneurs' interests in maximizing their fees rather than reflecting the mix of rules that would maximize social efficiency. Class action awards or settlements accordingly resemble byproduct laws.

B. *Corporate Law*

Corporate law is a leading example of byproduct law drafting. In this case the concentrated interest group that derives the most benefits from corporate law, lawyers, has been most active in drafting it. Lawyers operate through state bar associations in each state. Also, on a national level, a subcommittee of the American Bar Association's Business Law Section drafts the Model Business Corporation Act, many of whose provisions have been adopted in a substantial number of states. Even with the participation of lawyers, corporate law has exhibited relatively little differentiation over time and across states.⁷⁸ There is only one dominant competitor, Delaware, for the "national" market of firms incorporating outside their home state,⁷⁹ and this state competes on the basis of the quality of its courts and lawyers rather than primarily on the basis of legal innovation.⁸⁰

2010); Leandra Lederman, *Precedent Lost: Why Encourage Settlement, and Why Permit Non-party Involvement in Settlements?*, 75 N.D. L. REV. 221, 221–22 (1999).

⁷⁵ See Paul H. Rubin & Martin J. Bailey, *The Role of Lawyers in Changing the Law*, 23 J. LEGAL STUD. 807, 825 (1994).

⁷⁶ William P. Barrett, *I Have No Clients*, FORBES, Oct. 11, 1993, at 52 (quoting Lerach as saying "I have the greatest practice of law in the world, I have no clients").

⁷⁷ See Bruce H. Kobayashi & Larry E. Ribstein, *Class Action Lawyers as Lawmakers*, 46 ARIZ. L. REV. 733, 780 (2004).

⁷⁸ See Hadfield & Talley, *supra* note 1.

⁷⁹ Marcel Kahan & Ehud Kamar, *The Myth of State Competition in Corporate Law*, 55 STAN. L. REV. 679, 685 (2002).

⁸⁰ Roberta Romano, *Law as a Product: Some Pieces of the Incorporation Puzzle*, 1 J.L. ECON. & ORG. 225, 226–27 (1985).

Given this history of uniformity and stability it is notable that there is evidence that Nevada has sought to compete with Delaware over the last decade or so.⁸¹ Nevada's strategy has been to compete primarily by providing for relatively lax duties for officers and directors and charging a franchise tax that is significantly lower than in Delaware, though much higher than in most states.

Nevada's emergence as a competitor in the national market for incorporations raises two questions: why Nevada, and why only Nevada? Delaware's prominence and entrenchment can be explained by its legal infrastructure, which other states would find difficult and costly to replicate, and by Delaware's dependence on a corporate franchise tax, which in effect "bonds" its promise to maintain the quality of its law. Nevada, on the other hand, offers neither an infrastructure nor dependence on its corporate tax comparable to Delaware.⁸² Barzuza suggests that Delaware cannot compete with Nevada to provide lax law because this could dilute its brand. But even if that is true, it does not explain why some other state could not easily compete with both Delaware and Nevada. A state might offer the same law at a lower price or a different law that is more relaxed than Delaware but stricter than Nevada.

One potential explanation for Nevada's ability to compete with Delaware is Nevada's relatively small population, and therefore the impact that a franchise tax could make on Nevada's tax revenues. An analysis of the legislative history of Nevada's corporate law changes shows that they were intended as a deliberate strategy to compete with Delaware and thereby raise significant incorporation revenues.⁸³ The law passed over complaints that it would attract "sleaze balls and rip off artists" because of the argument that the additional revenues would help Nevada increase teacher pay.⁸⁴

This history does not, however, explain why some other relatively small revenue-starved state would not try a similar strategy. The answer may lie in Nevada's unique reputation as a "sin" state, based on reliance on its gambling industry. Although relatively lax corporate law may be efficient for some types of firms, it also makes the state a potential refuge for shady firms. Other states may be reluctant to risk damaging their business reputations. Moreover, even legitimate firms seeking less stringent rules

⁸¹ See Michal Barzuza, *Market Segmentation: The Rise of Nevada as a Liability-Free Jurisdiction*, 98 VA. L. REV. 935, 953 (2012). Hadfield & Talley note that Nevada was also the only state other than Delaware to provide some variation in corporate law during the period they examined. See also Hadfield & Talley, *supra* note 1.

⁸² See Bruce H. Kobayashi & Larry E. Ribstein, *Nevada and the Market for Corporate Law*, 35 SEATTLE U. L. REV. 1165, 1170–71 (2012).

⁸³ See Barzuza, *supra* note 81, at 949.

⁸⁴ *Id.* at 954 (citing Nev. Senate Debate, One Hundred and Eleventh Day (May 6, 2011) (statement of Sen. Dina Titus), available at <http://www.leg.state.nv.us/Session/71st2001/Journal/Senate/Final/SJ111.html>).

may be reluctant to trust states other than Nevada not to change their laws after they have incurred the costs of incorporating there.

Another possible explanation for the lack of state experimentation in corporate law is the Model Business Corporation Act (MBCA), prepared by the American Bar Association, Committee on Corporate Laws of the Section of Business Law. The MBCA provides a competent model prepared by expert corporate lawyers. Because it is not designed to create uniformity, it does not share the particular byproduct characteristics of NCCUSL. Unlike Delaware corporation law, the MBCA is not tailored to the particular legal infrastructure of Delaware. The MBCA therefore enables many states with thin legal infrastructures to adopt a corporate law that is reasonably tailored to their corporations' needs and that is probably better than their own lawyers or legislators could draft on their own. At the same time, the existence of the MBCA may reduce the level of variation in corporate law that would otherwise exist. The point of this story is that it is difficult for states to enter the national market for corporate law. Given their generally weak incentives, states must meet extraordinary conditions to give their law drafters sufficient incentives to innovate. Even lawyers' incentives to earn fees from increased corporate business have not been enough to motivate competition except in unusual situations involving high investment in infrastructure (Delaware) and willingness to attract low-quality business (Nevada). This suggests that there might be more legal innovation if private parties had stronger incentives to create laws.

C. *Limited Liability Companies*

The development of limited liability companies illustrates the central paradox of byproduct legislation. On the one hand, the incentives that motivate this law drafting can spur more innovation than either public law drafting or private law drafting under the current weak property rights regime. These new laws accordingly can increase social welfare by providing default rules that reduce firms' transaction costs compared to the situation without the byproduct laws. On the other hand, byproduct law drafters' incentives can divert these rules from first-best laws designed to maximize social welfare.

1. The Development of LLCs

The LLC ultimately filled the need for a small business form that combined the general partnership's flexibility with corporate-type limited liability. Legislative experiments with such a business form had failed in

the nineteenth century.⁸⁵ Guinnane et al. attribute the failure to the conservatism of common law courts and to states' refusal to enforce sister states' statutes.⁸⁶ This does not explain why state legislatures and courts embraced the corporate form. A more complete explanation focuses on states' unwillingness to extend owners' limited liability beyond the controlled corporate setting and the federal government's insistence on taxing such firms as corporations.⁸⁷

Private law drafting efforts ultimately broke the impasse. An oil company's lawyer promoted the enactment of a statute in Wyoming authorizing a form of business it had experience with in Latin America.⁸⁸ Another company then applied for an IRS ruling that a Wyoming LLC would be taxed as a partnership.⁸⁹ At the same time, Georgia lawyers drafted and successfully pressed for adoption of a new limited partnership act that gave all members of a limited partnership limited liability. These private law drafting efforts ultimately prompted a federal tax ruling classifying an LLC as a partnership for tax purposes.⁹⁰ The ruling eventually spurred all states to adopt LLC statutes. Broad state acceptance, in turn, persuaded the IRS to eliminate most tax impediments on limited liability business forms.⁹¹

The creation and evolution of the LLC illustrates the relationship between byproduct law drafting, public law drafting, and jurisdictional competition in producing legal innovation. Public lawmakers had little incentive to invest effort and political capital in developing a new limited liability vehicle for which there would be little demand because of the political impediments to extending limited liability and the corporate tax. Private parties, meanwhile, lacked sufficient property rights to have incentives to craft a socially-efficient mix of standard forms that might have helped promote change. The work was done by byproduct law drafters, including business lawyers seeking clients and firms in industries like oil and gas seeking particular tax benefits.

⁸⁵ See Wayne M. Gazur & Neil M. Goff, *Assessing the Limited Liability Company*, 41 CASE W. RES. L. REV. 387, 393–94 (1991); see also Timothy W. Guinnane, Ron Harris, Naomi R. Lamoreaux & Jean-Laurent Rosenthal, *Ownership and Control in the Entrepreneurial Firm: An International History of Private Limited Companies* 4 n.1 (Yale Univ. Econ. Growth Ctr., Discussion Paper No. 959, 2007), available at http://www.econ.yale.edu/growth_pdf/cdp959.pdf.

⁸⁶ Timothy W. Guinnane, Ron Harris, Naomi R. Lamoreaux & Jean-Laurent Rosenthal, *Ownership and Control in the Entrepreneurial Firm: An International History of Private Limited Companies* 35–43 (Yale Univ. Econ. Growth Ctr., Discussion Paper No. 959, 2007), available at http://www.econ.yale.edu/growth_pdf/cdp959.pdf.

⁸⁷ See LARRY E. RIBSTEIN, *RISE OF THE UNINCORPORATION*, chs. 4–5 (2010).

⁸⁸ See William J. Carney, *Limited Liability Companies: Origins and Antecedents*, 66 U. COLO. L. REV. 855, 857 (1995).

⁸⁹ *Id.*

⁹⁰ Rev. Rul. 88-76, 1988-2 C.B. 360 (1988).

⁹¹ See Treas. Reg. § 301.7701-1-3 (2004).

The development of the LLC indicates that significant legal innovation can occur. The byproduct theory helps explain evidence of variation in LLC statutes.⁹² This contrasts with evidence of corporate non-differentiation that Hadfield & Talley cite in support of their model.⁹³ The fact that state LLC innovations were not correlated with state revenues from LLC formations⁹⁴ suggests that law drafters had byproduct incentives to engage in innovations.

2. Estate Freeze Provisions

Although the advent of LLC statutes likely improved public welfare by reducing firms' transaction costs, those who crafted the new statutes, particularly lawyers, were motivated by side benefits from the new business form that may have reduced its utility compared to a first-best design. In particular, lawyers gained benefits from statutes that facilitated tax breaks and debtor protection. Lawyers' pursuit of these benefits, in turn, helped skew the statutes from first-best terms.

An example is estate freeze provisions in state unincorporated business statutes. Business owners often seek to pass their firms onto their heirs. A business owner might ensure continuity of the business after the founder's death or retirement by forming a limited partnership or LLC and making the owner's potential heirs limited partners or non-managing LLC members. The surviving members would take control of the firm after the founder's death. However, estate and gift taxes on the transfer of shares could force the children to liquidate the business and thereby defeat the business owner's objective. One way to avoid this result would be to reduce the value of the heirs' interests by contracting around the statutory default rules in LLC statutes that let members dissolve the firm and thereby cash out on a member's death. Under state law, the members could contract around the statutory defaults to "freeze" the heirs into the firm, which would reduce the market value of their interests. However, tax law provides that a restriction on transfer does not count for tax valuation purposes unless it is imposed by state statute and not just private agreement.⁹⁵ The default provisions of LLC law thus impeded family firms from achieving an important tax objective.

Private law drafting efforts intervened to fill a gap in state business forms. A bar drafting committee in Georgia made that state's limited part-

⁹² Bruce H. Kobayashi & Larry E. Ribstein, *Evolution and Spontaneous Uniformity: Evidence from the Evolution of the Limited Liability Company*, 34 *ECON. INQ.* 464, 468 (1996); Kobayashi & Ribstein, *supra* note 17, at 103.

⁹³ Hadfield & Talley, *supra* note 1.

⁹⁴ See Kobayashi & Ribstein, *supra* note 17, at 95–96.

⁹⁵ See I.R.C. § 2704 (2006); see also 26 C.F.R. § 25.2704–2.

nership statute the country's first to eliminate limited partners' default buy-out rights. Lawyers alert to the tax rule discussed above spearheaded the adoption of similar estate freeze provisions in other limited partnership statutes.⁹⁶ The lawyers, in turn, may have hoped to benefit from these statutes through the increased estate planning fees these provisions would encourage. Most LLC statutes now also provide either that LLC members have no default right to dissociate or no right to be paid for their interests when they dissociate.⁹⁷

The estate freeze provisions thus were arguably a byproduct of lawyers' efforts to maximize their own benefits from increased use of limited partnership and LLC statutes as estate tax avoidance devices. These provisions illustrate both the benefits and costs of byproduct laws. On the one hand, estate freeze provisions helpfully accommodated some firms' needs in light of the prevailing tax rule. On the other hand, lawyers' motivations might have skewed the statutes away from more efficient approaches. Members of closely held firms often prefer liberal buyout or dissolution as in the traditional partnership standard form to being locked in as in corporations. The estate freeze thus effectively brings back a problem of the close corporation that the availability of limited liability partnership-type forms had solved.⁹⁸ Informal firms, which particularly want an exit right, may neglect to craft around the default rule.⁹⁹ Others do not need the default rule because they will in any event engage in costly planning.

The effect of byproduct laws in skewing rules from those the market demands becomes evident when considering what a private market might have provided: multiple standard forms that accommodate both firms that want the traditional partnership default rules and firms that want the estate freeze. However, lawyers would gain little from offering this variation in terms of attracting new firms to the state because the firms that were aware of the problem and did not care about the tax rule could simply draft around the statutory default rules. Indeed, lawyers may gain from the extra drafting and litigation costs required by the state's failure to offer the alternative form. By contrast, the alternative provisions might be produced by idealized private law drafters seeking to sell their laws rather than to use the laws to pursue tax revenues, increased business, or other objectives.

⁹⁶ See ALAN R. BROMBERG & LARRY E. RIBSTEIN, *BROMBERG & RIBSTEIN ON PARTNERSHIPS* §17.13(a)–(c) (2004).

⁹⁷ See Larry E. Ribstein & Robert Keatinge, *RIBSTEIN & KEATINGE ON LIMITED LIABILITY COMPANIES* App. § 11-2 (2d ed. 2013) (listing members' rights to withdraw by state).

⁹⁸ See Larry E. Ribstein, *The Closely Held Firm: A View from the U.S.*, 19 MELB. U. L. REV. 950, 956–57 (1995).

⁹⁹ See Ian Ayres, *Judging Close Corporations in the Age of Statutes*, 70 WASH. U. L. Q. 365, 390–95 (1992).

3. Expansion of LLC Owners' Liability Protection

LLC statutes evolved beyond owners' limited liability for their firms' business debts to a mechanism for insulating members from liability for their own debts. Specifically, legislatures modified LLC statutes to permit formation of firms with non-business objectives such as holding the owner's personal residence. These firms then could take advantage of partnership "charging order" provisions that enable members' creditors to reach their income from the firm but not their interest in the firm's assets. These provisions were designed to protect non-debtor members' from destruction of going concern value by debtor members' creditors. However, where the firm has only one owner and holds non-business assets, the provisions effectively allow individuals to use LLCs to hide personal assets from unsuspecting creditors.¹⁰⁰ This development may explain the large number of very small LLCs in the leading asset protection jurisdictions of Nevada and Florida.¹⁰¹

Opening up LLCs to single-member, non-business entities may have been an efficient addition to the set of standard forms. However, this modified LLC form should not have retained partnership provisions designed for businesses that provided an end run around owners' personal liability. One possible explanation for these provisions is that they were added by lawyers, the primary interest group in drafting LLC provisions, as a byproduct of their interest in increasing legal business in their states by attracting clients to the state interested in debtor protection. Private providers of standard forms in an ideal market for such forms may have produced a variety of statutes that would accommodate both property owners' interest in new devices for holding assets and creditors' reasonable expectations regarding debt collection. For example, the statutes might have permitted the use of non-business LLCs for holding property, or the use of single-member LLCs for such purpose that did not provide for charging orders. Such statutes would have better served creditors' interests and would have provided for clearer legal consequences for debtors. These statutes, however, might have reduced lawyers' ability to promote the modified LLC form as an asset protection vehicle.

4. L3Cs

Statutes providing for the "low profit limited liability company" (L3C)¹⁰² provide another illustration of byproduct law drafting in the evolu-

¹⁰⁰ See Larry E. Ribstein, *Reverse Limited Liability and the Design of Business Associations*, 30 DEL. J. CORP. L. 199, 204 (2005).

¹⁰¹ See Kobayashi & Ribstein, *supra* note 17, at 116.

¹⁰² *Id.*

tion of LLCs. These statutes are intended to facilitate investments by private foundations that seek exemptions as nonprofits under § 501(c)(3) of the Internal Revenue Code. The foundations may be assessed excise taxes if they make investments that jeopardize their charitable purposes. Congress enacted provisions in the Tax Reform Act of 1969 for “program related investments” (PRIs) that would exempt these foundations from the excise taxes.¹⁰³ However, forty years after the birth of the concept, few foundations were using PRIs¹⁰⁴—perhaps because of ambiguity of the definition of PRIs. L3C statutes are intended to solve this problem by creating a form of entity that is clearly limited to charitable-type purposes. As with the estate freeze provisions, the L3C attempted to mesh the state law standard form with firms’ tax needs. Significantly, the L3C germinated not in a legislature but in a presentation by foundation head Robert Lang at the Aspen Institute’s 2006 meeting and follow-up by participants.¹⁰⁵ The foundations were looking to clarify the PRI tax break and thereby make it more valuable. Although amendment of the tax law or a tax rule would have been the surest way to provide this clarification, that may not have been politically feasible. The L3C’s proponents may have hoped that state statutes would provoke federal action.

This new business form arguably illustrates the social value of private law drafting in promoting legal innovation. The PRI is inherently a difficult concept to apply since it attempts to graft nonprofit-type restrictions onto for-profit businesses. Many firms do not fit squarely into either the for-profit or nonprofit categories. Entrepreneurs may want profits plus something other than financial gain. For example, they may want to invest in projects that are socially valuable but too risky to be considered positive net present value. These firms may need standard form provisions that differ from those that match the needs of standard for-profit firms.

The L3C arguably facilitates this type of innovation in two ways. First, it mitigates the uncertainty that has hobbled the PRI by providing a state statutory safe harbor that enables the federal tax exemption. Second, the L3C provides default rules that, even apart from the PRI rules, address the difficulty of contracting for hybrid profit/nonprofit entities. This particularly includes defining the fiduciary duties of managers who must serve both society and markets.¹⁰⁶ Although existing business associations let managers of essentially for-profit firms mingle profit-making with social

¹⁰³ See J. William Callison & Allan Vestal, *The L3C Illusion: Why Low-Profit Limited Liability Companies Will Not Stimulate Socially Optimal Private Foundation Investment in Entrepreneurial Ventures*, 35 VT. L. REV. 273, 276–79 (2010).

¹⁰⁴ *Id.* at 273 n.4.

¹⁰⁵ See Elizabeth Schmidt, *Vermont’s Social Hybrid Pioneers: Early Observation and Questions to Ponder*, 35 VT. L. REV. 163, 165 n.10 (2010).

¹⁰⁶ See generally John Tyler, *Negating the Legal Problem of Having ‘Two Masters’: A Framework for L3C Fiduciary Duties and Accountability*, 35 VT. L. REV. 117 (2010) (proposing a framework for L3C fiduciary duties and their enforcement).

responsibility and permit contracting to alter the mix of these objectives,¹⁰⁷ the L3C adds clear structural rules for defining the duties in such hybrid firms. These rules not only provide guidance for managers, but also help signal the firm's objectives to investors and customers.¹⁰⁸ L3C statutes accordingly fill a gap in available standard forms.

L3Cs also can be seen as a way to avoid the effects of lawyer domination of both public and byproduct private law drafting. PRIs arguably illustrate lawyer-driven complexity that attempts to achieve precise accuracy in characterizing firms at the expense of cost-effective simplicity.¹⁰⁹ The L3C enables firms to start up quickly, without going through the costly process of IRS approval that normally accompanies the formation of a 501(c)(3) firm. A survey of the first group of entrepreneurs using the L3C showed that costs and simplicity were critical to their choice of form.¹¹⁰

The L3C, however, ultimately failed in important ways to achieve its main objective of simplifying use of PRIs when neither Congress nor the IRS endorsed use of this device. A state law could not protect foundations from having to clear their PRIs with the IRS. In other words, the tax objective of the L3C failed to become "law" in the sense of providing certainty of enforcement. Therefore, the L3C arguably misleads its investors with the false hope of simplicity and certainty because the statute's definition of "low profit" LLCs may have little to do with the tax meaning of program related investments.¹¹¹

It is not clear whether the non PRI-driven benefits of L3Cs outweigh the risk that the law will mislead firms as to the tax consequences of their choice of this form. To be sure, L3Cs provide a mechanism for clarifying the tax rule: a readymade business association that the PRI definition can refer to. However, this mechanism is unlikely to lead to legislation that authorizes states to decide on the scope of a federal tax exemption given the inherent conflict between states' interests in attracting business and the federal government's interest in preserving tax revenues.

¹⁰⁷ See Larry E. Ribstein, *Accountability and Responsibility in Corporate Governance*, 81 NOTRE DAME L. REV. 1431, 1433 (2006) ("[t]here is no question whether the parties to the firm may contract to take society's interests into account.").

¹⁰⁸ See Schmidt, *supra* note 105, at 177 (describing the "branding value" that the L3C label provides entrepreneurs).

¹⁰⁹ See Hadfield, *supra* note 19, at 965 (describing how the legal profession does not have strong incentives to simplify the law).

¹¹⁰ Schmidt, *supra* note 105, at 176–77.

¹¹¹ See Daniel Kleinberger, *A Myth Deconstructed: The "Emperor's New Clothes on the Low Profit Limited Liability Company* 32 (William Mitchell Coll. of Law Legal Studies Research Paper Series, Working Paper No. 2010-03, 2010), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1554045; see also Daniel S. Kleinberger & J. William Callison, *When the Law is Understood—L3C No 3* (William Mitchell Coll. of Law Legal Studies Research Paper Series, Working Paper No. 2010-07, 2010), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1568373.

The L3C illustrates the compromise nature of byproduct laws. A law drafter whose main incentive was to market her intellectual property rather than to lobby for a tax break might have designed a more suitable model for hybrid for-profit/nonprofit firms. Designing the L3C primarily as a mechanism to spur Congress into clarifying the law on PRIs has produced a standard form that actually increases transaction costs by both skewing the terms of the standard form and potentially misleading its users. An efficient set of standard forms for hybrid firms might include statutes designed for low-profit businesses as well as statutes designed for businesses that want to limit themselves to particular types of “program-related” investments. However, the developers of the L3C were focused on their political objective of promoting the tax exemption.

The L3C provides a lesson for other attempted byproduct uses of the LLC’s flexibility to achieve political and social objectives. For example, commentators have proposed using business associations, such as partnerships and LLCs, to provide a mechanism for legal approval of same-sex domestic relationships.¹¹² These laws are designed at least in part to spur recognition of, and overcome legal barriers to, these relationships. However, these proposed actions could result in laws that are ill-suited to domestic relationships and thus both increase transaction costs and reduce certainty.¹¹³

IV. MECHANICS OF PRIVATE LAWMAKING

So far we have discussed significant problems with existing public, private, and byproduct approaches to law drafting. This Part shows how these problems might be reduced by mechanisms that encourage more direct private investment in law creation. An important component of this system is enabling private lawmakers to retain property rights in their creations even after they are adopted as law. This would entail at least modifying copyright protection from current law to better balance the public’s access rights to privately drafted forms adopted as law against the law drafter’s right to exclusive ownership. Such protection would address the problem discussed in Part II—the inability under current law to combine the certainty of law with property rights in law. Subpart A describes the

¹¹² See, e.g., Mary Anne Case, *Marriage Licenses*, 89 MINN. L. REV. 1758, 1779 (2005); Adrienne D. Davis, *Regulating Polygamy: Intimacy, Default Rules, and Bargaining for Equality*, 110 COLUM. L. REV. 1955, 1960 (2010); Jennifer A. Drobac & Antony Page, *A Uniform Domestic Partnership Act: Marrying Business Partnership and Family Law*, 41 GA. L. REV. 349, 353 (2007); Martha M. Ertman, *Marriage as a Trade: Bridging the Private/Private Distinction*, 36 HARV. C.R.-C.L. L. REV. 79, 84 (2001).

¹¹³ Ribstein, *Hendricksons*, *supra* note 21, at 278–79.

property rights that are necessary to create the appropriate incentives for private lawmakers.

Merely creating property rights in government-adopted law is not enough, however, to sustain private lawmaking. Subpart A shows that, in order to administer a manageable scheme of private property rights in law, the government must play an active role. This includes not only enacting the laws, which as we discuss above is critical to minimize expected reorganization costs, but also administering the property rights. The question then, discussed in Subpart B, is how to ensure the government will have the right incentives in deciding which privately drafted laws to enact and administer. In other words, an efficient private market for law requires not only properly motivated private lawmakers on the buy side, but also properly motivated government actors on the buy side. Jurisdictional competition, as under the current regime, may or may not provide the necessary discipline. If government is not properly motivated, the private law regime may be no better than the current public/byproduct regime. Subpart C discusses the alternative of removing government altogether and moving to a fully privatized system of lawmaking.

A. *Creating Property Rights in Law*

This Subpart discusses the basic property rights that could create a foundation for a private market in law. This involves three questions: First, the intellectual property protection based on copyright law. Second, the nature of the property rights copyright would entail. Finally, the types of incentive issues that would remain even given the application of copyright.

1. Application of Copyright

Copyright is the primary mechanism for protecting authors' rights in specific laws. As already discussed, current law restricts the availability of copyright for privately produced materials that a government entity adopts as law. Specifically, § 105 of the Copyright Act precludes protection for any work "prepared by an officer or employee of the United States Government as part of that person's official duties."¹¹⁴ This definition extends to court opinions written by federal judges, congressional bills and statutes, and federal regulations. State laws are subject to similar rules. *Veeck* shows that definition has been extended to privately produced works such as model laws that were produced to be adopted as law and have been adopted as law.¹¹⁵ *Veeck* also has potential application beyond state law.

¹¹⁴ See 17 U.S.C. §§ 101, 105 (2006).

¹¹⁵ See *Veeck v. S. Bldg. Code Cong. Int'l, Inc.*, 293 F.3d 791, 793 (5th Cir. 2002).

Courts have held that litigation documents in public courts cannot be secured from public access by a confidentiality agreement and protective order without a compelling justification for privacy.¹¹⁶ Language cited in a judicial opinion might cause the loss of its author's copyright.¹¹⁷

The potential social welfare benefits of private law drafting and the importance of property rights in achieving those benefits suggest that Congress should explicitly extend a form of copyright protection to private materials that are given the effect of law by enactment, administrative promulgation, or inclusion in a judicial opinion. Permitting copyright of privately produced materials adopted as law would not be a radical legal change. Instead, it would resolve a contentious debate about current law between the majority and dissenting judges in *Veeck*, where the majority broadly held that:

... [P]ublic ownership of the law means precisely that "the law" is in the "public domain" for whatever use the citizens choose to make of it. Citizens may reproduce copies of the law for many purposes, not only to guide their actions but to influence future legislation, educate their neighborhood association, or simply to amuse.¹¹⁸

The majority reasoned as a policy matter that the author of the material had survived without copyright protection and likely would continue to promulgate codes for her own purposes even without such protection. However, even the majority opinion recognized exceptions. For example, the majority suggested that the code author would be protected from publication of material in the model code that was not part of the law¹¹⁹ and from publication of the model code itself as distinguished from statutes based on it,¹²⁰ and it suggested a distinction between publication of a law based on the code and the law's reference to the privately prepared standards or other materials. Two dissenting opinions questioned the breadth of the majority's rule and its application to a case involving publication of copyrighted codes on a website where there was no evidence that anyone was actually denied access to the laws. Both dissenting opinions noted the need, particularly of smaller government entities, to outsource law drafting services to code preparers.¹²¹

¹¹⁶ See *Brown v. Advantage Eng'g, Inc.*, 960 F.2d 1013, 1014 (11th Cir. 1992) (vacating district court's order sealing court record, including pleadings and motions); see also *Wilson v. Am. Motors Corp.*, 759 F.2d 1568, 1571 (11th Cir. 1985); TEX. R. CIV. P. § 76a (1990) (creating a presumption that court records, including unfiled discovery materials and settlement agreements, are open to the public).

¹¹⁷ See *Cunningham*, *supra* note 70, at 304–05.

¹¹⁸ See *Veeck*, 293 F.3d at 799.

¹¹⁹ *Id.* at 799 n.14.

¹²⁰ *Id.* at 804.

¹²¹ See *id.* at 807 (Higginbotham, dissenting); see also *id.* at 817 (Wiener, dissenting).

2. The Scope of Property Rights in Laws

Even if Congress clarifies that private parties have property rights in the laws they draft, several questions remain concerning the scope of these rights. The first question concerns the appropriate balance between the scope of property rights necessary to create adequate incentives for drafters and the need to provide reasonable public access to privately drafted legislative proposals adopted as law. The law author should be able to sell or license the law to governments that adopt it or private firms that use it as a standard form. As long as the system results in a public benefit of encouraging legal innovations, the public should be willing to pay the cost. Thus, in the *Veeck* situation, the model building code author could post the code on a website with a licensing agreement and retain its property rights even after a municipality adopts the code. However, due process demands that the law's content should not be subject to intellectual property protection as against those who simply want to read or write about it. Thus, competing distributors should be able to copy the law's content and distribute it at a lower price. This would encourage efficiencies in distribution while the law drafter's ability to license to governments and firms preserves the author's incentives to create original laws.¹²²

Second, the copyright on law protects only the precise form of original expression and not the underlying ideas. Thus, even if a particular LLC statute was protected by copyright, a competing producer could sell a similar statute that expressed the underlying ideas in a different way. Moreover, otherwise copyrightable original expression may become merged with the underlying idea and therefore unprotected under copyright law.¹²³

Patent-type rights in a legal idea may provide broader protection for ideas. However, such rights face hurdles under rules defining patentable subject matter and requiring non-obviousness.¹²⁴ Even if these hurdles could be overcome, the rights conferred in a particular idea still may not cover similar ideas. For example, a patent for a "poison pill" takeover defense might cover takeover defenses that use anti-dilution mechanisms but

¹²² These due process concerns could be alleviated through fair use privileges or through jurisdictions requiring licensors to explicitly allow such uses by those bound by the law. Courts could also require similar licenses to be granted by those wishing to file briefs, complaints, and other potentially copyrightable litigation documents. See Kobayashi & Ribstein, *supra* note 14, at 1179. For a current example of these issues, see Chad Bray, *Keep Your Hands off My Briefs: Lawyers Sue Westlaw, Lexis, WALL ST. J. L. BLOG* (Feb. 22, 2012, 6:21 PM), <http://blogs.wsj.com/law/2012/02/22/keep-your-hands-off-my-briefs-lawyers-sue-westlaw-lexis/> (discussing the class action complaint in *White v. West Publ'g*, which alleges copyright violations by WESTLAW and LEXIS/NEXIS resulting from the unauthorized electronic publication of briefs and other litigation documents); see also Kobayashi & Ribstein, *supra* note 77 (discussing the copyrightability of class action complaints and other litigation documents).

¹²³ Goetz & Scott, *supra* note 2, at 292 n.78; Kobayashi & Ribstein, *supra* note 14, at 1175.

¹²⁴ Goetz & Scott, *supra* note 2, at 292 n.78; Kobayashi & Ribstein, *supra* note 14, at 1175.

not all takeover defenses or even all director-approved takeover defenses. Similarly, a patent for a limited liability company would not necessarily cover other limited liability standard forms for closely held firms such as limited liability partnerships or limited partnerships. Indeed, in view of these considerations, it is not even clear patent rights would materially assist private law drafters.

Government addresses the problem of the scope of property rights in law by adopting a specific law governing a type of situation, rather than others covering the same situation. The adoption of the law effectively grants a franchise to the private law drafter covering similar types of laws. The tradeoff is that competition among law drafters is constrained while the government's power is commensurately enhanced. Subpart C below discusses jurisdictional competition as a mechanism for disciplining this power. But, this competition restores the problem of the law drafter's scope of property rights. Although a private lawmaker may have property rights in a particular law enacted by a particular government, these rights do not cover similar laws other governments may enact. This affects private lawmakers' incentives, as discussed below in Subsection 4.

3. Enforcement of Property Rights

Special problems arise in enforcing property rights in law, particularly including how to apply remedies for infringement. As discussed above, law is potentially useful in reducing transaction costs by filling gaps in specific contracts. Although parties can adapt non-statutory standard forms for their particular relationships, these forms cannot fully provide law's unique gap-filling and enforcement function. Yet statutes' gap-filling role raises a question concerning how to enforce drafters' intellectual property rights. The answer to this question may depend on how the private lawmaker sells her law.

One type of sale of private laws involves business-association-type statutes that firms adopt as their governing law by filing with the state. Suppose, for example, a private party writes a law for a new type of business entity that a government adopts—a "series" LLC. The new law provides, among other things, for the effect of certain types of provisions in private agreements, such as provisions separating management, property, and liabilities of sub-entities that are being operated together. Suppose further the government buys exclusive rights to the law and pays a fee to the drafter, which the government recoups as part of the franchise fee it charges firms for organizing under the law. This resembles the current system except that purely private lawmakers substitute for byproduct lawmakers such as the Delaware Bar, and cash payments to the law drafters substitute for political advantages.

The private law drafter alternatively could sell the statute directly to firms that form under the law. The state could charge fees and taxes, all of

which go to the state treasury. Meanwhile, the private law drafter would charge adopting firms a license fee. The law drafter would then have to collect fees from the adopting firms and enforce its rights against the adopting firms in court. As long as the government must establish a system for accepting filings and collecting fees, licensing through the government would seem to be more efficient than direct sales to adopting firms. Thus, the government plays a necessary role in providing a collection mechanism.¹²⁵

Remedies for infringement would depend on whether the infringer is a state or a private party. If a private law drafter or state seeks to collect fees for a copyrighted statute in violation of the drafter's copyright, the drafter could sue the infringing state for inverse condemnation and the private usurper for infringement.¹²⁶ As discussed above, the drafters would have intellectual property rights only in the content of the law—as distinguished from the mechanism of distribution—and only as against firms or states that adopt the law as the controlling statute, not against members of the public who seek to access the law.

Enforcing property rights in law is further complicated where the law provides background rights even for firms that do not formally adopt the law by making a filing. Examples of this complication would include sales laws, such as the Uniform Commercial Code, and informal business association laws, such as the law of agency and general partnership. In this situation, there is no metering device such as a franchise fee and no mechanism such as a formal filing that identifies potential violators. The law's basic function of operating in the background to clarify or fill gaps in provisions included in parties' agreements creates special problems for applying intellectual property law. Firms might be sued for including specific language in their agreements, provided the law's author could track down these private contracts. However, this seems no different from the statutory language filling gaps in agreements that fit the statutory definition. In short,

¹²⁵ In effect, the government franchise fee acts like a metering device that includes an upcharge used to compensate the law drafter. See *ProCD, Inc. v. Zeidenberg*, 86 F.3d 1447 (enforcing terms of shrinkwrap license that limited use of information contained in database). But see Mark A. Lemley, *Beyond Preemption: The Law and Policy of Intellectual Property Licensing*, 87 CAL. L. REV. 111 (1999) (criticizing the holding in *ProCD*). See generally Michelle M. Burtis & Bruce H. Kobayashi, *Intellectual Property and Antitrust Limitations on Contract*, in DYNAMIC COMPETITION & PUB. POL'Y (2001) (discussing interaction between contract, antitrust, and intellectual property); Ronald H. Coase, *The Lighthouse in Economics*, 17 J. L. & ECON. 357 (1974) (discussing an analogous situation of using port fees to pay for lighthouse services); Bruce H. Kobayashi, *Spilled Ink or Economic Progress? The Supreme Court's Decision in Illinois Tool Works v. Independent Ink*, 53 ANTITRUST BULL. 5 (2008) (discussing the economic efficiency of using an implied license and metering instead of direct licensing); Bruce H. Kobayashi & Larry E. Ribstein, *Uniformity, Choice of Law, and Software Sales*, 8 GEO. MASON L. REV. 261 (1999) (discussing the use of restrictive licenses to complement intellectual property rights).

¹²⁶ See *supra* text accompanying note 30.

the special gap-filling feature of law may make intellectual property rights in law impossible to enforce effectively outside the special situation of laws adopted through formal filings.

A possible solution to this problem is to effectuate enforcement of private property rights in law by extending filing requirements and franchise fees to contracts other than business associations. In other words, firms would lose the advantage of these statutory forms unless they affirmatively opted in. However, this would raise the potentially serious problem of leaving in limbo the rights of parties who fail to adopt background laws simply because they are unaware of them. This would make statutory forms useless or even counterproductive for the very parties who most need them to reduce contracting costs.

The complications multiply for privately drafted forms that have not been adopted as laws. Drafters can sell these forms to private parties and sue copycat competitors for infringement.¹²⁷ They may also be able to sue parties who use copyrighted language in their agreements, subject to fair use limitations.¹²⁸ As with statutory forms that do not involve public filings, private forms lack a government-provided metering or compliance device. Indeed, even apart from the absence of a filing, firms have no clear way to adopt these forms' language by reference as their governing law.¹²⁹

Private producers might promulgate statutes and offer them for licensing, effectively enabling firms to organize under, for example, "Hammurabi law," just as they now form under Delaware law. Whatever the private drafter calls her product, it does not acquire the increased certainty of enforcement of "law" unless a state adopts it as such. Accordingly, the state could ignore the form language when its courts interpret and enforce the parties' contract. This could expose adopting firms to potential reorganization costs. As discussed above, firms would have to balance their savings in matching costs from a better fitting statute against the risk of reorganization costs. Despite potential reorganization costs, firms might find it worthwhile to use the purely private law, particularly if it is a widely used form that courts are unlikely to reject out of a concern for frustrating expectations. Indeed, a court might give the form some quasi-legal force. For example, a Delaware court refused to imply an opt-out from fiduciary duties despite the inclusion of a standard provision giving the general partner sole discretion to manage the business. The agreement in that instance used

¹²⁷ See *supra* text accompanying note 34.

¹²⁸ NIMMER, *supra* note 34, at § 2.18(e).

¹²⁹ One possible solution to this set of problems is to link enforcement of contracts to payment for property rights by also privatizing enforcement. See Bernstein, *supra* note 66, at 143–44; Hadfield & Weingast, *supra* note 11, at 7.

language from a popular form but omitted language explicitly preempting default duties.¹³⁰

Even if private producers of non-filed law or non-law forms could enforce intellectual property rights against infringers, copyright law will not protect the creator against competing sellers of similar but not identical ideas or expressions, and effective patent protection may not be available for many legal innovations.¹³¹ The application of copyright law may be critical where the exact expression is important, as with a fiduciary opt-out. If the user must borrow the exact language from a privately promulgated form in order to get the desired effect, it may matter whether the form has retained copyright despite its adoption as law or use in a case, and if so, whether borrowing the language is fair use. In other cases, as with the series LLC, the idea may be critical and unprotected under intellectual property law. Moreover, a statute may contain several ideas, raising the question whether the organization or selection of ideas in the statute is original enough to qualify for copyright protection. However, the protection afforded such compilations under copyright law is “thin.”¹³²

In short, even if intellectual property rights in private laws are theoretically attractive and potentially available, enforcing these rights outside a narrow category of contracts requiring state filings may be impractical.

4. Incentives to Produce Efficient Laws

Even assuming the law suitably clarifies drafters’ property rights in law, there may be a number of potential problems in the market for private law that require a legal solution. First, even with property rights, private lawmakers may not have an incentive to produce any laws. Conversely, they may have an incentive to produce too many laws. For example, as with orphaned drugs, law drafters may lack incentives to create laws for limited niches of users. Also, firms’ costs of using a particular form may depend on the extent and quality of the “network” of legal materials available for interpreting and applying the form.¹³³ Indeed, this is an important advantage of statutory law. This network may determine both firms’ mismatch costs and the degree of legal certainty regarding a particular term.¹³⁴

¹³⁰ *Miller v. Am. Real Estate Partners*, No. Civ. A. 16788, 2001 WL 1045643, at *9 (Del. Ch. Sept. 6, 2001) (citing Martin I. Lubaroff & Paul M. Altman, LUBAROFF & ALTMAN ON DELAWARE LIMITED PARTNERSHIPS, at F-38 (2000 Supp.)); Larry E. Ribstein, *The Uncorporation and Corporate Indeterminacy*, 2009 ILL. L. REV. 131, 149–50 (discussing *Miller*, 2001 WL 1045643, at *9).

¹³¹ See Goetz & Scott, *supra* note 2, at 295.

¹³² *Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 349 (1991).

¹³³ Klausner, *supra* note 39, at 783.

¹³⁴ In other words, the “law,” which we associate with certainty, includes not only statutory provisions but also common law rules interpreting the statutes. The value of all these legal rules, in turn, depends on associated materials assisting in understanding these legal rules.

It follows that private incentives to produce statutes may depend on the order in which these statutes are produced over time—not just on firms' intrinsic characteristics and demands apart from network effects. In other words, network effects may prevent entry of private standard forms that would reduce total mismatch and drafting costs in the absence of such effects. Although network effects do not necessarily prevent the emergence of a more efficient form,¹³⁵ this might occur.

Second, private lawmakers may over-create laws, so that total drafting and other costs exceed social benefits. Presumably the market can, to some extent, constrain producers from investing in law-production such that expected costs exceed expected benefits. However, market constraints may not be adequate where the expected costs are imposed on parties other than law buyers and sellers. For example, the *numerus clausus* principle limits the menu of property ownership forms from which parties can choose in order to minimize the information and other costs imposed by having too many forms.¹³⁶ In the context of business association and other contractual standard forms, parties' ability to choose the applicable form and state law likely minimizes this problem. Parties will choose the state law that minimizes users' costs by restricting the number of forms. However, this may be a problem for privately produced property and other rules that may apply without the parties making an explicit *ex ante* choice.

Third, private owners may not produce the right mix of laws. For example, they might maximize their profits by producing statutes that are as different as possible from each other, even if this is not the best fit for the firms that would use the statutes. Even if more firms have use for statutes that are similar to existing statutes, and total welfare would be increased by producing such statutes, the firms that need the dissimilar statutes might pay more for them because their drafting costs increase rapidly with the difference between their preferred rules and other available statutes.¹³⁷ This assumption reflects the intuition that shifts in individual contract provisions—such as liability for the firm's debts, management, control, and profit-sharing in a firm's governance structure—change relationships between the characteristics and therefore necessitate redrafting of these other characteristics.¹³⁸

To be sure, these incentive factors do not alone negate the benefits of private lawmaking. Despite these complications, providing property rights in law might improve the mix of available laws over what is available without property rights. However, when added to the other problems discussed in this Subpart concerning the scope and enforcement of these property

¹³⁵ Kobayashi & Ribstein, *supra* note 17, at 115–16.

¹³⁶ Thomas W. Merrill & Henry E. Smith, *Optimal Standardization in the Law of Property: The Numerus Clausus Principle*, 110 YALE L.J. 1, 7 (2000).

¹³⁷ Hadfield & Talley, *supra* note 1, at 418.

¹³⁸ Hadfield & Talley, *supra* note 1, at 419–20.

rights, private lawmakers' incentives provide a further reason for skepticism about the potential benefits of private lawmaking.

B. *Government's Role in Private Lawmaking*

We propose that private parties participate in law drafting only as drafters. This proposal responds to public legislators' weak incentives to innovate complex standard forms. Thus, government would be the exclusive enforcer of privately drafted laws. Moreover, as discussed in Subpart A, it may be efficient for government to be the exclusive purchaser or licensor.¹³⁹ In any event, it would be left to government to enforce private law drafters' property rights in their laws. This reliance on government may seem an odd way to promote optimal private law production because it raises the problems of inadequate government incentives to innovate that private law drafting is intended to solve.

Perhaps increased private law drafting would improve upon the present system despite government's continued involvement as enforcer because it would at least increase incentives for drafting innovative laws. Governments in effect would be outsourcing law drafting to private providers—comparable to the municipal adopters of the building codes involved in *Veck*.¹⁴⁰ Outsourcing could help overcome public lawmakers' unwillingness to invest in drafting new laws beyond the very limited extent to which the new laws could contribute to their reelection.¹⁴¹ This could motivate private lawmakers to create laws that reduce users' mismatch costs, rather than mainly for political gain as with byproduct lawmakers. Although byproduct lawmakers would continue to produce laws, they would

¹³⁹ We focus on government purchase of discrete statutes. Another approach might be for government to contract with third party suppliers to produce laws. One concern with this approach is that the third party might be bound to a particular government and therefore would not avoid the political incentives that plague the "byproduct" market.

¹⁴⁰ This unbundling of law drafting and enforcement is analogous to a proposal for European corporate law drafting. See Christian Kirchner, Richard W. Painter & Wulf Kaal, *Regulatory Competition in EU Corporate Law After Inspire Art: Unbundling Delaware's Product for Europe* 34–35 (Univ. Ill. Law & Econ. Research Paper No. LE04-001, 2004), available at <http://ssrn.com/abstract=617681>.

¹⁴¹ This problem explains why it is not enough to simply give public lawmakers property rights in their laws as one author suggests. Stephen Clowney, *Property in Law: Government Rights in Legal Innovations*, 72 OHIO ST. L.J. 1, 3–4 (2011). This would not solve the incentive problem unless governments could pay their law drafters a share of any profits or other gains from selling laws. Yet profit sharing would be inconsistent with the inherently public nature of what governments do. Enabling government to outsource law drafting to private law drafters avoids this problem. See Gregory Kroger, *Position Taking and Cosponsorship in the U.S. House*, 28 LEGIS. STUD. Q. 225, 225 (2003) (discussing the evolution of Congress's use of co-sponsorship of bills as a way to claim quasi-property rights to legislation); Gregory Koger, *Property Rights of Legislation? When Did That Happen?*, MISFCHIEFS OF FACTION (Aug. 3, 2012), <http://mischiefsoffaction.blogspot.com/2012/08/this-week-politico-had-story-joe-walsh.html?m=1>.

have to compete with private lawmakers. Even if governments are not perfectly motivated to buy private laws, the stock of privately drafted laws offered for sale would at least inform the public as to potential alternatives to government-adopted statutes.

The development of a significant market for private laws is at least plausible. Small jurisdictions whose law drafters lack significant resources for researching and drafting legislation, such as the municipalities that bought the housing codes involved in *Veeck*, would have an incentive to outsource law drafting to private drafters, as suggested by the *Veeck* dissenters. A private law supplier could acquire a reputation for high quality drafting and updating, which makes its laws attractive.¹⁴² Such an organization would provide an alternative to the currently limited number of branded law drafters like NCCUSL. Even NCCUSL, despite its byproduct incentives, has been able to use its reputation to “sell” its laws to many states.¹⁴³ This would enable states and municipalities to offer high quality and diverse laws without being in the relatively limited category of jurisdictions like Delaware that draw on local expertise to reap large gains from competing in the national market for laws. The lawmaking organization’s reputation for quality could help bond the adopting jurisdiction’s implicit promise not to manipulate the law to appeal to local interest groups.

States could encourage a market for private laws not only by adopting specific laws but by providing a platform for private lawmaking. States might offer open-ended statutes that enforce agreements of specified types, such as a “contractual entity.”¹⁴⁴ *Hammurabi, Inc.* could then sell standard forms that parties might use under this type of statute. The open-ended statute would in effect create the opportunity for an “aftermarket” for standard forms, equivalent to the “app” market for mobile devices. The open-ended statute would give these privately created standard forms some of the effect of law. Interpretation problems might remain which would need to be addressed by additional law in the form of specific statutes or court decisions.

The important question raised by government’s involvement on the buy side of the private market for law is whether this would re-introduce all of the problems of rent-seeking that exist under the current public/byproduct regime. Government agents may have political incentives to buy too many or too few laws compared to profit-maximizing private purchasers. Indeed, these incentives produce the skewing from social welfare that we noted above with byproduct laws such as L3Cs.

¹⁴² The private firm with property rights to their products might also intervene or otherwise participate in litigation to ensure the enforcement of the terms set out in the private statute and to insure adopters against reorganization costs if the terms contained in the private statute are not enforced.

¹⁴³ Ribstein & Kobayashi, *supra* note 54, at 147.

¹⁴⁴ Larry E. Ribstein, *Limited Liability Unlimited*, 24 DEL. J. CORP. L. 407, 410 (1999).

Although in theory government could continue to choose laws created by byproduct or public lawmakers, or might buy the wrong private laws, jurisdictional competition could be an important mechanism for aligning the government producers of laws with social welfare. Governments can compete with each other not only regarding the outputs of their legislative agents, but also regarding decisions by their government agents as to which private laws to purchase. Firms would choose the laws of jurisdictions that best address these problems, and choice-of-law rules could enforce these choices. This would be analogous to the situation that currently exists with byproduct law drafting, where a state legislature like Delaware relies almost completely on local lawyers to write business association laws. The difference is that a market for private laws would enable legislatures to rely on lawyers generally and non-lawyer drafters rather than being limited to help from the local bar.

A potential downside of jurisdictional competition for private lawmaking is that competition can erode private lawmakers' incentives. As discussed in Subpart A, government's power to adopt law also empowers it to create law franchises that protect private lawmakers' property rights to types of laws. However, other states can invade this space with competing laws. Over time, jurisdictional competition can eventually weed out the excess laws, just as it does in the current system.¹⁴⁵ But until then, private lawmakers must contend with competitors selling laws to all of the states.

In sum, although there are reasons to believe that an "outsourcing" approach to law drafting would function better than the current system of law drafting by government and byproduct drafters, there are also reasons to be skeptical. There are a number of possible outcomes under a private law system. Governments might not buy outsourced laws from private parties due to concern that the public would not accept this approach. There may be only a small number of buyers and laws would be sold in a captive market, much like the one in which rent-seeking, byproduct law drafters operate. Or perhaps bad private laws would proliferate, and state legislators would not be able to distinguish them from good laws. We cannot prove that Hammurabi, Inc. would improve on the existing equilibrium. On the other hand, the possibility of improvement is sufficiently plausible that it is worth analyzing the conditions under which it might occur, particularly including the creation of stronger property rights in privately drafted laws. Moreover, it is not obvious how adding an additional group of private law drafting organizations could result in worse laws than the existing mix of government and byproduct law drafters.

¹⁴⁵ Larry E. Ribstein, *Making Sense of Entity Rationalization*, 58 *BUS. LAW.* 1023, 1040–41 (2003).

C. *Private Enforcement*

The main alternative to a government market for laws would be to find some way for private enforcers to provide government-like legal certainty. Such a regime has worked, for example, in a closed system like the world of the diamond merchants in Bernstein's study.¹⁴⁶ In that study, notice is no problem, and the parties are subject to strong reputational constraints.¹⁴⁷ Effective coordination can occur other than as a result of promulgation of laws in the sense defined in this article.¹⁴⁸

Large-scale private common law systems can emerge, as demonstrated by the development of the Law Merchant.¹⁴⁹ The main impediment to such a system is that a full-fledged private judicial system requires a mechanism not only for deciding cases, as in arbitrations, but also for producing judicial-type opinions that are respected as precedent. The basic problem is that any benefit from the opinion in terms of increased predictability of results would accrue to litigants in subsequent cases, while the fees to judges and indirect costs in terms of lost confidentiality accrue to the parties of an individual case. Parties accordingly would participate in a private common law system only if they benefit over time from having their transactions subject to clear legal rules. The state usually will be in the best position under modern conditions of open trade to provide and guard the integrity of such a durable system.¹⁵⁰ As long as the state provides the law, it arguably must ensure that the public has general access to the proceedings just as for statutory law. This returns to the basic problem of protecting property rights in private law drafting and the dilemma inherent in private law drafting.

Although the state would seem to be the most likely source of a full-fledged common law system, there is some chance a fully private legal system could emerge. One possible path to such a system is through arbitration. Arbitration associations already compete for users through rules and reputations. An association (perhaps a subsidiary of Hammurabi, Inc.) could compete with both public courts and other arbitration associations by offering careful public written opinions by former judges hired as arbitrators. The association could internalize the cost of the system through the fees it charges to users. Parties, especially repeat players in certain types of cases, might be willing to pay the higher cost if they thought the arbitrators had more expertise than government judges or that the association's procedures could save them overall litigation costs compared to a government-run system. Although such a system could not offer enforcement compara-

¹⁴⁶ Bernstein, *supra* note 66, at 115.

¹⁴⁷ *Id.* at 116.

¹⁴⁸ Hadfield & Weingast, *supra* note 11, at 7.

¹⁴⁹ Masten & Prufer, *supra* note 65, at 28–29.

¹⁵⁰ *See id.* (discussing the conditions that support private and public courts).

ble to a government system, in some kinds of cases private sanctions such as reputational bonding might suffice.¹⁵¹

CONCLUSION

Legal innovation is important, but it may be under-produced because of public law drafters' weak incentives. Private law drafting is a potential solution to this problem. However, under current law this law drafting faces the horns of a dilemma: it requires government enforcement and recognition, yet such enforcement and recognition reduces the property rights that are essential to motivate private law drafters. The result is that much private law drafting today occurs as a byproduct of political and other activities, with results that are often less efficient than would be produced by a purely commercial market for law.

We outline a plausible approach to productive legal innovation by establishing a better balance between public access and private rights than the one that exists under current law. The specific path to our approach would be legislative reversal of the *Veeck* rule to clarify that private law drafters retain property rights in privately drafted law proposals, even if they are adopted as law. This type of systemic reform might create the conditions necessary for Hammurabi, Inc. to thrive and to supply a richer variety of law than can be expected from a purely public law drafting system. To be sure, it is not clear whether the suggested reform would, in fact, improve the current market for law. On the other hand, it is also not clear that the reform could do harm, particularly, as the *Veeck* dissenters suggested, if the private property rights are carefully limited to preserve public access.

¹⁵¹ Indeed, an advantage of a fully private system is the ability to link use of a private statute as background rules with adjudication in private court. This could provide a metering system where no public filings are necessary. *But see* Erin A. O'Hara O'Connor, Kenneth J. Martin & Randall S. Thomas, *Customizing Employment Arbitration*, 98 IOWA L. REV. 133, 137-42 (2012) (analyzing issues in private arbitration contracts that are reserved for adjudication in court). It can also allow the parties to choose their own procedural rules. *See generally* Robert G. Bone, *Party Rulemaking: Making Procedural Rules Through Party Choice*, 90 TX. L. REV. 1329 (2012); Kevin E. Davis & Helen Hershkoff, *Contracting for Procedure*, 53 WM. & MARY L. REV. 507 (2011); David A. Hoffman, *Wither Bespoke Procedure?*, U. ILL. L. REV. (forthcoming) (TEMPLE U. LEG. STUD. RESEARCH PAPER No. 2013-10, 2013), available at SSRN:<http://ssrn.com/abstract=2216902>. Alternatively, the parties could use the Delaware hybrid system of state judges privately adjudicating cases and charging a direct fee for adjudication services. *See* 10 Del. C. § 349(a) (2012) (giving the Delaware Court of Chancery "the power to arbitrate business disputes when the parties request a member of the Court of Chancery, or such other person as may be authorized under rules of the Court, to arbitrate a dispute"); Larry E. Ribstein, *Practicing Theory: Legal Education for the Twenty-First Century*, 96 IOWA L. REV. 1649, 1668 (2011) (discussing arbitration under the Delaware statute). *But see* Del. Coal. for Open Gov't v. Strine, No. 1:11-1015, 894 F. Supp. 2d 493, 494 (D. Del. 2012) (holding that arbitrations conducted under the Delaware hybrid system could not be closed to the public).



ECONOMIC ANALYSIS BY FEDERAL FINANCIAL REGULATORS

*Hester Peirce**

The Wall Street Reform and Consumer Protection Act (Dodd–Frank)¹ gave U.S. financial regulators a long list of regulations to write. Despite the sweeping nature of Dodd–Frank’s changes, it does not generally require regulators to conduct economic analysis.² Further, most of the regulators charged with implementing Dodd–Frank are not subject to the standard regulatory analysis requirements for government rulemaking. Economic analysis can play a valuable role in assisting regulators in deciding whether and how to regulate, but very few financial regulators take advantage of this tool of their own volition.

This article will describe just how little high quality economic analysis the federal financial regulators charged with implementing Dodd–Frank and regulating the financial markets are doing.³ Although each regulator has a unique approach to economic analysis, all of their approaches fall short of the standard to which executive agencies are held. More fundamentally, the federal financial regulators are depriving themselves of analysis essential to the proper exercise of their rulemaking functions.

* Senior Research Fellow, Mercatus Center at George Mason University. I gratefully acknowledge the research assistance of Robert Greene and Derek Thieme, and the helpful comments of Ted Bolema, Jerry Ellig, J.W. Verret, and Richard Williams. All errors are my own.

¹ Dodd–Frank Wall Street Reform and Consumer Protection (Dodd–Frank) Act, 12 U.S.C. § 5301 (2010).

² In this article, except where the context demands otherwise, the terms *economic analysis* and *regulatory analysis* are used interchangeably. The terms *cost–benefit analysis* and *benefit–cost analysis* are commonly used as substitutes for *economic analysis* and *regulatory analysis* but are generally avoided here because a thorough regulatory analysis entails much more than simply weighing the costs and benefits of a proposed regulation. Regulatory analysis entails looking at whether there is a market failure that should be addressed through regulation, different alternatives for solving the problem, and the costs and benefits of each alternative as compared to a common baseline.

³ See *infra* Table 1 for a list of the federal financial regulators discussed. Some agencies with rulemaking authority under Dodd–Frank are not included because their primary mission is not federal financial regulation. The Federal Insurance Office, a creation of Dodd–Frank, is also omitted; it does not have independent authority to issue regulations, although any determinations to preempt state insurance law are subject to the Administrative Procedure Act. The Financial Crimes Enforcement Network (FinCEN), which administers the Bank Secrecy Act, is also omitted. Because FinCEN is a bureau of the Department of Treasury, it is subject to the same economic analysis requirements as other executive agencies. The quality of FinCEN’s analysis is worthy of consideration, but it is beyond the scope of this article because FinCEN’s regulatory focus is anti-money laundering and terrorist financing. See generally Daniel J. Mitchell, *Fighting Terror and Defending Freedom: The Role of Cost–Benefit Analysis*, 25 PACE L. REV. 219 (2005) (examining anti-money laundering and terrorist financing laws from a cost–benefit perspective).

Table 1. Federal Financial Regulators⁴

Name	Acronym	Status	Function
Accounting Standard Setters (Financial Accounting Standards Board, Government Accounting Standards Board)	FASB and GASB	Private Standard Setter	Establish financial accounting and reporting standards
Bureau of Consumer Financial Protection	CFPB	Independent Regulatory Agency	Regulates provision of consumer financial products and services.
Board of Governors of the Federal Reserve System	FRB	Independent Regulatory Agency	Regulates bank holding companies, savings and loan holding companies, financial holding companies, state banks that are members of the Federal Reserve System, foreign banks' U.S. operations, U.S. banks' foreign operations, designated systemically important nonbank financial companies, and designated systemically important financial market utilities.
Market utilities, such as stock and options exchanges, designated contract markets, clearing agencies, derivatives clearing organizations, swap execution facilities, trade data repositories. (New York Stock Exchange, Chicago Mercantile Exchange, The Options Clearing Corporation, The Depository Trust Company, etc.)	Various (NYSE, CME, OCC, DTC, etc.)	Quasi-Governmental Regulatory Organizations	Provide utility-like services to the financial markets. In that capacity, they are entrusted with certain regulatory responsibilities.
Commodity Futures Trading Commission	CFTC	Independent Regulatory Agency	Regulates the commodity-based futures markets and the bulk of the over-the-counter derivatives markets.
Federal Deposit Insurance Corporation	FDIC	Independent Regulatory Agency	Provides deposit insurance; serves as primary regulator of state banks that are not members of the Federal Reserve System and state-chartered thrifts and back-up regulator of non-FDIC-supervised insured depository institutions; resolves failed insured financial institutions and systemic financial companies.
Federal Housing Finance Agency	FHFA	Independent Regulatory Agency	Regulates Fannie Mae, Freddie Mac, and the Federal Home Loan Banks; conservator for Fannie Mae and Freddie Mac.
Financial Industry Regulatory Authority	FINRA	Quasi-Governmental Regulator	Regulates brokerage firms and individuals that sell securities to the public.
Financial Stability Oversight Council	FSOC	Executive Agency	Monitors stability of financial system; identifies systemically important financial entities.
Municipal Securities Rulemaking Board	MSRB	Quasi-Governmental Regulatory Organization	Regulates municipal securities dealers and municipal advisors.
National Credit Union Administration	NCUA	Independent Agency	Regulates federal credit unions and FDIC-insured state-chartered credit unions.
National Futures Association	NFA	Quasi-Governmental Regulatory Organization	Regulates futures market participants that deal with the public.
Office of the Comptroller of the Currency	OCC	Independent Regulatory Agency	Regulates national banks, federal savings associations (thrifts), and federal branches and agencies of foreign banks.
Office of Financial Research	OFR	Independent Regulatory Agency	Collects, standardizes, maintains, and disseminates financial data.
Public Company Accounting Oversight Board	PCAOB	Quasi-Governmental Regulatory Organization	Regulates auditors of public companies and auditors of broker-dealers.
Securities and Exchange Commission	SEC	Independent Regulatory Agency	Regulates securities markets and market participants and reviews disclosures of public companies. Regulated entities include brokers, dealers, investment advisers, mutual funds, stock and options exchanges, credit rating agencies, PCAOB, FINRA, MSRB, SIPC, clearing agencies, transfer agents, and certain parts of the over-the-counter derivatives market.
Securities Investor Protection Corporation	SIPC	Quasi-Governmental Regulatory Organization	Intervenes to protect customer property at financially troubled brokerage firms.

⁴ This table represents the author's summary of publicly available material.

The article begins with an introduction that provides a brief overview of the regulatory analysis obligations of executive agencies. It then proceeds to describe the obligations generally applicable to independent regulatory agencies, which include most of the federal financial regulators. The article then discusses each agency's unique statutory obligations related to economic analysis and how each particular agency employs economic analysis. The article also includes a discussion of economic analysis by the quasi-governmental regulators, which play an important role in federal financial regulation. They too fall short when it comes to regulatory analysis. The last section concludes by calling for greater emphasis on economic analysis in the promulgation of financial regulations.

I. INTRODUCTION

A. *Executive Agencies' Obligations*

For over thirty years, executive departments and agencies such as the Department of Transportation, the Food and Drug Administration, and the Environmental Protection Agency have been required to conduct economic analysis as part of their rulemaking processes.⁵ This requirement has been embodied in the Unfunded Mandates Reform Act of 1995 (UMRA)⁶ and a series of presidential executive orders, starting with Executive Order 12,291 issued by President Reagan in 1981.⁷ The Office of Information and Regulatory Affairs (OIRA), which is part of the president's Office of Management and Budget (OMB), reviews the agencies' analyses.

The current requirements for executive agencies are embodied in President Clinton's Executive Order 12,866, which calls for executive branch

⁵ For a helpful overview of regulatory analysis requirements, see CURTIS W. COPELAND, CONG. RESEARCH SERV., R41974, COST-BENEFIT AND OTHER ANALYSIS REQUIREMENTS IN THE RULEMAKING PROCESS (2011), available at <http://www.fas.org/sgp/crs/misc/R41974.pdf>.

⁶ Unfunded Mandates Reform Act of 1995, Pub L. No. 104-4, 109 Stat. 48 (codified as amended in scattered sections of Title 2 of the U.S. Code). UMRA, among other things, requires agencies (except independent regulatory agencies) to conduct a cost-benefit analysis, and select the most cost-effective alternative for rules that will impose a federal mandate that results in direct costs to state and local governments or the private sector of \$100 million or more. This article does not separately discuss UMRA because analysis under the executive orders tends to satisfy UMRA. See, e.g., Cass R. Sunstein, OIRA Administrator, Written Test. before the Subcomm. on Tech., Info. Policy, Intergovernmental Relations & Procurement Reform of the H. Comm. on Oversight and Gov't Reform (May 25, 2011), available at http://oversight.house.gov/wp-content/uploads/2012/01/5-25-11_Sunstein_Testimony.pdf ("Insofar as UMRA is designed to require certain analyses of the effects of rules and to ensure that costs and burdens are reduced, the Act's goals evidently overlap with those of Executive Order 12866, which was issued in 1993 and has long governed the process of regulatory review.").

⁷ Exec. Order No. 12,291, 46 Fed. Reg. 13,193 (Feb. 17, 1981).

agencies to take a number of commonsense steps in determining whether to regulate and, if so, how to do it.⁸ An agency must first identify the problem it is trying to address and the significance of the problem. If an existing statute or regulation is the source of the problem, the agency should consider whether that regulation or statute could be modified to fix the problem. If a new regulation is the best solution, the agency must assess different ways of regulating and choose an option that is not overly prescriptive, achieves the intended benefits in the most cost-effective manner, and generates sufficient benefits to justify its costs.⁹ OIRA has published a detailed document to guide agency economists through this analysis.¹⁰

In January 2011, in Executive Order 13,563, President Obama largely reaffirmed these established principles for regulatory analysis and process.¹¹ The order directs each of the covered agencies to continue the following practices set forth in Executive Order 12,866:

- (1) Propose or adopt a regulation only upon a reasoned determination that its benefits justify its costs (recognizing that some benefits and costs are difficult to quantify);
- (2) Tailor its regulations to impose the least burden on society, consistent with obtaining regulatory objectives, taking into account, among other things, and to the extent practicable, the costs of cumulative regulations;
- (3) Select, in choosing among alternative regulatory approaches, those approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity);
- (4) To the extent feasible, specify performance objectives, rather than specifying the behavior or manner of compliance that regulated entities must adopt; and
- (5) Identify and assess available alternatives to direct regulation, including providing economic incentives to encourage the desired behavior, such as user fees or marketable permits, or providing information upon which choices can be made by the public.¹²

Executive Order 13,563 modifies Executive Order 12,866 by—among other things—permitting additional emphasis on elements of the analysis

⁸ Exec. Order No. 12,866, 58 Fed. Reg. 51,735 (Sept. 30, 1993).

⁹ For an in-depth discussion of the regulatory analysis requirements applicable to executive agencies, see Richard Williams & Jerry Ellig, *Regulatory Oversight: The Basics of Regulatory Impact Analysis*, MERCATUS CENTER AT GEORGE MASON UNIVERSITY (Sept. 12, 2011), <http://mercatus.org/sites/default/files/Mercatus-Regulatory-Impact-Analysis-Toolkit.pdf>. For a general description of the regulatory process, see SUSAN E. DUDLEY & JERRY BRITO, REGULATION: A PRIMER 35–56, available at http://mercatus.org/sites/default/files/RegulatoryPrimer_DudleyBrito_0.pdf.

¹⁰ OFFICE OF MGMT. & BUDGET, EXEC. OFFICE OF THE PRESIDENT, CIRCULAR A-4 (Sept. 17, 2003), available at http://www.whitehouse.gov/omb/circulars_a004_a-4.

¹¹ Exec. Order No. 13,563, 76 Fed. Reg. 3821 (Jan. 18, 2011).

¹² *Id.* at 3821.

that are difficult or impossible to quantify, such as human dignity,¹³ and by stressing the importance of public participation in the rulemaking process, specifically through the Internet.¹⁴ Executive agencies' regulatory analysis is far from perfect and, indeed, usually falls short of the executive order requirements.¹⁵ Nevertheless, the executive orders and related guidance provide a standard to which these agencies can be held.¹⁶

B. *Independent Regulatory Agencies and the Executive Orders*

The executive orders requiring economic analysis do not apply to the so called independent regulatory agencies, among them most of the federal financial regulators.¹⁷ The Office of the Comptroller of the Currency (OCC), which is part of the Department of Treasury and thus of the executive branch, used to be subject to the executive orders. Dodd–Frank added the OCC, along with the CFPB and the OFR, to the list of independent regulatory agencies. Presumably the expectation was that these agencies would not be covered by the executive orders, and their rulemakings would

¹³ *Id.* (“Where appropriate and permitted by law, each agency may consider (and discuss qualitatively) values that are difficult or impossible to quantify, including equity, human dignity, fairness, and distributive impacts.”).

¹⁴ *Id.*

¹⁵ See Jerry Ellig & John Morrall, *Assessing the Quality of Regulatory Analysis: A New Evaluation and Data Set for Policy Research* (Mercatus Ctr. Working Paper No. 10-75, 2010) (concluding, based on an assessment of all economically significant regulations proposed by executive branch regulatory agencies in 2008 and 2009, that “the quality of regulatory analysis is generally low, varies widely, and did not change much with the change of administrations between 2008 and 2009”), available at <http://mercatus.org/publication/assessing-quality-regulatory-analysis>; see also Jerry Ellig & Sherzod Abdulkadirov, *Regulatory Analysis and Regulatory Reform* (Mercatus on Policy No. 99, 2011), available at <http://mercatus.org/publication/regulatory-analysis-and-regulatory-reform>.

¹⁶ Unless otherwise indicated, the term *executive orders* refers to Exec. Orders 12,866 and 13,563.

¹⁷ The executive orders specifically exclude *independent regulatory agencies* as defined in Paperwork Reduction Act, 44 U.S.C. § 3502 (2006) (definition of *agency*); see Exec. Order 12,866, 58 Fed. Reg. 51735, § 3(b) (Sept. 30, 1993). 44 U.S.C. § 3502(5) (2006) sets forth a list of independent regulatory agencies and allows for statutory additions to the list. As mentioned above, executive agencies' economic analysis requirements are also derived from UMRA, which directs agencies to “assess the effects of Federal regulatory actions on State, local, and tribal governments, and the private sector,” and to “identify and consider a reasonable number of regulatory alternatives and from those alternatives select the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule.” 2 U.S.C. §§ 1532, 1535 (2006). Because UMRA does not cover independent regulatory agencies, most federal financial regulators are not covered by this mandate either.

not be subject to OIRA review.¹⁸ Arguably, a president could simply rewrite the executive orders to include independent regulatory agencies.¹⁹

President Obama took a step in this direction by urging independent regulatory agencies to comply with the executive order requirements.²⁰ In addition, the President's former top regulatory official, while emphasizing that the executive order "does not apply to independent agencies," encouraged such agencies "to give consideration to all of its provisions, consistent with their legal authority."²¹ Although financial regulators have pledged compliance with the spirit of the orders,²² according to the Government Accountability Office (GAO), they have not conducted economic analysis with any consistency, thoroughness, or rigor.²³ Moreover, to the extent that

¹⁸ See Dodd–Frank Act §§ 315, 1100D(a), P.L. No. 111-203, 124 Stat. 1376 (2010) (amending the definition of "independent regulatory agency" in 44 U.S.C. § 3502(5) (2006) to include the OCC, the CFPB, and the OFR).

¹⁹ See Robert W. Hahn & Cass R. Sunstein, *A New Executive Order for Improving Federal Regulation? Deeper and Wider Cost–Benefit Analysis* 37–43 (John M. Olin L. & Econ., Working Paper No. 150, 2002) (arguing that independent agencies' rules should—and legally could—be subject to OIRA review), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=309754; Edward Sherwin, *The Cost–Benefit Analysis of Financial Regulation: Lessons from the SEC's Stalled Mutual Fund Reform Effort*, 12 STAN. J.L. BUS. & FIN. 1, 54–56 (2006) (discussing the legality of bringing independent regulatory agencies under Exec. Order 12,291).

²⁰ Exec. Order 13,579, 76 Fed. Reg. 41,587 (July 11, 2011). The federal financial regulators are not alone among the independent regulatory agencies in performing little regulatory analysis. See Arthur Fraas & Randall Lutter, *On the Economic Analysis of Regulations at Independent Regulatory Commissions*, 63 ADMIN. L. REV. 213, 216 (2011) (concluding that "based on [an] admittedly quick and limited survey . . . that the analysis conducted by the [independent regulatory commissions] is generally the minimum required by statute") (omitting footnote citing the Nuclear Regulatory Commission as an exception).

²¹ Memorandum from Cass R. Sunstein, OIRA Administrator, to the Heads of Exec. Depts. and Agencies, and of Indep. Regulatory Agencies Regarding Exec. Order 13563, "Improving Regulation and Regulatory Review" (Feb. 2, 2011), available at <http://www.whitehouse.gov/sites/default/files/omb/memoranda/2011/m11-10.pdf>.

²² See, e.g., U.S. Gov't Accountability Office, *Dodd–Frank Act Regulations: Implementation Could Benefit from Additional Analysis and Coordination* 12 (2011) [hereinafter GAO Report], available at <http://www.gao.gov/assets/590/586210.pdf> ("Although federal financial regulatory agencies are not required to follow E.O. 12866 or OMB Circular A-4, CFTC, Federal Reserve Board, FDIC, NCUA, OCC, and SEC officials have said that their agencies follow OMB's guidance in spirit or principle. CFPB officials also said that the Bureau expects to follow the spirit of OMB's guidance."); see also U.S. GOV'T ACCOUNTABILITY OFFICE, *DODD–FRANK ACT: AGENCIES' EFFORTS TO ANALYZE AND COORDINATE THEIR RULES* 10 (2012) [hereinafter GAO Report II], available at <http://www.gao.gov/assets/660/650947.pdf> ("While most financial regulators said that they attempt to follow OMB's guidance in principle or spirit, we found that they did not consistently follow key elements of the guidance in their regulatory analyses.")

²³ See GAO REPORT, *supra* note 22, at 14 ("Although most of the federal financial regulators told us that they tried to follow Circular A-4 in principle or spirit, their policies and procedures did not fully reflect OMB guidance on regulatory analysis."); *id.* at 21 (finding that only the SEC and the OCC had revised their guidance); see also Letter from the Committee on Capital Markets Regulation to Chairman Tim Johnson, Ranking Member Richard Shelby, Chairman Spencer Bacchus & Ranking Member Bar-

financial regulators perform regulatory analysis, the analysis is not subject to OIRA review, unless a regulator voluntarily submits it to OIRA for informal review.

C. *Regulatory Analysis Obligations Applicable to Independent Regulatory Agencies*

Federal financial regulators are generally subject to the Administrative Procedure Act (APA),²⁴ which imposes certain requirements for transparency, notice, and public participation in the rulemaking process. The APA requires, among other things, that a reviewing court “hold unlawful and set aside agency action, findings, and conclusions found to be arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.”²⁵ The improper use or failure to use rigorous analysis could result in a court’s determination that an agency has acted arbitrarily and capriciously or abused its discretion.²⁶

In addition to their responsibilities under the APA, financial regulators are subject to certain targeted, statutory regulatory analysis requirements.²⁷ The relevant statutes include: (1) the Paperwork Reduction Act,²⁸ which requires agencies to estimate the magnitude of, and obtain OMB approval for, “collections of information” from the public;²⁹ (2) the Regulatory Flexibility Act,³⁰ which requires agencies to analyze, if a substantial number of small entities will be affected, how regulations will affect small entities and whether there are alternatives; (3) the Congressional Review Act,³¹ which requires agencies to submit rules, together with any cost–benefit analysis performed, to Congress for potential disapproval and delays the effective date of major rules;³² (4) the Riegle Community Development and Regula-

ney Frank (Mar. 7, 2012), available at <http://capmksreg.org/2012/03/lack-of-cost-benefit-analysis-in-dodd-frank-rulemaking> (reviewing 192 Dodd–Frank rules revealed that 57 contained no cost–benefit analysis and 85 contained entirely qualitative analyses).

²⁴ Administrative Procedure Act (APA), 5 U.S.C. §§ 551–59 (2006). The quasi-governmental regulators discussed in Section II.K are not subject to the APA.

²⁵ 5 U.S.C. § 706(2)(A) (2006).

²⁶ See *Chamber of Commerce v. SEC*, 412 F.3d 133, 144–45 (D.C. Cir. 2005) (holding that the SEC’s failure to consider a reasonable alternative was a violation of the APA).

²⁷ See *infra* Table 2.

²⁸ Paperwork Reduction Act, 44 U.S.C. §§ 3501–21 (2006).

²⁹ See 44 U.S.C. § 3507(f) (2006). The financial regulators and other independent regulatory agencies that are governed by boards or commissions can override a denial of approval.

³⁰ 5 U.S.C. §§ 601–12 (2006).

³¹ 5 U.S.C. §§ 801–08 (2006).

³² Major rules are those that will have an annual impact of \$100 million or more on the economy; result in a major increase in costs or prices; or adversely affect competition, employment, investment, productivity, innovation, or international competitiveness. Surprisingly, federal financial regulations are rarely deemed major rules. See Curtis W. Copeland, *Economic Analysis and Independent Regulatory*

tory Improvement Act,³³ which requires the federal banking agencies to look at the benefits and administrative burdens new rules would impose on banks and their customers; and (5) the Economic Growth and Regulatory Paperwork Reduction Act, which requires the banking agencies to review, through a notice-and-comment process, all of their regulations every ten years for the purpose of eliminating regulations that unduly burden banks.³⁴ None of these statutes provides for comprehensive, ex ante economic analysis by the financial regulators.

Agencies 10 (Admin. Conf. of the U.S. 2013) [hereinafter *ACUS Report*], available at <http://acus.gov/sites/default/files/documents/Copeland%20CBA%20Report%203-29-13.pdf> (listing number of major rules promulgated by independent regulatory issues between January 2007 and December 2012). As Fraas and Lutter observed, “without doing at least rudimentary economic analysis, it would seem difficult for an [independent regulatory commission] to determine whether a rule is major.” Fraas and Lutter, *supra* note 20, at 221.

³³ See Riegle Community Development and Regulatory Improvement Act § 302, 12 U.S.C. § 4802(a) (2006).

³⁴ See *id.* at § 222; see also 12 U.S.C. § 3311 (2006) (the report from the first review was submitted to Congress July 31, 2007); Federal Financial Institutions Examination Council Joint Report to Congress, July 31, 2007, Economic Growth and Regulatory Paperwork Reduction Act, 72 Fed. Reg. 62,036 (Nov. 1, 2007), available at <http://www.gpo.gov/fdsys/pkg/FR-2007-11-01/pdf/07-5385.pdf>.

Table 2. Relevant Statutes of General Applicability to Federal Financial Regulators³⁵

Statute	Purpose
Administrative Procedure Act	Establishes procedures for agency rulemaking, including allowing for public participation in rulemaking.
Paperwork Reduction Act	Requires agencies to analyze and get approval from the Office of Information and Regulatory Affairs for paperwork burdens imposed by their regulations.
Regulatory Flexibility Act	Requires agencies to analyze—if a substantial number of small entities will be affected—how regulations will affect small entities and whether there are alternatives that achieve the desired goals and are better for small entities.
Congressional Review Act	Requires agencies to submit a rule, together with a statement of whether it is major and any cost–benefit analysis, to Congress and the GAO before it can take effect. Enables Congress to overturn rules.
Riegle Community Development and Regulatory Improvement Act	Directs banking regulators, in setting effective date and administrative compliance requirements for new regulations that impose additional requirements on banks, to consider both the benefits and the administrative burdens on banks, including small banks, and their customers.
Economic Growth and Regulatory Paperwork Reduction Act	Requires banking agencies to review their rules every ten years.

In addition to the requirements in the broadly applicable statutes noted above, several federal financial regulators have agency-specific economic analysis requirements built into their organic statutes. Regardless of the existence and nature of their statutory obligations, the federal financial regulators generally have not embraced regulatory analysis, as discussed below.

³⁵ This table represents the author’s summary of publicly available material. These statutes are not applicable to the quasi-governmental regulatory organizations. See *infra* Part II.K below.

II. ECONOMIC ANALYSIS OBLIGATIONS AND EFFORTS BY THE FEDERAL FINANCIAL REGULATORS

This section describes the obligations of each federal financial regulator with regard to economic analysis and analyzes the approach each regulator takes to fulfilling these obligations. The discussion is based in part on recent reports prepared by the GAO³⁶ and the inspectors general of a number of the federal financial regulators.³⁷ These reports generally described approaches to economic analysis that lack the rigor, purpose, and public transparency required of an analysis performed under the executive orders. As the discussion illustrates, the statutory obligations and approaches taken by the different regulators are not uniform.

³⁶ See GAO REPORT, *supra* note 22, *passim*; GAO REPORT II, *supra* note 22, *passim*.

³⁷ The inspectors general for a number of the federal financial regulators prepared reports in response to congressional requests regarding economic analysis. OFFICE OF INSPECTOR GENERAL, CFTC, AN INVESTIGATION REGARDING COST-BENEFIT ANALYSES PERFORMED BY THE COMMODITY FUTURES TRADING COMMISSION IN CONNECTION WITH RULEMAKINGS UNDERTAKEN PURSUANT TO THE DODD-FRANK ACT (Apr. 15, 2011) [hereinafter CFTC IG REPORT I], *available at* http://www.cftc.gov/ucm/groups/public/@aboutcftc/documents/file/oig_investigation_041511.pdf; OFFICE OF INSPECTOR GENERAL, CFTC, A REVIEW OF COST-BENEFIT ANALYSES PERFORMED BY THE COMMODITY FUTURES TRADING COMMISSION IN CONNECTION WITH RULEMAKINGS UNDERTAKEN PURSUANT TO THE DODD-FRANK ACT (June 13, 2011) [hereinafter CFTC IG REPORT II], *available at* http://www.cftc.gov/ucm/groups/public/@aboutcftc/documents/file/oig_investigation_061311.pdf; OFFICE OF INSPECTOR GENERAL, DEPARTMENT OF THE TREASURY, OIG-CA-11-006, DODD-FRANK ACT: CONGRESSIONAL REQUEST FOR INFORMATION REGARDING ECONOMIC ANALYSIS BY OCC (June 13, 2011) [hereinafter OCC IG REPORT], *available at* <http://www.treasury.gov/about/organizational-structure/ig/Documents/OIG-CA-11-006.pdf>; OFFICE OF THE INSPECTOR GENERAL, FDIC, EVAL-11-003, EVALUATION OF THE FDIC'S ECONOMIC ANALYSIS OF THREE RULEMAKINGS TO IMPLEMENT PROVISIONS OF THE DODD-FRANK ACT (June 2011) [hereinafter FDIC IG REPORT], *available at* <http://fdicig.gov/reports11/11-003EV.pdf>; OFFICE OF INSPECTOR GENERAL, BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM, RESPONSE TO A CONGRESSIONAL REQUEST REGARDING THE ECONOMIC ANALYSIS ASSOCIATED WITH SPECIFIC RULEMAKINGS (June 13, 2011) [hereinafter FRB IG REPORT], *available at* http://www.federalreserve.gov/oig/files/Congressional_Response_web.pdf; OFFICE OF INSPECTOR GENERAL, SEC, REPORT OF REVIEW OF ECONOMIC ANALYSES PERFORMED BY THE SECURITIES AND EXCHANGE COMMISSION IN CONNECTION WITH DODD-FRANK RULEMAKINGS (June 13, 2011) [hereinafter SEC IG REPORT I], *available at* http://www.sec-oig.gov/Reports/AuditsInspections/2011/Report_6_13_11.pdf; OFFICE OF INSPECTOR GENERAL, SEC, FOLLOW-UP REVIEW OF COST-BENEFIT ANALYSES IN SELECTED SEC DODD-FRANK ACT RULEMAKINGS (Jan. 27, 2012) [hereinafter SEC IG REPORT II], *available at* http://www.sec-oig.gov/Reports/AuditsInspections/2012/Rpt%20499_FollowUpReviewofD-F_CostBenefitAnalyses_508.pdf; OFFICE OF INSPECTOR GENERAL, SEC, USE OF THE CURRENT GUIDANCE ON ECONOMIC ANALYSIS IN SEC RULEMAKINGS (June 6, 2013) [hereinafter SEC IG REPORT III], *available at* <http://www.sec-oig.gov/Reports/AuditsInspections/2013/518.pdf>. It should be noted that the inspector general reports were prepared in response to congressional requests, which—with the exception of the last SEC report—directed the inspectors general to concentrate their reviews on a specific set of regulations. The reports, which vary in detail and length, also include some general information about the agencies' use of economic analysis.

The regulators are discussed in the approximate descending order of the stringency of the economic analysis obligations they face in rulemaking. This regulator-by-regulator review demonstrates, however, that none of the regulators are conducting economic analysis of the quality that was envisioned in the executive orders. There is thus ample room for improvement in the rulemaking conducted by all of the federal financial regulators.

A. *Financial Stability Oversight Council*

The Financial Stability Oversight Council (FSOC), the new systemic risk monitoring body created by Dodd–Frank, is made up of the heads of the other federal financial regulators, representatives of state regulators, and an insurance expert. FSOC, which is housed within the Department of Treasury, is not an independent regulatory agency and therefore is subject to the requirements of the executive orders. Nevertheless, FSOC has not conducted economic analysis for the final rules it has adopted.³⁸

With respect to the two key rules FSOC has finalized, FSOC took the position that it need not conduct a cost-benefit analysis despite the fact that the rule was a “significant regulatory action”:

Several commenters suggested that the Council should, or is required to, conduct a cost—benefit analysis, such as a review of the impact of the rule on the economy and on different sectors of the financial services industry. These commenters argued that a cost—benefit analysis would enhance transparency and ensure that costs are minimized, and may be required under Executive Orders 12866 and 13563. In addition, commenters questioned the determination that this rule is not economically significant under section 3(f) of Executive Order 12866. That section defines “significant regulatory action” to include a regulatory action (which may include a proposed rule of agency procedure or practice) that is likely to result in a rule that may raise certain novel legal or policy issues. Based on this determination, which is made by the Office of Management and Budget, the Council is not required to conduct a cost—benefit analysis in connection with this rulemaking.³⁹

³⁸ FSOC does not have explicit authority to adopt rules other than “such rules as may be necessary for the conduct of the business of the Council.” 12 U.S.C. § 5321(e)(2) (2006). However, FSOC has taken the position that it “has the inherent authority to promulgate interpretive rules and interpretive guidance.” Authority to Require Supervision and Regulation of Certain Nonbank Financial Companies, 77 Fed. Reg. 21637, 21647 (Apr. 11, 2012).

³⁹ FSOC, Final Rule and Interpretive Guidance, Authority to Require Supervision and Regulation of Certain Nonbank Financial Companies, 77 Fed. Reg. 21637, 21651 (Apr. 11, 2012). FSOC also took the position that the rule was procedural. *Id.*; see also FSOC, Second notice of Proposed Rulemaking and Proposed Interpretive Guidance, Authority to Require Supervision and Regulation of Certain Nonbank Financial Companies, 76 Fed. Reg. 64264 (Oct. 18, 2011) (“This rule has been designated a ‘significant regulatory action’ although not economically significant, under section 3(f) of Executive Order 12866.”); FSOC, Final Rule, Authority to Designate Financial Market Utilities as Systemically Important, 76 Fed. Reg. 44763, 44773 (Jul 27, 2011) (not including a cost-benefit discussion, but purporting to satisfy its obligations under Exec. Order 12866 through OMB’s review of the rule).

Executive Order 12,866, however, does not wholly exempt agencies from conducting and making available to the public regulatory analyses for regulations that are not deemed economically significant but are nevertheless significant regulatory actions.⁴⁰

Executive Order 13,563 emphasizes interagency cooperation in rulemaking to ensure that industries are not overburdened with regulatory obligations.⁴¹ There is not an established process for achieving such coordination among financial regulators.⁴² FSOC, which is charged with “facilitat[ing] information sharing and coordination among member agencies,”⁴³ is well positioned to fill this void. To date, however, FSOC has not taken the lead, and there has been little analysis of the aggregate effect of Dodd–Frank rulemaking. The regulators have argued that looking at cumulative impact would be impossible at this stage.⁴⁴ Indeed, the manner and

⁴⁰ Under Exec. Order 12,866, a full analysis of benefits, costs, and alternatives is required only for a “significant regulatory action” that may “[h]ave an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal government communities.” Exec. Order 12,866, 58 Fed. Reg. 51,738 (1993). However, for all significant regulatory actions, agencies must prepare “a reasonably detailed description of the need for the regulatory action and an explanation of how the regulatory action will meet that need,” and “[a]n assessment of the potential costs and benefits of the regulatory action” and make it available to the public. *Id.* at 51,741.

⁴¹ Exec. Order 13,563, 76 Fed. Reg. 3821, at 3822 (“Some sectors and industries face a significant number of regulatory requirements, some of which may be redundant, inconsistent, or overlapping. Greater coordination across agencies could reduce these requirements, thus reducing costs and simplifying and harmonizing rules. In developing regulatory actions and identifying appropriate approaches, each agency shall attempt to promote such coordination, simplification, and harmonization.”); *see also* Memorandum from Cass R. Sunstein, OIRA Administrator, to Heads of Executive Departments and Agencies (Mar. 20, 2012) (calling for “[c]oordination of timing, content, and requirements of multiple rulemakings that are contemplated for a particular industry or sector, so as to increase net benefits”).

⁴² *See, e.g.*, OCC IG REPORT, *supra* note 37, at 2 (noting that “there was no formal process in place that provides for coordination on economic analyses between OCC and the other federal banking agencies”).

⁴³ Dodd–Frank Act § 112(a)(2)(E), 12 U.S.C. § 5322(a)(2)(E) (2010).

⁴⁴ *See, e.g.*, GAO REPORT, *supra* note 22, at 35 (“In light of its statutory requirements, FSOC plans to assess the future impact of significant Dodd–Frank regulations, including those that may not have systemic risk implications. . . . However, they also noted that was too early for such a review because most of the Dodd–Frank Act rules were not in effect.”); FRB IG REPORT, *supra* note 37, at 21 (“Senior Board officials noted, however, that estimating the cumulative burden of imposing Dodd–Frank Act mandated rules on the broader economy is not possible at this time since few Dodd–Frank Act provisions have taken effect.”); OCC IG REPORT, *supra* note 37, at 12 (“OCC believes that it is effectively impossible to assess the cumulative impact [of all Dodd–Frank rulemakings] at this time because no final rules have been adopted.”).

timing of regulatory actions have complicated attempts to analyze the effects of the rules individually as well as in the aggregate.⁴⁵ Although difficult, there is precedent for looking broadly at the costs and benefits of a package of related financial markets reforms.⁴⁶

B. *Securities and Exchange Commission*

The Securities and Exchange Commission (SEC) is charged with protecting investors in the nation's securities markets, maintaining fair, orderly, and efficient markets, and facilitating capital formation.⁴⁷ The principal securities laws require the SEC to perform economic analysis with respect to many of its rules. The SEC, however, has struggled to implement its statutory mandate.

⁴⁵ For example, the CFTC and SEC did not define the market participants and financial products that would fall within the new regulatory regime for derivatives until mid 2012, well after many of the substantive derivatives market requirements had been proposed, and, in some cases, adopted. Without knowing the scope of the derivatives market, it was difficult to assess the impact of the substantive rules as they were being developed. For example, when the banking agencies were developing rules related to margin on derivatives transactions, they did not know "the population of dealers and major participants to which the proposed rules would apply [because it was] subject to definitions that are presently being developed by the CFTC and SEC through rulemakings." FDIC IG REPORT, *supra* note 37, at 15.

⁴⁶ Efforts by the United Kingdom's Financial Services Authority (FSA) to assess the aggregate costs and benefits of the Markets in Financial Instruments Directive (MiFID) are instructive. MiFID was a major European initiative to update and integrate the financial services regulatory system. In addition to analyzing the effects of individual pieces of the legislation, the FSA looked at the changes in the aggregate:

In the case of a wide-ranging directive like MiFID, it is useful to step back and consider the bigger picture, which is the aim of this paper. In broad terms, we attempt to identify the overall costs of MiFID implementation for firms, and set them alongside an attempt to quantify the benefits of MiFID for the UK. This is understandably a challenging task (and more challenging than a typical CBA), and there are certain important caveats attached to this exercise.

FSA, THE OVERALL IMPACT OF MiFID 2 (Nov. 2006), *available at* http://www.fsa.gov.uk/pubs/international/mifid_impact.pdf. More recently, the FSA commissioned a comprehensive study of the costs and benefits of Solvency II, a major European insurance regulatory reform initiative. ERNST & YOUNG LLP, SOLVENCY II COST-BENEFIT ANALYSIS I (June 2011), *available at* <http://www.fsa.gov.uk/pubs/other/ey-solvencyii-cba.pdf> (summarizing "key findings of the completion of a cost benefit analysis of introducing Solvency II in the UK insurance industry," an analysis "completed in line with the FSA's statutory objectives of assessing the expected market and consumer impact of major regulatory changes").

⁴⁷ U.S. SECURITIES AND EXCHANGE COMMISSION, *The Investor's Advocate: How the SEC Protects Investors, Maintains Market Integrity, and Facilitates Capital Formation*, SEC.GOV, <http://www.sec.gov/about/whatwedo.shtml> (last visited June 10, 2013).

The SEC, unlike most other federal financial regulators, has an established practice of including a cost–benefit analysis section in its rulemakings.⁴⁸ Historically, the agency’s lawyers have been primarily responsible for drafting these analyses with varying degrees of assistance from the agency’s economists. The quality of the SEC’s economic analysis and the SEC’s adherence to its statutory analysis requirements have been questioned by SEC commissioners,⁴⁹ the SEC’s Inspector General,⁵⁰ the GAO,⁵¹ Congress,⁵² commentators,⁵³ and courts in a number of successful challenges to its rulemakings in recent years.⁵⁴

The SEC faces more statutory requirements with respect to economic analysis than most of the other federal financial regulators. Whenever the SEC has to consider whether a rulemaking is consistent with the public interest, the agency must “consider, in addition to the protection of inves-

⁴⁸ See SEC IG REPORT II, *supra* note 37, at v (“SEC Chairmen previously committed to Congress that the SEC would conduct cost–benefit or economic analyses in connection with its rulemaking activities, and it has consistently performed such analyses in its rulemakings.”).

⁴⁹ See Kathleen L. Casey, Commissioner, SEC, Statement at Open Meeting: Business Conduct Standards for Security-Based Swap Dealers and Major Security-Based Swap Participants (June 29, 2011), available at <http://www.sec.gov/news/speech/2011/spch062911klc.htm> (“I believe the general decision to avoid serious analysis of the total costs of the rulemaking is shortsighted and actually impairs the Commission’s ability to assess the merits of the rules we may propose and ultimately adopt. It is imperative that we get a more complete understanding of the total costs, and total benefits, of the entire regulatory regime we are creating. Only if we understand the total burden, whether that burden is statutorily imposed or not, can we make sound decisions on the marginal costs and benefits of rules as we consider them.”); Troy A. Paredes, Commissioner, SEC, Speech before the 2011 Investment Adviser Compliance Conference (Mar. 10, 2011), available at <http://www.sec.gov/news/speech/2011/spch031011tap.htm> (“[D]ata and rigorous economic analysis must be much more central to decision making at the SEC than has been the case. Not only does empirical analysis allow the Commission to leverage its expertise, but data and economics often reveal insights—many of which are counterintuitive—that we might not have appreciated otherwise and that allow us to challenge, in fruitful ways, our presuppositions and inclinations. With good data and sound economics, we are able to make better, more informed choices in discharging our regulatory duties.”).

⁵⁰ See generally SEC IG REPORT I, *supra* note 37; SEC IG REPORT II, *supra* note 37.

⁵¹ See generally GAO REPORT, *supra* note 22.

⁵² See, e.g., The SEC’s Aversion to Cost–Benefit Analysis: Hearing before the Subcomm. on TARP, Financial Servs. & Bailout of Pub. & Private Programs of the H. Comm. on Oversight and Gov’t Reform, 112th Cong. (Apr. 17, 2012) [hereinafter House SEC Hearing], available at <http://oversight.house.gov/hearing/the-secs-aversion-to-cost-benefit-analysis>.

⁵³ See, e.g., Sherwin, *supra* note 19, at 17–18 (critiquing the quality of the SEC’s economic analysis); see also David S. Ruder, *Balancing Investor Protection with Capital Formation Needs after the SEC Chamber of Commerce Case*, 26 PACE L. REV. 39, 71 (2005) (“[G]iven the comment by the District of Columbia Court of Appeals that the Commission must determine the ‘economic implications’ of its rule making, the SEC in the future will be well served in its rule making to demonstrate economic effects through quantitative and statistical analysis of costs and benefits and impacts on capital formation.”).

⁵⁴ See generally *Business Roundtable & Chamber of Commerce v. SEC*, 647 F.3d 1144 (D.C. Cir. 2011); *Am. Equity Inv. Life Ins. Co. v. SEC*, 572 F.3d 923 (D.C. Cir. 2009); *Chamber of Commerce v. SEC*, 443 F.3d 890 (D.C. Cir. 2006); *Chamber of Commerce v. SEC*, 412 F.3d 133 (D.C. Cir. 2005).

tors, whether the action will promote efficiency, competition, and capital formation.”⁵⁵ Separately, § 23(a)(2) of the Securities Exchange Act of 1934 (Exchange Act) requires rulemakings to include a “determination that any burden on competition imposed by such rule or regulation is necessary or appropriate.”⁵⁶ In addition, a number of discrete statutory provisions require the SEC to consider economic effects of rules adopted pursuant to those provisions.⁵⁷

Whether these statutory provisions constitute a mandate to perform economic analysis is a matter of some dispute. The SEC’s chairman argues that the agency is not under an obligation to conduct cost–benefit analysis but has long done so as a matter of good regulatory practice.⁵⁸ Other commentators are of the view that Congress made a deliberate decision not to require the SEC to perform cost–benefit analysis.⁵⁹

⁵⁵ Securities Act of 1933 § 2(b), 15 U.S.C. § 77b (2006); Securities Exchange Act of 1934 § 3(f), 15 U.S.C. § 78c(f) (2006); Investment Company Act of 1940 § 2(c), 15 U.S.C. § 80a-2(c) (2006). This requirement was added to these statutes by the National Securities Market Improvement Act of 1996. The Gramm-Leach-Bliley Act of 1999 added the language to the Investment Advisers Act of 1940. See Gramm-Leach-Bliley Act § 202(c), 15 U.S.C. § 80b-2 (2006).

⁵⁶ Securities Exchange Act of 1934 § 23(a)(2), 15 U.S.C. § 78w(a)(2) (2006).

⁵⁷ See, e.g., Securities Exchange Act of 1934 § 6(k)(1), 15 U.S.C. § 78F(k)(1) (2006) (“To the extent necessary or appropriate in the public interest, to promote fair competition, and consistent with the promotion of market efficiency, innovation, and expansion of investment opportunities, the protection of investors, and the maintenance of fair and orderly markets, the Commission and the Commodity Futures Trading Commission shall jointly issue such rules, regulations, or orders as are necessary and appropriate to permit the offer and sale of a security futures product traded on or subject to the rules of a foreign board of trade to United States persons”); Securities Exchange Act of 1934 § 15(n)(2), 15 U.S.C. § 78o(n)(2) (2006) (“In developing any rules under [the prior paragraph relating to disclosures by broker–dealers to retail investors], the Commission shall consider whether the rules will promote investor protection, efficiency, competition, and capital formation.”).

⁵⁸ See, e.g., House SEC Hearing, *supra* note 52 (prepared testimony of Mary L. Schapiro, Chairman, SEC), available at http://www.sec.gov/news/testimony/2012/ts041712mls.htm#P30_7886 (“No statute expressly requires the Commission to conduct a formal cost–benefit analysis as part of its rule-making activities, but—since at least the early 1980s—the Commission has considered potential costs and benefits in its rulemaking as a matter of good regulatory practice.”).

⁵⁹ See, e.g., Dennis Kelleher, President & CEO, Better Markets, Paper Presentation at Peterson Institute for International Economics for *Setting the Record Straight on Cost–Benefit Analysis and Financial Reform at the SEC: A Report from Better Markets, Inc.* (Jul. 30, 2012) (“The plain fact is that the Securities Laws do not include any language requiring the SEC to conduct cost–benefit analysis when it promulgates rules.”). Kelleher lays out an extensive case against cost–benefit analysis, based on his interpretation of legislative history and his concerns about the harmful implications that cost–benefit analysis could have for financial reform efforts. Kelleher’s analysis, however, seems premised on a misunderstanding of the purposes and methods of economic analysis and the nature of its role in agency rulemaking. Properly conducted economic analysis would assist the SEC in effectively meeting its statutory objectives rather than derail it from doing so.

Legislative history suggests, however, that when Congress adopted the requirement with respect to the consideration of the promotion of efficiency, competition, and capital formation, it anticipated that the SEC generally would conduct meaningful analysis in fulfillment of that requirement. The Committee on Commerce report accompanying the House version of the National Securities Markets Improvement Act of 1996 explained that “[i]n considering efficiency, competition, and capital formation, the Commission shall analyze the potential costs and benefits of any rulemaking initiative, including whenever practicable, specific analysis of such costs and benefits. The Committee expects that the Commission will engage in rigorous analysis pursuant to this section.”⁶⁰

In 1999, when Congress added the requirement to consider efficiency, competition, and capital formation to the Investment Advisers Act, it “note[d] that the SEC’s record in implementing [the statutory mandate in the context of the Securities Exchange Act] has failed to meet the Congressional intent.”⁶¹ The report went on to direct the SEC to “improve in this area.”⁶² This assessment of the SEC’s failure to meet congressional intent suggests that Congress intended the SEC to perform more than the cursory analysis it was performing at the time.

The United States Court of Appeals for the District of Columbia Circuit believes that the SEC’s organic statutes impose on it a “statutory obligation to determine as best it can the economic implications of the rule it has proposed.”⁶³ The court interprets this statutory obligation as requiring the SEC to engage in thorough, logical, and well supported economic analysis.⁶⁴

⁶⁰ H.R. REP. NO. 104-622, at 39 (1996). The report went on to suggest that such an analysis would have to be provided to Congress under the Congressional Review Act (CRA). *Id.* The CRA requires that an agency provide to Congress, along with the rule that it is submitting for congressional review, “a complete copy of the cost–benefit analysis of the rule, if any.” Congressional Review Act, 5 U.S.C. § 801(a)(1)(B)(i). By implication, the committee considered the analysis performed with respect to efficiency, competition, and capital formation to be or include a cost–benefit analysis. *See also* Paul Rose and Christopher Walker, *The Importance of Cost–Benefit Analysis in Financial Regulation* 6 (U.S. Chamber of Commerce Ctr. for Capital Mkts. Competitiveness 2013), available at <http://www.centerforcapitalmarkets.com/wp-content/uploads/2010/04/CBA-Report-3.10.13.pdf> (concluding that “[t]he legislative history [of the National Securities Market Improvement Act] indicates that Congress intended to require cost–benefit analysis”).

⁶¹ CONF. REP. NO. 106-434, at 165 (1999).

⁶² *Id.*

⁶³ *Chamber of Commerce v. SEC*, 412 F. 3d 133, 143 (D.C. Cir. 2005).

⁶⁴ *See Bus. Roundtable v. SEC*, 647 F.3d 1144, 1148 (D.C. Cir. 2011) (holding that SEC had violated the APA by engaging in economic analysis that failed “adequately to assess the economic effects of a new rule”); *see also Am. Equity Inv. Life Ins. Co. v. SEC*, 572 F.3d 923, 933, 935 (D.C. Cir. 2009) (failure to “disclose a reasoned basis for its conclusion that [the rule] would increase competition” was arbitrary and capricious, “failure to analyze the efficiency of the existing state law regime renders arbitrary and capricious the SEC’s judgment that applying federal securities law would increase effi-

Chastened by the increasing scrutiny it has faced with respect to economic analysis, the SEC has revisited its approach. Recent changes in the SEC's organizational structure and relevant internal staff guidelines may show an increased willingness to employ meaningful economic analysis in SEC rulemaking. After a brief period during which the SEC's economists reported to an attorney rather than to a chief economist, Chairman Schapiro altered the organizational structure at the SEC so that the chief economist reports directly to the chairman and serves as the Director of the Division of Economic and Risk Analysis, which was known until June 2013 as the Division of Risk, Strategy, and Financial Innovation (RiskFin), the division in which most of the agency's economists work. This change should help give the SEC's economists a stronger voice in the agency's rulemaking and other matters.

In addition to the structural changes, new staff guidance was issued jointly by the RiskFin and the Office of General Counsel in March 2012.⁶⁵ The guidance acknowledged that

[h]igh-quality economic analysis is an essential part of SEC rulemaking. It ensures that decisions to propose and adopt rules are informed by the best available information about a rule's likely economic consequences, and allows the Commission to meaningfully compare the proposed action with reasonable alternatives, including the alternative of not adopting a rule.⁶⁶

The staff guidance, with reference to the executive orders and the accompanying OIRA guidance, sets forth a fairly robust set of principles for economic analysis. From a procedural standpoint, the guidance envisions the economists being better integrated into the rulemaking teams and economic analysis being better incorporated into the policy decision-making process and rulemaking notices.⁶⁷ From a substantive standpoint, the guidance describes the key components that should be included in the economic analysis accompanying every SEC rulemaking—a statement of need, identification of a baseline against which to measure the effects of the regulation, identification of reasonable alternatives, and an evaluation of the costs and benefits of the proposed regulation and the alternatives.⁶⁸

ciency," and "the SEC's flawed efficiency analysis also renders its capital formation analysis arbitrary and capricious").

⁶⁵ Memorandum from the SEC's Division of Risk, Strategy, and Financial Innovation and the Office of General Counsel to the Staff of the Rulemaking Divisions and Offices (Mar. 16, 2012) [hereinafter SEC Staff Memo], *available at* http://www.sec.gov/divisions/riskfin/rsfi_guidance_econ_analy_secrulemaking.pdf.

⁶⁶ *Id.* at 1.

⁶⁷ *Id.* at 15–17.

⁶⁸ *Id.* at 4–15; *see also* GAO REPORT II, *supra* note 22, at 21 (finding that "SEC's guidance defines the basic elements of good regulatory economic analysis in a manner that closely parallels the elements listed in Circular A-4").

In some ways, however, the staff guidance still falls short of the executive orders; it is intended only to “draw on principles set forth in those orders,”⁶⁹ rather than simply to wholly endorse those orders as the standard for the SEC to employ in its economic analysis. Past efforts to improve the SEC’s economic analysis have not been successful.⁷⁰ Whether the new staff guidance will be more successful at effecting fundamental change in the SEC rulemaking process remains to be seen.⁷¹

C. *Commodity Futures Trading Commission*

The Commodity Futures Trading Commission (CFTC) regulates the futures markets and, with new authority under Dodd–Frank, is the primary regulator of the over-the-counter derivatives (swaps) market. The CFTC is statutorily required to consider the costs and benefits of its rules, but it has not conducted the type of thorough economic analyses required by the executive orders.⁷²

⁶⁹ SEC Staff Memo, *supra* note 65, at 4.

⁷⁰ The SEC’s Office of Inspector General conducted a review of SEC rulemaking in 2002. OFFICE OF INSPECTOR GEN., SEC, RULEMAKING PROCESS (Audit No. 347 July 12, 2002), *available at* http://www.sec.gov/about/oig/audit/347fin.htm#P45_7907. The inspector general reported that “[a]ccording to Commission officials, the cost–benefit analysis section of a rule is becoming increasingly significant and they intend to more consistently follow the best practice principles in Executive Order 12866.” *Id.* Consistent with that objective, the inspector general recommended improvements to the SEC’s cost–benefit analysis.

⁷¹ An early report by the SEC’s Inspector General shows signs of improvement. SEC IG REPORT III, *supra* note 37, at ii (finding that “the SEC’s use of the Current Guidance has been effective in incorporating economic analysis into the rulemaking process,” but identifying further opportunities for improvement). For suggestions on how the SEC can further demonstrate a commitment to meaningful economic analysis, *see* House SEC Hearing, *supra* note 52 (prepared testimony of J. W. Verret) (offering eight recommendations “as a test of the SEC’s resolve to make economic analysis a real constraint on SEC rulemaking and a limit on the pressures it may face to politicize its activities and undermine its investor protection mission”); Henry G. Manne, *Economics and Financial Regulation: Will the SEC’s New Embrace of Cost–Benefit Analysis Be a Watershed Moment?*, REGULATION (Summer 2012), at 21, 25 (pointing out some potentially problematic sections of the memorandum, and arguing that it “will not overcome the inhibiting effects of 80 years of a different intellectual culture at the SEC, but it will be a start”); Bruce Krause and Connor Raso, *Rational Boundaries for SEC Cost–Benefit Analysis*, 30 YALE J. ON REG. (forthcoming 2013), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2139010 (suggesting some procedural steps the SEC could take to incorporate efficiency, competition, and capital formation considerations into its rulemaking in a manner that is neither too broad nor too narrow).

⁷² *See, e.g.*, Letter from Scott O’Malia, CFTC Comm’r, to the Hon. Jeffrey Zients, Acting OMB Dir. (Feb. 23, 2012) at 1, 4, *available at* <http://www.cftc.gov/ucm/groups/public/@newsroom/documents/file/omalialetter022312.pdf> (“It is my concern that the Commission’s cost–benefit analysis has failed to comply with the standards for regulatory review outlined in OMB Circular A-4, Executive Order 12866, and President Obama’s Executive Orders 13,563 and 13,579 . . . President Obama was very clear in his two Executive Orders that he expected the highest standards of analysis to validate the necessity of government rulemaking to ensure we don’t impose undue and unfounded economic burdens on market participants and the public as a

The CFTC's principal governing statute requires the agency to evaluate the costs and benefits of a proposed rule "in light of (A) considerations of protection of market participants and the public; (B) considerations of the efficiency, competitiveness, and financial integrity of futures markets; (C) considerations of price discovery; (D) considerations of sound risk management practices; and (E) other public interest considerations."⁷³ The statute also directs the CFTC to "endeavor to take the least anticompetitive means of achieving [its] objectives."⁷⁴

The CFTC, focusing on the fact that the statute requires only consideration of the enumerated factors, has taken a narrow view of the statutory economic analysis mandate. Typically, the CFTC uses the statutory mandate as the baseline, which means only costs attributable to the CFTC's discretion in implementing that mandate are taken into account.⁷⁵ A staff memorandum regarding compliance with this requirement stated that the CFTC has discretion to weigh the statutory factors in any way it wishes and to proceed with a rule regardless of its costs.⁷⁶ A subsequent staff memo-

whole. I don't believe the Commission's rulemakings comply with this directive or OMB Circular A-4."); Jill Sommers, CFTC Comm'r, Remarks Before the Institute of International Bankers, Annual Washington Conf. (Mar. 7, 2011), *available at* <http://www.cftc.gov/PressRoom/SpeechesTestimony/opasommers-13> (stating clearly that when it comes to cost-benefit analyses, the Commission is merely complying with the absolute minimum. The CFTC is not keeping with the spirit of the President's recent Executive Order on 'Improving Regulation and Regulatory Review.' We owe the American public more than the absolute minimum. As we add layer upon layer of rules, regulations, restrictions and new duties, we should be attempting to quantify the costs of what we are proposing. And we should most certainly attempt to determine whether the costs outweigh the benefits. The public deserves this information and deserves the opportunity to comment on our analysis).

⁷³ 7 U.S.C. § 19(a)(2) (2006).

⁷⁴ 7 U.S.C. § 19(b) (2006).

⁷⁵ *See, e.g.*, Swap Dealer and Major Swap Participant Recordkeeping, Reporting, and Duties Rules; Futures Commission Merchant and Introducing Broker Conflicts of Interest Rules; and Chief Compliance Officer Rules for Swap Dealers, Major Swap Participants, and Futures Commission Merchants; Final Rule, 77 Fed. Reg. 20,128, 20,167 (Apr. 3, 2012) ("To the extent that these new regulations reflect the statutory requirements of the Dodd-Frank Act, they will not create costs and benefits beyond those resulting from Congress's statutory mandates in the Dodd-Frank Act. However, to the extent that the new regulations reflect the Commission's own determinations regarding implementation of the Dodd-Frank Act's provisions, such Commission determinations may result in other costs and benefits. It is these other costs and benefits resulting from the Commission's own determinations pursuant to and in accordance with the Dodd-Frank Act that the Commission considers with respect to the section 15(a) factors.").

⁷⁶ CFTC IG REPORT I, *supra* note 37, at Ex. 1, Memorandum from Dan M. Berkovitz, General Counsel, CFTC, and Jim Moser, Acting Chief Economist, CFTC, to Rulemaking Teams re Guidance and Template for Presenting Cost-Benefit Analyses for Commission Rulemakings (Sept. 29, 2010), at 1. The memorandum further states that "the costs typically may be presented by describing a counterfactual—what the Commission expects will happen if the rule is not adopted, with reference to previous or anticipated events." *Id.* at 2. This directive has at times resulted in discussion of the rule's benefits in both the costs and the benefits sections of CFTC cost-benefit analyses.

random reiterated these points, but directed CFTC rule writers to “utiliz[e] the principles set forth in Executive Order 13,563 in a manner that is reasonably feasible and appropriate, and consistent with the underlying statutory mandate.”⁷⁷ The memorandum appeared to be designed in part to ensure that the CFTC’s final rules would withstand legal challenges.⁷⁸

The second staff memorandum came in the wake of the first of two reviews of the agency’s economic analysis conducted by the CFTC’s Inspector General. In the first report, the Inspector General looked at four Dodd–Frank rules and concluded that “the Commission generally adopted a ‘one size fits all’ approach to section 15(a) compliance without giving significant regard to the deliberations addressing idiosyncratic cost and benefit issues that were shaping each rule.”⁷⁹ The Inspector General further observed that the CFTC viewed its obligations under § 15(a) through a legal compliance lens, rather than through an economic lens.⁸⁰ The Inspector General’s second report looked at four other rules and found the analyses for three of the four lacking, but nevertheless expressed optimism that the CFTC was making progress toward more sound economic analysis.⁸¹

⁷⁷ CFTC IG Report II, *supra* note 37, at Ex. 2; *see also* Memorandum from Dan M. Berkovitz, General Counsel, CFTC, and Andrei Kirilenko, Chief Economist, CFTC, to Rulemaking Teams re Staff Guidance on Cost–Benefit Considerations for Final Rulemakings under the Dodd–Frank Act (May 13, 2011), at 3.

⁷⁸ Indeed, as this memorandum appears to have anticipated, the CFTC’s compliance with § 15(a) is being tested in court. The CFTC has enjoyed an early success in defending its compliance with its economic analysis obligations. *See Inv. Co. Inst. v. CFTC*, 891 F. Supp. 2d 162, 190 (D.D.C. 2012) (concluding “that the CFTC fulfilled its responsibilities under both the CEA and the APA to evaluate the costs and benefits of the Final Rule”).

⁷⁹ CFTC IG REPORT I, *supra* note 37, at 21.

⁸⁰ *Id.* at 22 (“[I]t is clear that the Commission staff viewed section 15(a) compliance to constitute a legal issue more than an economic one, and the views of the Office of General Counsel therefore trumped those expressed by the Office of Chief Economist, at least for the four rules we reviewed. We do not believe this approach enhanced the economic analysis performed under section 15(a) for the four rules.”). The danger of this legal check-the-box approach is that the CFTC will lose the insights that economists can bring to the analysis. A disclosure requirement, for example, might very successfully satisfy a statutory mandate, but, in the process, could have the unintended consequence of driving firms out of business. By failing to take into account economic insights about how behavior will change as a result of particular regulatory actions, the CFTC deprives itself and others of knowledge about the effects of their regulations.

⁸¹ *See* CFTC IG REPORT II, *supra* note 37, *passim*.

CFTC Commissioner O'Malia subsequently questioned the CFTC's progress and urged a renewed effort by the agency to conduct thorough regulatory analyses.⁸² In May 2012, the CFTC entered into an agreement with OIRA, pursuant to which an OIRA staff member will provide technical assistance to the CFTC with respect to economic analyses.⁸³

[T]hese rules are the first to benefit from our recently signed memorandum of understanding with the Office of Information and Regulatory Affairs within the Office of Management and Budget ("OMB") providing for technical assistance with regard to the Commission's cost-benefit analyses. I want to emphasize that these two final rules and proposal have benefited both from OMB's technical assistance and from the Commission's commitment to putting forth rules that utilize appropriate baselines, include replicable quantitative analysis (when possible), and reflect the consideration of a range of policy alternatives. I look forward to the continuing coordination between OMB and the Commission to further improving our cost benefit analysis.⁸⁴

As with the SEC's overhaul of its approach to economic analysis, the long-term results of the CFTC's new commitment to conduct more thorough economic analysis remain to be seen.

⁸² Scott O'Malia, Comm'r, CFTC, Almost Certainly MSU (Making Stuff Up), Remarks at the Eighth Annual Energy Trading Conference, Bauer College Global Energy Management Institute, University of Houston (Mar. 23, 2012), *available at* <http://www.cftc.gov/PressRoom/SpeechesTestimony/opaomalia-12> ("The Commission must do a better job in consulting with the public as it develops sweeping economic reform. It must develop consistent baselines based on the status quo, include regulatory and policy alternatives and fulsome discussion as to the ultimate choices, and provide publicly available, reproducible quantitative analysis. We should wholeheartedly accept OMB's guidance when available, seek technical guidance as needed, and constantly explore 'what is working, and what isn't.' We can begin by ensuring that our rules are informed, evidence-based and data-driven. Simply stated; no MSU.") (citing Cass Sunstein, *A Regulatory System for the Twenty-First Century*, Nov. 30, 2011, *available at* http://www.whitehouse.gov/sites/default/files/omb/inforeg/speeches/a-regulatory-system-for-the-twenty-first_century-11-30-2011.pdf).

⁸³ Gary Gensler, Chairman, CFTC, Statement at Open Commission Meeting for Consideration of Rules Implementing the Dodd-Frank Act (May 10, 2012), *available at* <http://www.cftc.gov/PressRoom/SpeechesTestimony/genslerstatement051012> ("I'm pleased that we've also arranged for a staff member from the Office of Information and Regulatory Affairs to supplement the excellent work of the CFTC staff with technical assistance, particularly with respect to the consideration of costs and benefits.").

⁸⁴ Scott O'Malia, Comm'r, CFTC, Opening Statement at the Twenty-Eighth Commission Meeting to Consider: (1) Two Final Rules Providing an Exemption from the Clearing Requirement for End-Users and Further Defining Certain Product Definitions under Title VII of the Dodd-Frank Act; and (2) One Proposed Rule Providing Relief for Certain Cooperatives from the Clearing Requirement (July 10, 2012), *available at* <http://www.cftc.gov/PressRoom/SpeechesTestimony/omaliastatement071012>.

D. *Bureau of Consumer Financial Protection*

The Bureau Consumer Financial Protection (CFPB)⁸⁵ was created by Dodd–Frank to regulate the provision of consumer financial products and services. Under Dodd–Frank, the CFPB is an independent regulatory agency exempt from the executive orders.⁸⁶ Nevertheless, Dodd–Frank required the CFPB to undertake some economic analysis. The CFPB, in fulfilling this mandate, so far has not employed the type of analysis required by the executive orders.

In prescribing a rule, the CFPB is required to consider benefits and costs to consumers and firms, “including the potential reduction in access by consumers to consumer financial products or services resulting from such rule,” the impact on small banks and credit unions, and the effect on rural consumers.⁸⁷ The CFPB is also required to conduct five year reviews of its significant rules.⁸⁸ Although the statute does not explicitly require the CFPB to follow the executive orders or to rely on the analysis it performs, the SEC’s experience with legal challenges based upon its statutory analysis mandate should be instructive to the CFPB.

In fulfilling its statutory mandate thus far, the CFPB has not chosen to embrace regulatory analysis as a way of better assessing the need for, alternatives to, and economic implications of its rules. Instead, the CFPB’s approach has exhibited deficiencies that impair its usefulness as a rulemaking tool. For example, the CFPB has relied on speculative benefits;⁸⁹ underestimated compliance costs;⁹⁰ minimized noncompliance costs, including the

⁸⁵ The Bureau of Consumer Financial Protection is typically referred to as the CFPB, rather than the BCFP. For purposes of clarity, the standard convention is employed herein.

⁸⁶ Dodd–Frank Act of 2010 § 1100D(a), Pub. L. No.111-203, H.R. 4173 (adding the CFPB to the list of independent regulatory agencies in 44 U.S.C. § 3502(5) (2006)).

⁸⁷ Dodd–Frank Act § 1022(b)(2)(A); *see also* Dodd–Frank Act § 1100G (requiring the CFPB, as part of its Initial Regulatory Flexibility Analyses, to describe “any projected increase in the cost of credit for small entities” and alternatives that would minimize any such increases).

⁸⁸ Dodd–Frank Act § 1022(d).

⁸⁹ *See, e.g.*, CFPB, Integrated Mortgage Disclosures under the Real Estate Settlement Procedures Act (Regulation X) and the Truth in Lending Act (Regulation Z), Proposed Rule, 77 Fed. Reg. 51,115, 51,270 (Aug. 23, 2012) (“[S]imple hypothetical calculations demonstrate that, because the mortgage market is so large, even very small effects on improving consumers’ ability to make informed decisions or small effects on prices from greater shopping would lead to large savings for consumers. For example, if the new disclosures only affect 10% of consumers, and only lower their interest rates by .125% (1/8 of a percentage point, the smallest typical unit of price difference in the mortgage market), this would lead to an annual savings of \$1,250,000,000 for mortgage borrowers if all mortgages were originated with the proposed disclosures and total outstanding mortgage balances were to remain at their current level of roughly \$10 trillion.”).

⁹⁰ *See, e.g.*, CFPB, Defining Larger Participants in the Consumer Reporting Market, Final Rule, 77 Fed. Reg. 42,8743, 42,894 (July 20, 2012) (providing a “rough estimate” of a cost of \$12,000 per small firm subject to examination based on an expectation that such an examination would last four weeks, but this estimate only includes the cost of the time of the staff directly charged with preparing for

costs to consumers of reduced access to financial products and services;⁹¹ and deferred quantitative analysis.⁹²

The CFPB is one of three agencies—and the only federal financial regulator—required to set up panels under the Small Business Regulatory Enforcement and Fairness Act of 1996 (SBREFA).⁹³ The SBREFA panel process is intended to ensure that agencies hear and consider the views of small entities about regulations that will affect them and that agencies look at alternatives before rules are proposed. To date, the CFPB has convened three SBREFA panels.⁹⁴ Based on these panels, the CFPB has come under criticism for the manner in which it is approaching its SBREFA responsibilities, including its failure to allow adequate time for small entities to consider proposals and formulate responses.⁹⁵ It remains to be seen whether, as

the examination and does not take into account other costs associated with hosting a month-long examination by CFPB staff).

⁹¹ See, e.g., CFPB, High-Cost Mortgage and Homeownership Counseling Amendments to the Truth in Lending Act (Regulation Z) and Homeownership Counseling Amendments to the Real Estate Settlement Procedures Act (Regulation X), Proposed Rule, 77 Fed. Reg. 49,089, 49,131–38 (Aug. 15, 2012) (downplaying the possibility that restricting or prohibiting loan terms such as prepayment penalties and balloon payments could have negative implications for the cost and availability of credit).

⁹² See, e.g., CFPB, Defining Larger Participants of the Consumer Reporting Market, Final Rule, 77 Fed. Reg. 42,873, 42,892 (July 20, 2012) (“The Proposal requested information to support the analysis of benefits, costs, and impacts, but commenters did not provide, or identify sources for, relevant data. Over time, the Bureau expects to develop information related to these topics through its supervisory activities.”) (omitting footnote referring to comments that apparently were not taken into account because they provided data “without explanation”).

⁹³ Dodd–Frank Act § 1100G (amending 5 U.S.C. § 609(d) (2006)).

⁹⁴ The panels focus only on small providers of financial products and services, not on the individuals and small entities indirectly affected by the CFPB’s regulatory actions. However, the CFPB may, in its discretion, consult small entities beyond those directly affected. See *Hearing before the House Committee on Small Business* (2012) (written statement of Richard Cordray, Dir. Of CFPB), available at <http://www.consumerfinance.gov/speeches/written-testimony-of-richard-cordray-before-the-house-committee-on-small-business> (“By law, the representatives must be selected from businesses that are likely to be directly subject to the requirements of the rule. In part because of this requirement, the Bureau has been convening a number of other roundtables at roughly the same time that it convenes the small business review panels in order to obtain feedback from a broader range of stakeholders.”).

⁹⁵ See, e.g., *Hearing before the House Committee on Small Business* (2012) (statement of Am. Bankers Ass’n), available at <http://www.aba.com/Issues/Testimonies/Documents/08012012FINALABASStatementfortheRecord-SBREFASmBiz.pdf> (citing, in addition to failing to allow for inadequate time, the following flaws in the SBREFA process: failure of panels to serve as advocates for small entities and failure to seek cost data from third-party service providers); see also Letter from Various Small Business Organizations to Richard Cordray, CFPB Dir. (Jan. 24, 2012), at 2, available at <http://www.aia.org/aiaucmp/groups/aia/documents/pdf/aia092906.pdf> (urging CFPB to convene SBREFA panels early enough in the process to elicit “meaningful recommendations” from small entities).

the CFPB matures, it will embrace a more rigorous approach to fulfilling its statutory economic analysis and SBREFA obligations.⁹⁶

E. *Office of the Comptroller of the Currency*

The OCC, an independent bureau within the Department of the Treasury, is the regulator charged with overseeing national banks and federal savings associations, or “thrifts.” Dodd–Frank, in addition to transferring authority for thrifts from the Office of Thrift Supervision to the OCC, effectively changed the OCC’s obligations with respect to regulatory analysis by adding the OCC to the list of independent regulatory agencies, which have traditionally been exempt from the executive orders.⁹⁷

According to a June 2011 report by the Treasury’s Office of Inspector General, the “OCC has processes in place to ensure the rigor and consistency of economic analysis performed in connection with rulemaking [which] were developed and in place prior to passage of the Dodd–Frank Act when the OCC was still subject to EO 12866” and the other executive agency mandates.⁹⁸ Under these established agency practices, among other things, the OCC’s Policy Analysis Division prepared an economic analysis memorandum for each rulemaking that contained an assessment of the proposal and reasonable alternatives, including disclosure of the quantitative and qualitative methods and assumptions used in the assessment.⁹⁹

The OCC appears to be slowly changing its practices in light of its new exemption from the executive orders. The GAO reported that, at the end of 2011, the OCC was “revising its rulemaking policies and procedures to reflect this change.”¹⁰⁰ According to the GAO, the revised guidance retains references to OMB’s economic analysis guidance.¹⁰¹ It is likely, however, that in embracing its new status as an independent regulatory agency,

⁹⁶ The CFPB could signal its commitment to meaningful economic analysis by granting the personnel responsible for the analysis independence from the rule writers. See *Credit Crunch: Is the CFPB Restricting Consumer Access to Credit? Testimony Before the Subcommittee on TARP, Financial Services, and Bailouts of Public and Private Programs of the H. Committee on Oversight and Government Reform* (2012) (statement of Mark A. Calabria), available at <http://www.cato.org/publications/congressional-testimony/credit-crunch-is-cfpb-restricting-consumer-access-credit> (“Part of the problem is the CFPB’s structure where the Research area, which conducts cost–benefit analysis, is under the same Associate Director responsible for the rule-making. The cost–benefit analysis will not be independent of the rule-making process under such circumstances. I would urge the CFPB to establish an independent economics/research function that reports directly to the Director. As we have repeatedly seen with other agencies, the cost–benefit analysis has simply been an after-the-fact box-checking exercise, rather than a serious attempt to inform the rule-making process.”).

⁹⁷ See Dodd–Frank Act § 315 (amending 44 U.S.C. § 3502(5) (2006)).

⁹⁸ OCC IG REPORT, *supra* note 37, at 3.

⁹⁹ See *id.* at 5.

¹⁰⁰ GAO REPORT, *supra* note 22, at n.25.

¹⁰¹ See GAO REPORT II, *supra* note 22, at 22.

the OCC will cut back on its economic analysis.¹⁰² The OCC has not included economic analyses in its 2012 or 2013 proposed or final rules, with the exception of the rule described below (in which the regulatory analysis was part of the UMRA analysis).

Although the OCC's designation under Dodd–Frank as an independent regulatory agency exempts it from UMRA, the OCC has continued to comply with UMRA.¹⁰³ Accordingly, OCC's recent final rule on risk-based capital contained an UMRA analysis, which included a regulatory impact analysis that looked at the need for regulatory action, alternatives, and costs and benefits of the final rule.¹⁰⁴ The OCC might continue to conduct regulatory impact analyses for significant rulemakings, but its regulatory impact analyses will not be reviewed by OIRA.¹⁰⁵

F. *National Credit Union Administration*

The National Credit Union Administration (NCUA) is charged with overseeing federal credit unions and managing the National Credit Union Share Insurance Fund. NCUA, based on its claimed status as an independent regulatory agency, does not comply with the executive orders on economic analysis.¹⁰⁶

NCUA's chairman has asserted that “NCUA already meets or exceeds the key principles of the Executive Order” on rulemaking by independent

¹⁰² According to an OCC official interviewed by the OCC Inspector General, the “OCC does not perform any discretionary economic analysis.” OCC IG Report, *supra* note 37, at 6. It is not clear whether the OCC will perform discretionary analysis now that it is no longer subject to the executive order mandates.

¹⁰³ The OCC may have concluded that its designation by Dodd–Frank as an “independent regulatory agency” is for limited purposes and does not serve to exempt it from UMRA. See *ACUS Report*, *supra* note 32, at 346 (reporting that “an OCC official told the author of this report that it was unclear whether the agency was considered an independent regulatory agency for purposes of UMRA, since the statute does not define the term “independent regulatory agency” and does not reference the PRA definition. Therefore, he said OCC decided to err on the side of caution and conduct an UMRA analysis”). Dodd–Frank designated the OCC as an independent regulatory agency by adding it to the list of agencies so identified in 44 U.S.C. § 3502(5), but UMRA does not explicitly refer to that statutory section in its exclusion of independent regulatory agencies. 2 U.S.C. § 658(1) (2006).

¹⁰⁴ Risk-Based Capital Guidelines: Market Risk, 77 Fed. Reg. 53,060, 53,093 (Aug. 30, 2012) (to be codified at 12 C.F.R. pt. 3).

¹⁰⁵ For a discussion of the limitations of UMRA as compared to the executive orders, see generally Susan Dudley, *What To Do About Unfunded Mandates?*, THE DAILY CALLER (Feb. 17, 2011, 12:03 PM), <http://dailycaller.com/2011/02/17/what-to-do-about-unfunded-mandates> (last visited May 23, 2013).

¹⁰⁶ NCUA is an independent agency, but it also routinely states in its rulemakings that it is “an independent regulatory agency” as defined in 44 U.S.C. § 3502(5). NCUA is not, however, one of the agencies expressly listed in that statute.

regulatory agencies.¹⁰⁷ The GAO found, however, that stated commitments to the broad principles of the executive orders notwithstanding, NCUA, along with other federal financial regulators making such claims, would produce better analysis by more fully following OMB's Circular A-4.¹⁰⁸

NCUA's rulemakings do not generally include an independent economic analysis. One of NCUA's board members explained that NCUA is committed to regularly reviewing regulations already on the books, but it would be costly to conduct regulatory analysis for every rule:

I believe, however, that we cannot write a report about every regulation we review. Doing so would be too burdensome and not particularly fruitful. But at the same time, we are pleased to review any regulation—not just ones slated for review—that enough credit unions call to our attention as having out-lived its usefulness. And we welcome suggestions compatible with safety and soundness . . . I also do not believe we should write a report on the cost-benefit analysis of every regulation NCUA proposes. Doing so would be too burdensome, or necessitate hiring additional employees. In any event, the intended benefits are generally obvious in the regulations we propose, and, indeed, many comments point out potential costs—we need not duplicate those efforts. Like credit unions themselves, we at NCUA need to run as tight and as focused an agency as we can.¹⁰⁹

Although NCUA's commitment to retrospective review of regulations is important, NCUA also would be well served by conducting prepromulgation regulatory analysis to better understand the need for, alternatives to, and implications of its rules before they take effect.

G. *Federal Deposit Insurance Corporation*

The Federal Deposit Insurance Corporation (FDIC) administers the federal deposit insurance program, regulates banks, and manages receiverships of failed financial institutions. The FDIC is an independent regulatory agency and does not have unique statutory requirements to conduct economic analysis.

In 1998, the FDIC issued a public Statement of Policy on the Development and Review of Regulations (Statement of Policy), in which it pledged, before issuing a new rule, to consider whether such a rule is needed, "to minimize to the extent practicable the burdens which such issuance imposes on the banking industry and the public," and to give special con-

¹⁰⁷ Letter from Debbie Matz, Chairman, NCUA, to Cass R. Sunstein, Admin., OIRA, re Exec. Order 13579, Regulation and Independent Regulatory Agencies (Nov. 7, 2011), at 1, available at <http://www.ncua.gov/News/Documents/NW20111110EO-13579.pdf>.

¹⁰⁸ GAO REPORT, *supra* note 22, at 14–15.

¹⁰⁹ Michael E. Fryzel, Bd. Member, NCUA, Remarks at the Nat'l Assoc. of State Credit Unions Summit (Sept. 17, 2011), available at <http://www.ncua.gov/News/Pages/SP20100916FryzelNASCUS.aspx>.

sideration to the anticipated effect on small institutions.¹¹⁰ In addition, the Statement of Policy provides that, “Prior to issuance, the potential benefits associated with the regulation or statement of policy are weighed against the potential costs.”¹¹¹ The FDIC also stated its intent to periodically review its rules.¹¹² In response to Executive Order 13,579, the FDIC is revisiting its Statement of Policy, among other things, to “determine how it should be revised to incorporate additional principles regarding cost–benefit analysis, and otherwise to serve the purpose of reducing regulatory burden.”¹¹³

The FDIC contends that it “continually focuses on the potential costs and benefits of the rules that it adopts” and that “the FDIC’s longstanding policy [is] to ensure that the rules it adopts are the least burdensome to achieve [its] goals.”¹¹⁴ However, the FDIC also has taken the position that its ability to conduct regulatory analysis is severely limited:

We note that the FDIC faces certain challenges in conducting cost–benefit analysis of its rules. Applicable statutes often limit the FDIC’s flexibility and may constrain consideration of alternative approaches. In certain situations, additional cost–benefit analysis may require the FDIC (or other agencies) to seek additional, sometimes proprietary financial data from our regulated institutions, which may increase regulatory burden and delay implementation of statutory requirements. In addition, . . . the difficulty of reliably estimating costs of regulations to the financial services industry and the nation has long been recognized and the benefits of regulation generally are regarded as even more difficult to measure.¹¹⁵

The difficulties that the FDIC cites are not unique to financial regulators.¹¹⁶ Moreover, an entity like the FDIC has a particular interest in conducting economic analysis, namely protection of the deposit insurance fund.¹¹⁷

¹¹⁰ Statement of Policy on the Development and Review of Regulations, 63 Fed. Reg. 25,157; 25,158 (May 7, 1998) (to be codified at 12 C.F.R. ch. 3).

¹¹¹ Statement of Policy on the Development and Review of Regulations, 63 Fed. Reg. at 25,158.

¹¹² *Id.*

¹¹³ *FDIC’s Plans to Review Existing Regulations for Continued Effectiveness*, FDIC, <http://www.fdic.gov/regulations/laws/plans/index.html> (Apr. 27, 2012).

¹¹⁴ *Id.*

¹¹⁵ GAO REPORT, *supra* note 22, at App. VII; Letter from Michael H. Krimminger, Gen. Counsel, FDIC, to Nicole Clowers, GAO Dir. of Fin. Mkts. and Cmty. Inv. (Oct. 27, 2011), at 2 [hereinafter *Krimminger Letter*].

¹¹⁶ See, e.g., Kenneth J. Arrow *et al.*, *Is There a Role for Benefit–Cost Analysis in Environmental, Health, and Safety Regulation*, SCIENCE (Apr. 12, 1996), at 222 (acknowledging the limitations of benefit–cost analysis with respect to environmental, health, and safety regulation, but arguing that “it can provide an exceptionally useful framework for consistently organizing disparate information, and, in this way, it can, greatly improve the process and, hence, the outcome of policy analysis”).

¹¹⁷ See *id.*; see also FDIC IG REPORT, *supra* note 37, at 8 (The Inspector General reported that FDIC officials “expressed that it was a duty of the FDIC as an insurer and a safety and soundness regulator to ensure that the Corporation carefully considered how all aspects of particular rules individually and collectively affected the banks it ensures, the financial industry, and the broader economy”).

The FDIC's Inspector General, in its review of economic analysis at the FDIC, found that "the FDIC policies and practices generally address the spirit of, and principles found in" the executive orders and OMB Circular A-4.¹¹⁸ The GAO found, however, that the FDIC, along with other federal financial regulators with similar aspirational policies, had not translated these broad principles into more granular guidance comparable to OMB Circular A-4.¹¹⁹ Because the FDIC does not routinely publish regulatory analyses when it issues its proposed and adopted rules, it is difficult to assess the quality of the agency's analysis.¹²⁰ The FDIC's Inspector General found that, in practice, the FDIC does not follow a standard approach to analyzing the costs and benefits of its rules; instead, the staff charged with each rule decides the nature and amount of analysis to perform.¹²¹ Moreover, subject matter experts, who are not necessarily economists, perform and review the economic analysis.¹²²

The FDIC's current efforts to rethink its approach to regulatory analysis are much needed to match FDIC practice with its stated belief that "cost-benefit analysis [is] an important component of the rule-making process" and its stated claim that it "seeks to undertake such analysis with rigor and transparency."¹²³

¹¹⁸ *Id.* at 3.

¹¹⁹ GAO REPORT, *supra* note 22, at 14–15; GAO REPORT II, *supra* note 22, at 21.

¹²⁰ In response to a commenter's request for a cost-benefit analysis, the FDIC explained that it is not required by executive order to conduct a cost-benefit analysis, but that "the FDIC takes seriously the importance of evaluating the burdens imposed by its rulemaking efforts" and "seeks to adopt final rules that faithfully reflect the statutory provisions and Congressional intent while minimizing regulatory burden." FDIC, Definition of "Predominantly Engaged in Activities that Are Financial in Nature or Incidental Thereto," 78 Fed. Reg. 34,712, 34,731 (June 10, 2013). Aside from these general statements and its discussion related to the Regulatory Flexibility Act, the FDIC did not include a description of any analysis that it had undertaken in order to assess the burdens associated with this rulemaking. See Circular A-4, *supra* note 10, at 2 (The OMB explained, "A good regulatory analysis is designed to inform the public and other parts of the Government (as well as the agency conducting the analysis) of the effects of alternative actions. Regulatory analysis sometimes will show that a proposed action is misguided, but it can also demonstrate that well-conceived actions are reasonable and justified.").

¹²¹ FDIC IG REPORT, *supra* note 37, at 9. Based on the descriptions of the analyses contained in the Inspector General's report, the analysis for each of the three rules reviewed seemed primarily aimed at answering discrete questions, such as which entities would be covered by the rule, or considering factors specifically identified by the authorizing statute, rather than looking more broadly at the need for regulation, alternatives, and the relative costs and benefits of different approaches. See *id.* at 10–17.

¹²² *Id.* at 10.

¹²³ *Krimminger Letter*, *supra* note 115, at 1.

H. *Federal Housing Finance Agency*

The Federal Housing Finance Agency (FHFA), created in 2008, is the regulator and conservator of Fannie Mae and Freddie Mac, and the regulator of the Federal Home Loan Banks. When the FHFA was formed, it was designated as an independent regulatory agency.¹²⁴ Consequently, as with other independent regulatory agencies, the executive orders as currently drafted do not apply to it.

FHFA's role as conservator of Fannie Mae and Freddie Mac, however, gives the FHFA a unique reason for considering the economic consequence of its regulations with respect to those entities.¹²⁵ Although FHFA's notices of rulemaking do not contain regulatory analysis of the nature laid out in the executive orders, FHFA has shown a willingness to conduct economic analysis in other contexts that easily could be applied to rulemaking.¹²⁶

I. *Board of Governors of the Federal Reserve System*

The Board of Governors of the Federal Reserve System (FRB) is responsible for—among other things—overseeing financial holding compa-

¹²⁴ See Housing and Economic Recovery Act of 2008, Pub. L. No. 110-289 § 1216(e), 122 Stat. 2654, 2792 (2008).

¹²⁵ See 12 U.S.C. § 4617(b)(2)(D) (2006). As conservator, the FHFA may take actions appropriate “to put [Fannie Mae and Freddie Mac] in a sound and solvent condition” and “preserve and conserve [their] assets and property.” *Id.*

¹²⁶ For example, the FHFA conducted an analysis of allowing Fannie Mae and Freddie Mac to engage in principal reduction. The analysis included an assessment of the root problem, a model-based economic analysis with underlying assumptions disclosed, and an analysis of potential alternatives. Letter from Edward J. DeMarco, Acting Dir., FHFA, to Tim Johnson and Richard C. Shelby, Chairman and Ranking Member, Senate Comm. on Banking, Housing and Urban Affairs 1 (July 31, 2012), *available at* http://www.fhfa.gov/webfiles/24112/PF_LettertoCong73112.pdf (“In conducting this analysis, FHFA took into consideration current loss mitigation tools; costs and benefits of using principal forgiveness including the economic benefit or costs to the Enterprises as well as to taxpayers; the impact on borrower behavior; direct and indirect implementation costs; and, the overall impact on the mortgage market.”); *see also* FHFA, REVIEW OF OPTIONS AVAILABLE FOR UNDERWATER BORROWERS AND PRINCIPAL FORGIVENESS 4 (July 31, 2012), http://www.fhfa.gov/webfiles/24108/PF_FHFApaper73112.pdf. FHFA made the analysis and the model and underlying assumptions publicly available. FHFA, APPENDIX TO FHFA REVIEW OF OPTIONS (July 31, 2012), *available at* http://www.fhfa.gov/webfiles/24557/rp_technicalanalysisprincipalforgive.pdf (describing the modeling and sensitivity of the modeling to various assumptions). Accordingly, the Department of the Treasury was able to respond with a counter-interpretation of the analysis and its policy implications. *See* Letter from Timothy F. Geithner, Sec’y, Dep’t of the Treasury, to Edward J. DeMarco, Acting Dir., FHFA (July 31, 2012), *available at* <http://www.treasury.gov/connect/blog/Documents/letter.to.demarco.pdf> (transmitting memorandum arguing that, if performed differently, the analysis would support principal reduction).

nies, certain banks, and systemically important nonbanks. The FRB is generally not subject to regulatory analysis requirements in its authorizing statutes.¹²⁷ The FRB has a rulemaking policy statement in place that calls for some analysis to accompany most rulemakings,¹²⁸ but the FRB does not appear to follow this policy very closely.

That FRB rulemaking policy, which dates back to 1979, takes its lead from a Carter-era executive order on rulemaking.¹²⁹ The executive order required, among other things, that agencies prepare and make available to the public a regulatory analysis that

contain[s] a succinct statement of the problem; a description of the major alternative ways of dealing with the problem that were considered by the agency; an analysis of the economic consequences of each of these alternatives and a detailed explanation of the reasons for choosing one alternative over the others.¹³⁰

Broadly consistent with the approach set forth in that executive order, the policy statement directs FRB staff:

Before presenting any proposals regarding a regulation to the Board for formal action [to] prepare a regulatory analysis," "which, at a minimum . . . will discuss the need for and purposes of the regulation, set forth the various options available, discuss, where appropriate, their possible economic implications, evaluate their compliance, recordkeeping and reporting burdens, and recommend the best course of action based on the alternatives."¹³¹

If "considerable information is available, a correspondingly more exhaustive regulatory analysis will be expected."¹³² The policy statement also requires the regulatory analysis to be publicly available.¹³³ Moreover, in order to facilitate public involvement in rulemaking, the policy statement

¹²⁷ See FRB IG REPORT, *supra* note 37, at 6 ("A number of key statutes related to the Board's regulatory authority, including the Federal Reserve Act and the Bank Holding Company Act of 1956, provide the Board with rulemaking authority to perform the duties, functions, or services specified in these statutes. These statutes generally do not require economic analysis as part of the agency's rulemaking activities."). *But see* 15 U.S.C. § 1693b (2006) (requiring the FRB to conduct economic analysis and "demonstrate that the consumer protections of the proposed regulations outweigh the compliance costs imposed upon consumers and financial institutions" in conjunction with its regulation of debit interchange fees and certain rules related to motor vehicle dealers).

¹²⁸ Board of Governors of the Federal Reserve System, Statement of Policy Regarding Expanded Rulemaking Procedures, 44 Fed. Reg. 3957 (1979) [hereinafter *FRB Policy Statement*]; see also GAO REPORT, *supra* note 22, at App. VIII. The FRB's general counsel pointed to this statement of policy as the FRB's current "regulatory policies." *Id.*

¹²⁹ See *FRB Policy Statement*, *supra* note 128, at 3957.

¹³⁰ Exec. Order No. 12,044, 44 Fed. Reg. 12,661 (Mar. 24, 1978).

¹³¹ *FRB Policy Statement*, *supra* note 128, at 3958.

¹³² *Id.*

¹³³ *Id.* If there are material changes to the regulatory analysis in connection with the rule adoption, the revised analysis must be made available to the public. *Id.*

requires that meetings to consider rules be public.¹³⁴ Deviations from the approach to rulemaking laid out in the policy statement “may be appropriate” under certain circumstances, including when “[t]he regulation must be adopted within a statutory deadline.”¹³⁵

The FRB routinely departs from key aspects of the policy statement.¹³⁶ The Inspector General’s report found generally that the FRB does some economic analysis, but the amount and nature of economic analysis is dictated by specific statutory mandates and whatever more the FRB decides to do in its discretion.¹³⁷ This somewhat haphazard approach to economic analysis is not consistent with the policy statement’s goal of producing a comprehensive regulatory analysis with certain minimum elements for every rule. The policy statement reflects an expectation that rules will be proposed and adopted at public meetings,¹³⁸ but the FRB rarely holds public meetings to consider its rules.¹³⁹ Moreover, the policy statement promises that notices will “inform the public that copies of the regulatory analysis are available through the Freedom of Information Act,”¹⁴⁰ yet the FRB does not offer the regulatory analysis to the public.¹⁴¹ The FRB does not necessarily produce a written analysis for internal—let alone external—purposes, as was illustrated by the Inspector General’s recommendation “that the [FRB]

¹³⁴ *Id.*

¹³⁵ *Id.*

¹³⁶ None of the rule writers with whom the FRB Inspector General spoke seemed to be aware of the policy statement. FRB IG REPORT, *supra* note 37, at 9.

¹³⁷ *Id.* at 15 (“Documentation we reviewed indicated that the Board conducts the quantitative economic analysis necessary to satisfy statutory requirements, including ‘consideration’ requirements. On a discretionary basis, the Board also conducts the quantitative economic analysis it deems necessary to support the rulemaking.”).

¹³⁸ *FRB Policy Statement, supra* note 127, at 3958.

¹³⁹ The FRB only held four open meetings to consider rules since Dodd–Frank was signed into law on July 21, 2010, according to a search of the Board’s meeting notices found at <http://www.federalreserve.gov/aboutthefed/boardmeetings/meetingdates.htm> (a month-by-month search showed four open meetings of the Board of Governors of the Federal Reserve System: Dec. 16, 2010; June 29, 2011; June 7, 2012; Dec. 14, 2012).

¹⁴⁰ *FRB Policy Statement, supra* note 127, at 3958.

¹⁴¹ The FRB includes a section in its rulemaking notices called “Regulatory Analysis,” but this section includes only Paperwork Reduction Act and Regulatory Flexibility Act analyses, which do not serve the same purpose as the analysis outlined in the policy statement. In response to a commenter’s request for a cost–benefit analysis, the FRB explained that it is not required by executive order to conduct a cost–benefit analysis, but that the FRB “takes seriously the importance of evaluating the burdens imposed by its rulemaking efforts” and “seeks to adopt final rules that faithfully reflect the statutory provisions and Congressional intent while minimizing regulatory burden.” Board of Governors of the Federal Reserve System, Definitions of “Predominantly Engaged in Financial Activities” and “Significant” Nonbank Financial Company and Bank Holding Company, 78 Fed. Reg. 20,756, 20,776 (Apr. 5, 2013). Aside from these general statements and its discussions related to the Paperwork Reduction Act and Regulatory Flexibility Act, the FRB did not include a description of any analysis that it had undertaken in order to assess the burdens associated with this rulemaking.

consider establishing documentation standards for rulemaking economic analysis to help ensure reproducibility on an internal basis.”¹⁴²

The FRB has cited the difficulty of cost–benefit analysis mandates in connection with federal financial regulation, which is focused “above all else . . . on the safety and soundness of specific financial institutions.”¹⁴³ The FRB’s concerns for safety and soundness make thorough economic analysis all the more important as a tool for understanding the implications of its rules on the institutions it regulates.¹⁴⁴

J. *Office of Financial Research*

The Office of Financial Research (OFR) is a new agency, created by Dodd–Frank within—but independent of—the Department of the Treasury. It is charged with collecting, standardizing, maintaining, and disseminating financial data, conducting research, and developing tools for monitoring systemic risk. Dodd–Frank had the effect of exempting the OFR from the executive order requirements for economic analysis by adding it to the list of independent regulatory agencies.¹⁴⁵ Nevertheless, given its data-driven mission, the OFR is well-suited to conduct economic analysis voluntarily. It remains to be seen whether the OFR will do so.

The agency has rulemaking authority, but to date the OFR has not issued any regulations.¹⁴⁶ The OFR, however, issued a statement of policy with respect to legal entity identifiers (LEIs), one of the agency’s core initiatives.¹⁴⁷ The goal of this project is to have a unique identifier for every legal entity that engages in a financial transaction. The OFR is taking an active part in a cross-border effort with other regulators and industry participants to develop a universal LEI system. Once that system is finalized, the OFR “plans to issue a regulation mandating the use of such a standard for data reported to the Office.”¹⁴⁸ The OFR’s plans—simply to codify the

¹⁴² FRB IG REPORT, *supra* note 37, at 20.

¹⁴³ See GAO REPORT, *supra* note 22, at App. VIII (explaining that “Federal financial regulation, above all else, is focused on the safety and soundness of specific financial institutions and therefore, as the report notes, conducting benefit–cost analysis on financial regulations is inherently difficult”).

¹⁴⁴ See FRB IG REPORT, *supra* note 37.

¹⁴⁵ See H.R. 4173, 111th Congress (2010) (enacted). Section 1100D amended 44 U.S.C. § 3502(5)(2)(5) to designate the Office of Financial Research as an independent regulatory agency. *Id.*

¹⁴⁶ The Department of Treasury has issued rules related to the OFR, including one that was accompanied by a regulatory impact assessment. See Assessment of Fees on Large Bank Holding Companies and Nonbank Financial Companies Supervised by the Federal Reserve Board to Cover the Expenses of the Financial Research Fund, 77 Fed. Reg. 29,884, 29,891 (May 21, 2012) (codified at 31 C.F.R. § 150) (establishing a fee paid by financial companies to support the OFR and FSOC).

¹⁴⁷ Statement on Legal Entity Identification for Financial Contracts, 75 Fed. Reg. 74,146 (Nov. 30, 2010).

¹⁴⁸ *Id.* at 74, 147–48; see also Office of Financial Research, *Frequently Asked Questions: Global Legal Entity Identifier* 2 (Aug. 2012),

work of a private initiative not being conducted pursuant to APA requirements for transparency and public participation—raise some concerns about the OFR’s commitment to the regulatory process.¹⁴⁹

K. *Quasi-Governmental Regulatory Organizations*

Federal financial regulators rely heavily on quasi-governmental regulatory organizations (QGROs), typically referred to as self-regulatory organizations (SROs), to complement their rulemaking and examination efforts.¹⁵⁰ The CFTC and SEC are the most reliant on QGROs. QGROs vary in their statutory bases, form of governance, and degree to which they are overseen by one or more federal financial regulators. Most QGROs exert considerable control within their areas of delegated authority. QGROs often serve as the frontline regulators, directly regulating the firms and individuals that deal with the public. The rules adopted by QGROs are of critical importance to the firms they regulate, the customers of those firms, and the structure of our financial markets.

QGROs are likely to get more powerful as the federal financial regulators juggle their new Dodd–Frank responsibilities. For example, Dodd–Frank directed the SEC to study “the extent to which having Congress authorize the Commission to designate one or more self-regulatory organizations to augment the Commission’s efforts in overseeing investment advisers would improve the frequency of examinations of investment advisers.”¹⁵¹ Similarly, the CFTC has begun delegating additional functions to the National Futures Association (NFA).¹⁵²

http://www.treasury.gov/initiatives/wsr/ofr/Documents/LEI_FAQs_August2012_FINAL.pdf (“The OFR has worked with other U.S. regulators to embed the concept of the LEI into rulemakings, and will continue to do so. These mandatory reporting uses of the LEI will facilitate the rapid deployment of the LEI when the global system becomes available.”).

¹⁴⁹ Comment of Allan I. Mendelowitz, The Committee to Establish the National Institute of Finance 3–4 (Jan. 31, 2011), available at <http://www.regulations.gov/#!documentDetail;D=TREAS-DO-2010-0008-0029> (commenting in response to OFR’s policy statement by questioning the legality of the OFR’s excessive reliance on outside organizations in connection with the development and maintenance of the LEI and noting that the “standards, including legal entity identifiers, are to be established by the OFR by way of a rulemaking procedure”).

¹⁵⁰ The term SRO is, except where demanded by the context, avoided herein out of a concern that the term is somewhat misleading. Although not government agencies, these regulators exercise many of the same types of powers as government regulators. The use of the term “quasi-governmental regulatory organization” reflects the fact that these entities play a substantial role in shaping the financial marketplace. The rules and standards they adopt and punishments they mete out can have substantial effects on the individuals and entities over which the QGROs have authority.

¹⁵¹ H.R. 4173 § 914(a)(2)(B), 111th Congress (2010) (enacted); see also Elisse Walter, Commissioner, SEC, Statement on Study Enhancing Investment Adviser Examinations (Required by Section 914 of Title IX of the Dodd–Frank Wall Street Reform and Consumer Protection Act) 7 (Jan. 2011) [hereinafter Walter Statement], available at <http://www.sec.gov/news/speech/2011/spch011911ebw.pdf>.

Despite the increasingly important role that QGROs play in setting the ground rules for the financial markets, they generally are not directly subject to economic analysis requirements, the APA, or other statutes governing rulemaking processes.¹⁵³ An in-depth look at the practices of each QGRO is beyond the scope of this article,¹⁵⁴ but some of the key QGROs and their economic analysis practices are discussed briefly.

1. Public Company Accounting Oversight Board

The Sarbanes–Oxley Act created the Public Company Accounting Oversight Board (PCAOB) in response to the notorious audit failures at Enron and WorldCom to oversee firms that audit public companies. Every accounting firm that audits public companies is required to register with the PCAOB and is subject to the auditing standards and other rules promulgated by the PCAOB.¹⁵⁵ The PCAOB is a nonprofit corporation governed by a five-member board appointed by the SEC. As originally designed, the government-created PCAOB was found to be unconstitutional for lack of accountability to the president.¹⁵⁶ The Supreme Court struck the offending provision of the Sarbanes–Oxley Act, and thus preserved the PCAOB.¹⁵⁷

Although this study requirement related to the examination function, it is reasonable to expect that a designated QGRO would also have some rulemaking authority. Indeed, SEC Commissioner Walter favors an SRO model for investment advisers, because, in addition to alleviating the SEC's examination responsibilities, it would add "to the Commission's set of tools an ability to promulgate ethical and business conduct standards that would further protect investors." *Id.*

¹⁵² See *Oversight of the Dodd–Frank Implementation: A Progress Report by the Regulators at the Half-Year Mark: Hearing Before the Sen. Comm. on Banking, Housing, and Urban Affairs*, 112th Cong. 15 (Feb. 17, 2011) (statement of Gary Gensler, Chairman, Commodity Futures Trading Comm'n), available at <http://www.gpo.gov/fdsys/pkg/CHRG-112shrg65718/pdf/CHRG-112shrg65718.pdf> ("We are also working hand-in-glove with the self-regulatory organization, the NFA, to see what can they pick up, can they pick up registration and examination functions and so forth."). The recent problems at Peregrine Financial, for which the NFA was the primary regulator, may affect the debate about the proper role for QGROs, although FINRA's role as regulator of the Madoff and Stanford firms does not seem to have affected the debate. *Id.*

¹⁵³ See U.S. CHAMBER OF COMMERCE, U.S. CAPITAL MARKETS COMPETITIVENESS: THE UNFINISHED AGENDA 24 (2011), available at http://www.uschamber.com/sites/default/files/reports/1107_UnfinishedAgenda_WEB.pdf ("When the authority to set policy standards and assess fees is delegated, in fact or in effect, then concomitant responsibilities must also be assumed, including the obligation to abide by certain minimum administrative procedures, to conduct and make decisions based on sound cost–benefit analysis, to operate in a transparent manner, and to provide aggrieved parties due process.").

¹⁵⁴ Omitted from this discussion, for example, are entities like the Securities Investor Protection Corporation, exchanges, data repositories, and clearinghouses, all of which have regulatory obligations.

¹⁵⁵ H.R. 4173 § 982, 111th Congress (2010) (enacted) (expanding PCAOB's reach to include audits of brokers and dealers).

¹⁵⁶ *Free Enter. Fund v. Pub. Co. Accounting Oversight Bd.*, 130 S. Ct. 3138, 3164 (2010) ("While we have sustained in certain cases limits on the President's removal power, the Act before us imposes a

The PCAOB generally has not conducted formal economic analysis as part of the standard-setting process. The SEC is required to approve a PCAOB rule, “if it finds that the rule is consistent with the requirements of [the Sarbanes–Oxley Act] and the securities laws, or is necessary or appropriate in the public interest or for the protection of investors.”¹⁵⁸ The SEC, however, has not conditioned its approval on the PCAOB’s performance of a regulatory analysis.¹⁵⁹

The PCAOB is currently under pressure from within and from outside to begin conducting regulatory analysis. For example, Jay Hanson, a member of the PCAOB, stated, “[w]e also have a significant task in front of us to evaluate how to incorporate more robust economic analysis in our standard-setting process more generally, including how we begin with a clear articulation of each problem, how we prioritize the problem, and how we assess possible solutions.”¹⁶⁰

In 2012, SEC commissioner Troy Paredes called on the PCAOB to conduct cost–benefit analysis:

[T]he PCAOB also needs to engage in rigorous cost–benefit analysis of its rules, including its auditing standards. We need to be assured that the potential consequences—both for better and for worse—of a PCAOB rule have been thoroughly evaluated and considered in a balanced way. Otherwise, for example, how can we determine on a reasoned basis whether a PCAOB proposal advances the public interest? Whether a PCAOB rule advances the public interest depends on its practical impacts. Cost–benefit analysis allows us to better anticipate and assess these impacts so that a well-reasoned judgment can be made. Put differently, without such a rigorous analysis, there is a greater risk that a proposed standard or other PCAOB rule could do more harm than good, in which case an alternative approach would be preferable.¹⁶¹

new type of restriction—two levels of protection from removal for those who nonetheless exercise significant executive power. Congress cannot limit the President’s authority in this way.”)

¹⁵⁷ *Id.*

¹⁵⁸ H.R. 3763, 107th Cong. § 107(b)(3) (2002) (enacted).

¹⁵⁹ The PCAOB generally includes in its filings with the SEC a boilerplate statement, with minimal accompanying analysis, that “[t]he Board does not believe that the proposed rule changes will result in any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act.” *See, e.g.*, Public Company Accounting Oversight Board: Notice of Filing of Proposed Temporary Rule for an Interim Program of Inspection Related to Audits of Brokers and Dealers, 76 Fed. Reg. 40,961, 40,962 (proposed July 12, 2011).

¹⁶⁰ Jay D. Hanson, Board Member, PCAOB, Statement on Auditing Standard Related to Communications with Audit Committees (Aug. 15, 2012), http://pcaobus.org/News/Speech/Pages/08152012_HansonStatement.aspx.

¹⁶¹ Troy Paredes, Comm’r, SEC, Remarks at AICPA Spring Meeting (May 17, 2012), <http://www.sec.gov/news/speech/2012/spch051712tap.htm>. Others have echoed Commissioner Paredes’ concerns. *See, e.g.*, *Accounting and Auditing Oversight: Pending Proposals and Emerging Issues Confronting Regulators, Standard Setters, and the Economy: Hearings Before the Subcomm. on Capital Markets and Government Sponsored Enterprises of the H. Comm. on Financial Services*, 112th Cong. 162–63 (2012) (testimony of Tom Quaadman).

The PCAOB is currently considering whether to propose a standard calling for mandatory audit firm rotation.¹⁶² Because of concerns that this standard could impose unwarranted costs on public companies, there have been calls for an analysis of costs and benefits in connection with any such proposal, including from former board member Daniel Goelzer.¹⁶³

Congress weighed in by including a provision in the recently passed Jumpstart Our Business Startups Act (JOBS Act) that would prohibit the application of a mandatory audit firm rotation standard to audits of emerging growth companies.¹⁶⁴ Moreover, future PCAOB rules would not apply to emerging company audits “unless the Commission determines that the application of such additional requirements is necessary or appropriate in the public interest, after considering the protection of investors and whether the action will promote efficiency, competition, and capital formation.”¹⁶⁵ This congressional mandate might also serve to remind the SEC of its broader need for regulatory analysis in connection with its approval of PCAOB rulemakings.

2. Financial Accounting Standards Board

The Financial Accounting Standards Board (FASB) is the private organization that sets financial accounting standards. Although the FASB is not a direct regulator, the SEC has recognized its standards as authoritative. Consequently, compliance with FASB standards is mandatory for public companies in the United States.¹⁶⁶ Thus, the FASB plays an extremely important role in U.S. capital markets.

When the SEC designated the FASB as accounting standard setter, the SEC expected that the FASB would “[c]ontinue to be objective in its decision-making and to weigh carefully the views of its constituents and the

¹⁶² Concept Release on Auditor Independence and Audit Firm Rotation, PCAOB Release No. 2011-006, at 1 (Aug. 16, 2011), *available at* http://pcaobus.org/Rules/Rulemaking/Docket037/Release_2011-006.pdf.

¹⁶³ Daniel L. Goelzer, Statement Regarding Concept Release on Auditor Independence and Audit Firm Rotation (Aug. 16, 2011), http://pcaobus.org/News/Speech/Pages/08162011_GoelzerStatement.aspx (stating “the Board should not impose the expense and burden associated with rotation on companies that raise capital in our markets unless the evidence is clear that the benefits will out-weigh the costs”).

¹⁶⁴ JOBS Act § 104 (amending § 103(a)(3) of the Sarbanes–Oxley Act of 2002 (codified as 15 U.S.C. 7213(a)(3)) (2006)).

¹⁶⁵ *Id.*

¹⁶⁶ See Policy Statement: Reaffirming the Status of the FASB as a Designated Private-Sector Standard Setter, 68 Fed. Reg. 23,333, 23,333 (May 1, 2003), *available at* <http://www.sec.gov/rules/policy/33-8221.htm> (“FASB’s financial accounting and reporting standards are recognized as ‘generally accepted’ for purposes of the federal securities laws. As a result, registrants are required to continue to comply with those standards in preparing financial statements filed with the Commission, unless the Commission directs otherwise.”).

expected benefits and perceived costs of each standard.”¹⁶⁷ The FASB’s own “Guiding Principles” include a commitment to some level of regulatory analysis, but they fall short of mandating rigorous economic analysis: “[w]hile reliable quantitative cost–benefit calculations are seldom possible, the FASB strives to determine that a proposed standard will fill a significant need and that the perceived costs it imposes, compared with possible alternatives, are justified in relation to the overall expected benefits.”¹⁶⁸ A FASB concepts statement also addresses the need to conduct some analysis of costs and benefits:

In applying the cost constraint, the Board assesses whether the benefits of reporting particular information are likely to justify the costs incurred to provide and use that information. When applying the cost constraint in developing a proposed financial reporting standard, the Board seeks information from providers of financial information, users, auditors, academics, and others about the expected nature and quantity of the benefits and costs of that standard. In most situations, assessments are based on a combination of quantitative and qualitative information.¹⁶⁹

In a 2012 speech, FASB Chairman Leslie Seidman elaborated on the practical implications of these guidelines:

We issue standards if the improvements in the quality of the reporting are expected to justify the costs of preparing and using the information. . . . From my perspective, the entire FASB process is one big cost–benefit analysis. That is, every step of our due process procedures is an effort to gather information about the benefits of a potential change in accounting; namely, to identify the most faithful way to present information about a transaction or economic condition so that investors and other users of financial statements can make well-informed decisions.¹⁷⁰

The chairman’s speech portrays a much less formal and rigorous form of analysis than that required by the executive orders.

¹⁶⁷ *Id.* at 23,335.

¹⁶⁸ FASB, Rules of Procedure (Jan. 1, 2012) at 4 (Guiding Principle 3), *available at* http://www.fasb.org/cs/ContentServer?site=FASB&c=Document_C&pagename=FASB%2FDocument_C%2FDocumentPage&cid=1176159620523.

¹⁶⁹ FASB, Statement of Financial Accounting Concepts No. 8 (Sept. 2010), at 22 (Qualitative Characteristic 38), *available at* [¹⁷⁰ Leslie F. Seidman, Chairman, FASB, Remarks at Compliance Week Annual Conference \(June 4, 2012\), *at* 8, *available at* \[http://www.fasb.org/cs/ContentServer?site=FASB&c=Document_C&pagename=FASB%2FDocument_C%2FDocumentPage&cid=1176160082895\]\(http://www.fasb.org/cs/ContentServer?site=FASB&c=Document_C&pagename=FASB%2FDocument_C%2FDocumentPage&cid=1176160082895\).](http://www.fasb.org/cs/BlobServer?blobkey=id&blobwhere=1175822892635&blobheader=application%2Fpdf&blobcol=urldata&blobtable=MungoBlobs; see also id. at 31 (Basis for Conclusion 3.47) (“Cost is a pervasive constraint that standard setters, as well as providers and users of financial information, should keep in mind when considering the benefits of a possible new financial reporting requirement. Cost is not a qualitative characteristic of information. It is a characteristic of the process used to provide the information.”).</p>
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The FASB has been called on to employ “more rigorous cost–benefit analysis.”¹⁷¹ Improved regulatory analysis, although perhaps presenting unique challenges in the context of accounting standard setting,¹⁷² could help the FASB maintain its independence as a standard setter.¹⁷³

3. Financial Industry Regulatory Authority

The Financial Industry Regulatory Authority (FINRA)¹⁷⁴ regulates securities brokers. A corporation governed by a board made up of a majority of independent and member directors, FINRA describes itself as “the largest independent regulator of securities firms doing business with the public in the United States.”¹⁷⁵ FINRA oversees approximately 4,200 firms and 630,000 individual registered securities representatives.¹⁷⁶ It is the only national securities association registered with the SEC.¹⁷⁷ Accordingly, broker–dealer firms and individuals involved in selling securities to the

¹⁷¹ See, e.g., KPMG and Financial Executives Research Foundation, *Disclosure Overload and Complexity: Hidden in Plain Sight* (2011), at 40, available at <http://www.kpmg.com/US/en/IssuesAndInsights/ArticlesPublications/Documents/disclosure-overload-complexity.pdf> (“the FASB should consider any new disclosure requirements from the context of the overall current disclosure environment rather than considering disclosure from the perspective of each individual topic as it is addressed in standards setting. This macro disclosure consideration, together with more rigorous cost–benefit analysis and field testing of disclosures should be considered prospectively and retrospectively”).

¹⁷² See Katherine Schipper, *How Can We Measure the Costs and Benefits of Changes in Financial Reporting Standards?*, 40 ACCT. AND BUS. RES. 309 (2010) (discussing cost–benefit analysis in the context of accounting standards and how it differs from cost–benefit methods used elsewhere).

¹⁷³ See Financial Reporting Policy Committee, American Accounting Association, *Accounting Standard Setting for Private Companies: Response to the Financial Accounting Foundation’s Plan to Establish the Private Company Standards Improvement Council* (Jan. 14, 2012), at 18, available at <http://www.accountingfoundation.org/cs/BlobServer?blobcol=urldata&blobtable=MungoBlobs&blobkey=id&blobwhere=1175823597699&blobheader=application%2Fpdf> (“We recommend that the FAF and the FASB consider workable models to evaluate the costs and benefits of every new standard. We recognize that this will take time, and caution against assuming this would be limited to a few areas; the problem appears pervasive. Yet a well-conceived CBA framework would create a less politicized standard setting process.”) (footnote omitted).

¹⁷⁴ FINRA is the successor organization to the National Association of Securities Dealers (NASD) and regulatory body of the NYSE.

¹⁷⁵ FINRA, *YEAR IN REVIEW AND ANNUAL FINANCIAL REPORT 8* (2011). FINRA also performs other regulatory functions, including providing market surveillance services to exchanges and maintaining a database of financial service providers.

¹⁷⁶ See FINRA, *About the Financial Industry Regulatory Authority*, <http://www.finra.org/AboutFINRA/> (last visited June 22, 2013).

¹⁷⁷ FINRA is registered as a national securities association under § 15A of the Securities Exchange Act of 1934 (codified as 15 U.S.C. § 78o-3 (2006)).

public must be members of FINRA¹⁷⁸ and thus are subject to its rules, examinations, and enforcement authority.

FINRA maintains a lengthy rulebook.¹⁷⁹ QGROs, including FINRA, are required to submit their rules to the SEC for approval. FINRA typically publishes its proposed rules for public comment before submitting them to the SEC. Before approving a FINRA rule,¹⁸⁰ the SEC again publishes it for public comment. The SEC must approve a rule if it is consistent with the Securities Exchange Act and relevant regulations.¹⁸¹ In its approval notices for many FINRA and other QGRO rulemakings—without any accompanying analysis—the SEC simply states that, “[i]n approving the proposal, the Commission has considered the proposed rule’s impact on efficiency, competition, and capital formation.”¹⁸² FINRA also generally includes a statement, without analysis, to the effect that its rule proposal does not “impose any burden on competition not necessary or appropriate in furtherance of the purposes of” the Securities Exchange Act.¹⁸³ FINRA has recently taken steps, however, that suggest it is planning to place greater emphasis on economic analysis.¹⁸⁴

The SEC could reasonably demand that FINRA provide a regulatory analysis in connection with rule proposals to serve as a basis for SEC approval. Doing so would be consistent with the changes the SEC has pledged to make in its approach to economic analysis for its own rules. In addition to this generally applicable statutory approval standard, the SEC

¹⁷⁸ See Exchange Act § 15(b)(8) (codified as 15 U.S.C. § 78o(b)(8) (2006)).

¹⁷⁹ Under the Exchange Act, FINRA is required to have rules that are designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general, to protect investors and the public interest. Exchange Act § 15A(b)(6) (codified as 15 U.S.C. § 78o-3(b)(6)). FINRA has the power to examine firms for compliance with those rules and the securities laws, and to impose sanctions, including fines and industry bars. §78o-3(b)(7). FINRA also enforces the rules of the Municipal Securities Rulemaking Board. FINRA’s enforcement decisions may be appealed to the SEC and then to federal court.

¹⁸⁰ Many of the functions with respect to the rules of FINRA and other QGRO’s are handled by the SEC staff under authority delegated from the commission.

¹⁸¹ See Exchange Act § 19(b)(2)(C) (codified as 15 U.S.C. § 78s(b)(2)(C) (2006)).

¹⁸² In connection with this statement, the SEC cites 15 U.S.C. § 78c(f), which is the same provision upon which the SEC’s economic analysis obligations are based in connection with its own rules. It would seem, then, that the SEC should also be conducting economic analysis in connection with FINRA rules.

¹⁸³ Exchange Act § 15A(b)(9) (codified as 15 U.S.C. §78o-3(b)(9) (2006)).

¹⁸⁴ See, e.g., FINRA, *Jonathan S. Sokobin Named FINRA’s Chief Economist*, available at <http://www.finra.org/Newsroom/NewsReleases/2013/P251015> (announcing the hiring of a chief economist to assist “in developing new rules and analyze the costs and benefits of existing and potential rulemakings”).

has the power to impose economic analysis obligations on FINRA and other QGROs in connection with particular delegated regulatory actions.¹⁸⁵

4. National Futures Association

The NFA is the counterpart to FINRA for the futures industry. The NFA, which is governed by a board composed of directors representing industry and the public, oversees approximately 3,900 firms and 54,000 individuals.¹⁸⁶ Membership in the NFA is mandatory for anyone engaged with the public in futures transactions, including futures commission merchants, retail foreign exchange dealers, introducing brokers, commodity pool operators, and commodity trading advisors.¹⁸⁷ Further, Dodd–Frank rulemaking added swap dealers and major swap participants to the NFA’s regulatory purview.

The NFA is a registered futures association with the CFTC.¹⁸⁸ The Commodity Exchange Act requires the NFA to file rulemaking proposals with the CFTC, and directs the CFTC to approve those changes if they are consistent with the statutory requirements for registered futures association rules and do not otherwise violate the Commodity Exchange Act or any implementing regulations.¹⁸⁹

Neither the NFA, in crafting its rules, nor the CFTC, in reviewing those rules, appears to employ economic analysis.¹⁹⁰ When the CFTC acts

¹⁸⁵ For example, the SEC required FINRA and the other QGROs charged with the joint development of a consolidated audit trail to include in their plan “[t]he detailed estimated costs for creating, implementing, and maintaining the consolidated audit trail” and “[a]n analysis of the impact on competition, efficiency and capital formation of creating, implementing, and maintaining of the national market plan.” 17 CFR § 242.613(a)(1)(vii)-(viii); *see also* Press Release, SEC, SEC Approves New Rule Requiring Consolidated Audit Trail to Monitor and Analyze Trading Activity (July 11, 2012), *available at* <http://www.sec.gov/news/press/2012/2012-134.htm>.

¹⁸⁶ *See* National Futures Association, *Who We Are*, <http://www.nfa.futures.org/NFA-about-nfa/index.html> (last visited May 31, 2013).

¹⁸⁷ *See* National Futures Association, *Bylaw 1101*, <http://www.nfa.futures.org/nfamanual/NFAManual.aspx?RuleID=BYLAW%201101&Section=3> (last visited May 31, 2013) (“No Member may carry an account, accept an order or handle a transaction in commodity futures contracts for or on behalf of any non-Member of NFA, or suspended Member, that is required to be registered with the Commission as an FCM, IB, CPO, CTA or LTM, and that is acting in respect to the account, order or transaction for a customer, a commodity pool or participant therein, a client of a commodity trading advisor, or any other person.”).

¹⁸⁸ 7 U.S.C. § 21 (2006). The SEC also exercises some oversight over the NFA.

¹⁸⁹ *Id.*

¹⁹⁰ The NFA rulemaking process is less transparent than that of the other QGROs, which makes it difficult to determine which factors were considered in the underlying rulemaking analysis. The NFA has been criticized more generally for its lack of transparency. *See* Letter from Angela Canterbury, Director of Public Policy, and Michael Smallberg, investigator, Project on Government Oversight, to Debbie Stabenow, Chairman, Senate Committee on Agriculture, Nutrition, and Forestry, et al. (July 23, 2012), *available at* <http://www.pogoarchives.org/m/fo/nfa-letter-20120723.pdf> (“As a private organiza-

with respect to an NFA rulemaking proposal,¹⁹¹ it is bound by the same requirement to consider the costs and benefits that applies to the adoption of its own rules.¹⁹² The CFTC, in connection with its review of NFA rules, could reasonably demand that the NFA provide a regulatory analysis in connection with each rule filing.

5. Municipal Securities Rulemaking Board

The Municipal Securities Rulemaking Board (MSRB) writes rules for municipal securities dealers and, under its new Dodd–Frank powers, for municipal advisers as well.¹⁹³ The MSRB is a nongovernmental corporation created by the Securities Acts Amendments of 1975. It is currently governed by eleven public representative directors and ten industry directors. Municipal securities dealers and municipal advisers must register with the MSRB and must comply with MSRB rules.

The MSRB does not, as a matter of regular practice, include economic analyses in its rulemakings.¹⁹⁴ In a nod to the statutory prohibition on imposing any undue “burden on competition,”¹⁹⁵ MSRB notices, like other QGRO rule filings, typically include a perfunctory statement on competition with little or no accompanying analysis. The process by which MSRB rules are published for comment and approved by the SEC is similar to the process described above for FINRA’s rules.¹⁹⁶ As with other QGRO rule-

tion, NFA does not have to comply with federal laws and regulations designed to make government agencies more transparent, ethical, and accountable.”)

¹⁹¹ The NFA’s rules can take effect without CFTC approval, but CFTC has the option to review NFA rules. 7 U.S.C. § 21 (2006).

¹⁹² *See id.*

¹⁹³ 15 U.S.C. § 78o-4(b)(2) (2006). Specifically, the MSRB is charged with writing,

Rules to effect the purposes of this title with respect to transactions in municipal securities effected by brokers, dealers, and municipal securities dealers and advice provided to or on behalf of municipal entities or obligated persons by brokers, dealers, municipal securities dealers, and municipal advisers with respect to municipal financial products, the issuance of municipal securities, and solicitations of municipal entities or obligated persons undertaken by brokers, dealers, municipal securities dealers, and municipal advisers.

The MSRB does not have enforcement authority. The SEC, the banking regulators, and FINRA enforce the MSRB’s rules. Municipal Securities Rulemaking Board, *Market Regulation*, <http://www.msrb.org/About-MSRB/Programs/Market-Regulation.aspx> (last visited May 31, 2013).

¹⁹⁴ *See* Letter from Michael Nicholas, Chief Executive Officer, Bond Dealers of America, to Ronald W. Smith, Corporate Secretary, Municipal Securities Rulemaking Board (Mar. 28, 2013), *available at* <http://www.msrb.org/RFC/2013-06/BDA.pdf> (calling on the MSRB to “strongly consider incorporating into all future rulemakings, as well as all rules it intends to revisit, an analysis of the potential economic benefits and burdens of each rule as good regulatory practice whenever it adopts rules” and noting “that the MSRB is considering the development of a cost-benefit-analysis model”).

¹⁹⁵ 15 U.S.C. § 78o-4(b)(2) (2006).

¹⁹⁶ Municipal Securities Rulemaking Board, *Market Regulation*, <http://www.msrb.org/About-MSRB/Programs/Market-Regulation.aspx> (last visited May 31, 2013).

makings, when approving MSRB rules, the SEC generally states with little or no analysis that it has considered the rule's effect on efficiency, competition, and capital formation.

In a lengthy statement of dissent from a recent MSRB rule approval, two SEC Commissioners took issue with this approach.¹⁹⁷ They explained that the analysis by the MSRB and the SEC in connection with that rule-making fell short of statutory approval standards, which require:

[A] thorough evaluation of the potential impacts of the proposed rule change, including in comparison to alternative regulatory approaches. Unsupported assertions that the hoped-for benefits will materialize, that the costs will be warranted, and that the statutory standard is met are inadequate to justify a rule change. If there is any question as to the rigor of an SRO's analysis, then it is all the more paramount that the Commission not defer to the SRO's claims, conclusions, and judgments. The Commission has a fundamental oversight role with respect to SROs, and undue deference to an SRO in the SRO rulemaking process undercuts the basic structure of that regulatory relationship.

As measured against this benchmark, the consideration by the MSRB and the Commission of the MSRB's proposed Rule G-17 guidance does not constitute a sufficiently reasoned basis upon which to conclude that the statutory standard required for approval has been met. The arguments set forth in favor of the rulemaking rely too much on conclusory statements and assumptions rather than on rigorous analysis of the real-life consequences that could arise, whether for better or for worse, as underwriters and issuers adapt to the new interpretive guidance.¹⁹⁸

The dearth of analysis highlighted by the commissioners is not unique to that particular rulemaking.¹⁹⁹ Absent a change in QGRO practices, similar objections are likely to be raised with respect to future rules of the MSRB and other QGROs.

III. CONCLUSION

The financial regulators charged with implementing Dodd–Frank and overseeing U.S. financial markets are subject to relatively few explicit statutory requirements to conduct economic analysis in connection with their rulemakings. Regardless of their legal obligations, all of the regulators

¹⁹⁷ Daniel M. Gallagher & Troy A. Paredes, Commissioners, SEC, *Statement Regarding Commission Approval of MSRB Rule G-17 Interpretive Notice* (May 14, 2012), <http://www.sec.gov/news/speech/2012/spch051412dmgtap.htm>.

¹⁹⁸ *Id.*

¹⁹⁹ *See, e.g.*, Municipal Securities Rulemaking Board, Form 19b-4 Filing with Securities and Exchange Commission (Oct. 23, 2012), *available at* <http://www.msrb.org/Rules-and-Interpretations/SEC-Filings/~media/Files/SEC-Filings/2012/SR-MSRB-2012-08.ashx> (acknowledging that certain underwriters might face new burdens under the new rule, but not attempting to ascertain whether that burden would be offset by a corresponding reduction in the burden associated with another rule and concluding, without supporting data that “[o]n balance, the MSRB believes that the benefits of the proposed rule change greatly exceed any potential increased burden resulting therefrom”).

should strive to conduct economic analysis of contemplated regulatory actions as a matter of good rulemaking practice. Economic analysis can assist regulators in making the difficult decisions about whether and how to regulate.

Although some regulators are making an effort to conduct economic analysis, federal financial regulators generally have shied away from conducting thorough regulatory analysis. Such an analysis should identify the problem and the best solution—regulatory or otherwise—to achieve the desired result. These regulators generally do not make formal economic analyses, and the assumptions underlying them, available for public review and comment. As a consequence, the massive Dodd–Frank rulemaking effort and other substantial initiatives in financial regulation are being undertaken without the benefit of the type of regulatory analysis that is a mandatory feature of rulemakings by executive agencies.

Additionally, economic analysis is not standard practice at QGROs. By avoiding economic analysis, QGROs, along with other federal financial regulators, deprive themselves of an important tool in the rulemaking process. To fulfill their oversight responsibilities, the SEC and CFTC could demand economic analyses from the QGROs but have generally not done so. If Congress bolsters the federal financial regulators' obligations to conduct economic analyses, the regulators could try to delegate additional responsibilities to QGROs in an effort to avoid these obligations.²⁰⁰ Thus, it may be wise to consider explicitly imposing companion requirements to conduct thorough economic analysis on QGROs in order to prevent regulators from evading their obligations.

The federal financial regulators' failure to embrace economic analysis as a tool for regular and systematic use in their rulemaking may reflect a belief that economic analysis is either inappropriate or impossible in the context of financial regulation. Economic analysis has been proven feasible and useful in other substantive areas.²⁰¹ Despite its inherent limitations, economic analysis is a useful tool for financial regulators.²⁰² In fact, the

²⁰⁰ SEC Commissioner Walter alluded to the benefits that can be achieved by accomplishing regulatory tasks through an SRO, rather than through a governmental regulator. As she put it, an advantage of the SRO model is “increasing speed and efficiency through SRO processes that are more expedited than those used by the government.” Walter Statement, *supra* note 151, at 7.

²⁰¹ See, e.g., Arrow, et al., *supra* note 116, at 222–23. Financial regulators in the United States can draw on the experiences of financial regulators elsewhere who have used economic analysis in their rulemaking efforts. The United Kingdom's FSA has given a lot of consideration to how economic analysis can be done with respect to financial regulation. See generally Isaac Alfon & Peter Andrews, Financial Services Authority, *Cost–Benefit Analysis in Financial Regulation: How To Do It and How It Adds Value*, FINANCIAL SERVICES AUTHORITY OCCASIONAL PAPER SERIES NO. 3 (Sept. 1999), available at <http://www.fsa.gov.uk/pubs/policy/p24.pdf>; John Howell & Co., *FSA N2+2 Review Cost Benefit Analysis—Cultural Issues* (Oct. 2004), available at http://www.fsa.gov.uk/pubs/other/howell_report.pdf.

²⁰² See, e.g., Sherwin, *supra* note 19, at 58–59 (arguing that although “not a panacea,” cost–benefit analysis “holds tremendous promise for improving the quality of financial regulation”); Rose and Walk-

financial regulators might find it easier than other regulators to conduct economic analysis due to their economic expertise and access to substantial financial markets research. The FRB and the regional Federal Reserve banks have traditionally generated a lot of research about the financial markets. The OFR, which is charged with “performing applied research and essential long-term research,”²⁰³ is likely to be another fruitful source of financial markets research. Isaac Alfon and Peter Andrews employ the following helpful analogy to explain how economic analysis can help regulators do their job better:

These days it is hard to imagine that the many doctors who lived before Hippocrates tended to treat the symptoms of disease rather than the cause. It now seems rather obvious that it is better to find out why a patient’s right foot is extremely painful and to treat the cause rather than to impose the costs that would follow from simply cutting off the foot. Moreover, a failure to treat the cause might well mean that the left foot soon becomes extremely painful. . . . Regulation too can address the symptoms or the cause of a problem. For example, an outright product ban or the creation of large barriers to the sale of a product might solve a particular consumer ill, albeit at the cost of reduced consumer choice. Nevertheless, failure to address the cause of that ill, which might be information or incentive problems, is likely to mean that a new product or service will soon create a similar detriment for consumers. Applying economic analysis to financial regulation is the only way of getting to the bottom of these issues. In particular, cost–benefit analysis (CBA) is a practical and rigorous means of identifying, targeting and checking the impacts of regulatory measures on the underlying causes of the ills with which regulators need to deal, those causes being the market failures that in turn may justify regulatory intervention.²⁰⁴

Although nascent, efforts by regulators like the SEC and the CFTC to revisit their past approaches to economic analysis and rethink their statutory mandates may be instructive for other financial regulators.

Of their own volition and without regard to whether they have a statutory obligation to do so, all federal financial regulators ought to take advantage of the valuable economic analysis tools other nonfinancial regulators employ. Regulators will find it worthwhile to gain an understanding about what the real problems are and how different solutions to those problems will affect financial institutions, their customers, and the economy as a whole. This is especially true for federal financial regulators who are responsible for monitoring the safety and soundness of particular institutions or the financial system as a whole. Employing regulatory analysis will assist the regulators in making better decisions and in justifying those decisions.

er, *supra* note 53, at 37 (arguing that “financial regulators can and should ground their rulemaking in rigorous cost–benefit analysis to arrive at more rational decision-making and efficient regulatory action as well as to promote good governance and democratic accountability”).

²⁰³ Dodd–Frank Wall Street Reform and Consumer Protection Act § 153(a)(3) (2010) (codified at 15 U.S.C. § 780 (2006)).

²⁰⁴ See Alfon & Andrews, *supra* note 201, at 4.

A clear statutory mandate for regulators to conduct thorough and well documented economic analysis could assist the federal financial regulators in improving their regulatory analysis practices by providing concrete guideposts for that analysis. The President, Congress, and the public would benefit from knowing—in connection with Dodd–Frank rulemakings specifically and financial regulation more generally—which problems regulators are trying to solve and which alternatives they are considering. Further, they will benefit from understanding the costs that society will bear and the benefits society will enjoy as a result of regulatory actions.



ADMINISTRATIVE PATENT LEVERS IN THE SOFTWARE,
BIOTECHNOLOGY, AND CLEAN TECHNOLOGY INDUSTRIES

David Orozco *

I. INTRODUCTION

With the recent passage of the America Invents Act (AIA), the U.S. patent system has undergone a transformative realignment.¹ Numerous significant changes have been made as a result of this legislation, and among the most significant are the implementation of a first-to-file system, fee-setting authority at the Patent and Trademark Office (PTO), and several changes involving post-grant review proceedings. Many questions remain, however, regarding how the statutory changes will impact patentees, innovators, and society. Scholars are called on to address these significant, largely open questions.²

One question relates to the rulemaking authority that has been statutorily delegated to the PTO.³ As recognized by scholars,⁴ a power struggle has been waged between the PTO and the Court of Appeals for the Federal Circuit (CAFC), a specialized appellate court with exclusive jurisdiction over patent cases decided by the federal district courts and PTO appeals.⁵

* Assistant Professor of Legal Studies, The College of Business, Florida State University; dorozco@fsu.edu. I would like to extend my deep gratitude to Professors Lynda Oswald and Dan Cahoy for organizing the colloquium *The Changing Face of American Patent Law and its Impact on Business Strategy* at the Stephen M. Ross School of Business at the University of Michigan, where this article was first presented. I would also like to thank the attending legal studies professors who provided many insightful comments. I also extend my deep gratitude to the editors at the *Journal of Law, Economics & Policy* and the three anonymous reviewers who provided invaluable and constructive feedback. Any errors remain exclusively mine.

¹ Leahy-Smith America Invents Act § 25, 35 U.S.C. § 2(b)(2)(G) (2012).

² For example, the Stephen M. Ross School of Business at The University of Michigan sponsored a symposium to address the AIA's impact on business strategy. The articles presented at this symposium, including an earlier version of this article, will be published as David Orozco, *Administrative Patent Levers in the Software, Biotechnology, and Clean Technology Industries*, in *THE CHANGING FACE OF AMERICAN PATENT LAW AND ITS IMPACT ON BUSINESS STRATEGY* 42–61 (Daniel R Cahoy & Lynda J. Oswald eds., 2013).

³ Sarah Tran, *Patent Powers*, 25 HARV. J.L. & TECH. 595, 616–17 (2012).

⁴ David Orozco, *Administrative Patent Levers*, 117 PENN ST. L. REV. 1 *passim* (2012); Tran, *supra* note 3, at 616–17; Clarissa Long, *The PTO and the Market for Influence in Patent Law*, 157 U. PA. L. REV. 1965, 1966 (2009) (describing how the PTO has maneuvered since the early 1990s to gain more influence and occupy a more central position in making patent law and policy).

⁵ The CAFC is also largely viewed as pro-patentee in its jurisprudence. *See generally* Adam B. Jaffe & Josh Lerner, *INNOVATION AND ITS DISCONTENTS: HOW OUR BROKEN PATENT SYSTEM IS ENDANGERING INNOVATION AND PROGRESS, AND WHAT TO DO ABOUT IT* (2004).

This struggle relates to the CAFC extending limited or no deference to the PTO, and limiting the PTO's ability to engage in substantive and policy-oriented rulemaking.⁶ The CAFC has held on various occasions that the PTO is limited solely to procedural rulemaking and that any rulemaking that extends beyond this function is beyond the PTO's delegated authority.

This article will examine this struggle in light of the AIA's passage and will build from the author's previous research⁷ to examine how the PTO has engaged in policymaking in response to industry-specific challenges, despite the significant limitations imposed on it by the CAFC. In particular, the PTO's rulemaking and policymaking will be analyzed in relation to three controversial and challenging industries: software, biotechnology, and clean technology.

The author's prior work has examined the PTO's engagement in policymaking through "administrative patent levers."⁸ Administrative patent levers are PTO administrative rules that address particular technological challenges or controversies—they are technology-specific and guided by policy motivations.⁹ The PTO's policy motivations and judgments expressed through administrative patent levers are developed as a reaction to institutional signals initiated by actors among all three branches of government.¹⁰ These policymaking rules, or levers, initiated at the PTO are explained by positive political theory and interest group theory. Positive political theory examines legal actors' decisions and motivations in response to larger political forces and frameworks.¹¹ This article provides additional evidence of the existence of administrative patent levers within the PTO.

As discussed in prior research, PTO rules classified as administrative patent levers are policy-oriented in nature. These rules emerge in response to actions or signals initiated among all three branches of government, and obtain legal legitimacy from this broad base of governmental support in light of the PTO's limited, procedural rulemaking authority, as it has been

⁶ Stuart Minor Benjamin & Arti K. Rai, *Who's Afraid of the APA? What the Patent System Can Learn from Administrative Law*, 95 GEO. L.J. 269, 310–311 (2007). The CAFC grants deference to PTO's fact-finding. *Dickinson v. Zurko*, 527 U.S. 150, 160–61 (1999). Likewise, the CAFC grants deference to PTO rules that are procedural in nature; however, it does not grant any deference to PTO rulemaking that has the effect of law or is substantive in nature. *Tafas v. Doll*, 559 F.3d 1345, 1352 (Fed. Cir. 2009) (stating that Section 2(b)(2) of the Patent Act "does not vest the USPTO with any general substantive rule-making power"). PTO rules or decisions that involve policymaking are also not granted deference by the CAFC. *In re Fisher*, 421 F.3d 1365, 1378 (Fed. Cir. 2005).

⁷ See Orozco, *supra* note 4 *passim*.

⁸ *Id.* at 1.

⁹ *Id.* at 2.

¹⁰ *Id.* at 1.

¹¹ See Sidney A. Shapiro, *Political Oversight and the Deterioration of Regulatory Policy*, 46 ADMIN. L. REV. 1, 7 (1994) (two chief ways Congress might supervise agencies are "police patrol" and "fire alarm" oversight); Mathew D. McCubbins, Roger G. Noll & Barry R. Weingast, *Structure and Process, Politics and Policy: Administrative Arrangements and the Political Control of Agencies*, 75 VA. L. REV. 431, 434–35 (1989) (mentioning various congressional oversight techniques).

interpreted by the CAFC. The author's prior research specifically examined administrative patent levers related to business methods.¹² In that work, it was demonstrated that the Legislature had reviewed business methods in a significant number of hearings and had implemented or proposed legislation that would curtail the harmful effects of business methods.¹³ The Judiciary likewise responded negatively to business methods and limited their negative impacts on industry.¹⁴ The Executive engaged in various policy studies that were critical of business methods in general.¹⁵ The result of this broad level of institutional attention was the emergence of various administrative patent levers germane to business methods.¹⁶

A theory of administrative patent levers builds on the related theory of judicial patent levers developed by Professors Burk and Lemley.¹⁷ In their important work, Burk and Lemley described judicial patent levers as policy-motivated doctrines that could be used by the courts to develop a more flexible patent jurisprudence.¹⁸ The use of judicial patent levers takes into account important industry-specific differences to achieve more equitable results. For example, the judicial patent lever related to granting a permanent injunction could be relaxed to achieve an equitable result in a complex technology¹⁹ like software to avoid the problem of patent thickets or holdups.²⁰ Administrative agencies' rules can impact legal outcomes, and agencies, like the courts, are able to implement policies with substantive implications and outcomes.²¹

Administrative agencies, however, have greater limitations than appellate courts or the legislature in their ability to create substantive legal policy. First, administrative agencies may be constrained by a statute's language and their interpretations of statutory language may be offered limited

¹² Orozco, *supra* note 4, at 8–15.

¹³ *Id.* at 24–26.

¹⁴ *Id.* at 21–22.

¹⁵ *Id.* at 27–29.

¹⁶ The levers implemented by the PTO to constrain the harmful effects of business methods are: creating a new examiner category to review these applications, requiring mandatory database and field searching, implementing a “second pair of eyes review”, coordinating with external parties to improve search capabilities, and implementing a new voluntary “peer-to-patent” pilot program. *Id.* at 33–36.

¹⁷ See Dan L. Burk & Mark A. Lemley, *Policy Levers in Patent Law*, 89 VA. L. REV. 1575, 1638–40 (2003).

¹⁸ *Id.*

¹⁹ Complex technologies are those that require multiple patents to implement a technology. See David Orozco & James G. Conley, *Friends of the Court: Using Amicus Briefs to Identify Corporate Advocacy Positions in Supreme Court Patent Litigation*, 2011 U. ILL. J.L. TECH. & POL'Y 107, 115–16 (2011).

²⁰ See Mark A. Lemley & Carl Shapiro, symposium, *Frontiers of Intellectual Property: Patent Holdup and Royalty Stacking*, 85 TEX. L. REV. 1991, 1991 (2007).

²¹ Shapiro, *supra* note 11, at 1–3.

discretion.²² Under the well-known *Chevron* doctrine, a key initial inquiry is whether “the statute is silent or ambiguous with respect to the specific issue.”²³ If that is the case, then “the question for the court is whether the agency’s answer is based on a permissible construction of the statute.”²⁴

Second, political science research suggests that administrative agencies may be constrained by larger political forces because government officials are responsive to interest groups across all three branches of government.²⁵ From a positive political theory perspective, policymakers often do not initiate regulatory oversight unless interest groups first voice the alarm.²⁶ The alarm and call for regulatory reform is then delegated to administrative agencies—such as the PTO—under what has been called the “fire-alarm model” of regulatory oversight.²⁷

If policymakers respond to interest group pressure, administrative agencies will then likely respond to policymakers’ concerns under the principal-agent theory of administrative decision-making.²⁸ From this perspective, elected policymakers in the legislative and executive branches exercise considerable discretion over administrative rulemaking and policy given their ability to enact legislation, appoint staff, and engage in general oversight and control of an agency’s funding through appropriations.²⁹ As with various other agencies, Congress is generally the ultimate decision-maker with respect to the PTO’s budgets and appointments. Congress also “con-

²² Shapiro, *supra* note 11, at 4 (stating that “[t]here are political reasons for vague and ambiguous delegations, but such legislation also reflects the fact that delegating discretion to an expert, experienced agent can result in collective gains for the public”).

²³ *Chevron U.S.A., Inc., v. NRDC, Inc.*, 467 U.S. 837, 842–43 (1984).

²⁴ *Id.* at 837–38.

²⁵ Benjamin & Rai, *supra* note 6, at 310–11.

²⁶ Mathew D. McCubbins & Thomas Schwartz, *Congressional Oversight Overlooked: Police Patrols Versus Fire Alarms*, 28 AM. J. POL. SCI. 165, 165–79 (1984) (describing for the first time the “fire alarm” model of regulatory change). The “fire alarm” model has been widely discussed in political science and legal scholarship examining regulatory and administrative behavior from a positive political theory perspective. See Mathew D. McCubbins et al., *Structure and Process, Politics and Policy: Administrative Arrangements and the Political Control of Agencies*, 75 VA. L. REV. 431, 434–35 (1989) (mentioning various congressional oversight techniques); Shapiro, *supra* note 11, at 7 (explaining two chief ways Congress might supervise agencies, by “police patrol” and “fire alarm” oversight. According to Shapiro, the “former involves audits, investigations, and other forms of random direct oversight. The latter involves reliance on third parties to report deviations by agents”).

²⁷ McCubbins & Schwartz, *supra* note 26, at 105.

²⁸ See CORNELIUS M. KERWIN, *RULEMAKING: HOW GOVERNMENT AGENCIES WRITE LAW AND MAKE POLICY* 220–21 (1st ed. 1994); Shapiro, *supra* note 11, at 3.

²⁹ When the business method administrative patent levers were implemented, the PTO lacked fee-setting authority, which, according to Professor Arti Rai, is an important power for an agency with operations that are entirely fee-based. See Arti Rai, *Growing Pains in the Administrative State: The Patent Office’s Troubled Quest for Managerial Control*, 157 U. PA. L. REV. 2051, 2056 (2009). Under current law, the PTO may keep its fees; however, Congressional appropriators must make this decision annually. See also Leahy–Smith America Invents Act § 10, 35 U.S.C. § 42(e) (2012). Recently, § 10 of The America Invents Act granted the PTO fee setting authority. *Id.*

ducts oversight and investigations, and engages in casework on behalf of constituents.³⁰ The Judiciary also exerts significant control over administrative policymaking due to its ability to shape the law through the common law process and its ability to constrain the deference offered to agencies' statutory interpretation.

This article will examine the larger institutional and political environment acting on the PTO's rulemaking in three controversial technological fields. This article makes two contributions. First, the article provides additional evidence that the PTO engages in policymaking and relies on administrative patent levers to achieve its policy-oriented goals. This policymaking occurs despite the CAFC's continued view of the PTO as an agency entrusted solely with narrow procedural rulemaking authority. The administrative patent levers examined here are also explained under positive political theory as a response to the pressure and signals sent among all three branches of government, some of which are referred to as "fire alarms" in the positive political theory literature.³¹ As reported in this literature, a fire alarm is a form of administrative agency oversight or critique that is initiated by a third party, such as another agency or interest group.³² Second, this article discusses the potential trajectory of future administrative patent levers in light of changes brought about by the passage of the AIA, which has been described as a transformative event in U.S. patent law. The AIA introduces new language that, on its face, grants the PTO authority to engage in policymaking by allowing it to prioritize patent applications with respect to technologies that the PTO deems important to American competitiveness.³³ This authority grants the PTO greater leeway in their future implementation of administrative patent levers.

The article will proceed as follows. Administrative patent levers in three technological areas—software, biotechnology, and clean technology—will be examined. These three industries were chosen because they triggered extraordinary concern—or fire alarms—among interested stakeholders and therefore, attracted policymakers' attention and regulatory action at the PTO. A section is devoted to each technological area, and each begins with an assessment of industrial and social concerns with patenting in each particular technological domain. Following this, each section will discuss the various types of institutional pressure exerted within each branch of government. The following sections discuss the PTO's response

³⁰ KERWIN, *supra* note 28, at 29.

³¹ McCubbins and Schwartz, *supra* note 26, at 165–79.

³² Shapiro, *supra* note 11, at 7.

³³ See, e.g., Leahy–Smith America Invents Act, §26, 35 U.S.C. § 2 (2012); Dan Cahoy, *Inverse Enclosure: Abdicating the Green Technology Landscape*, 49 AM. BUS. L.J. 805, 827–29 (2012).

to these examples of vigorous institutional pressure and highlight an example of administrative rulemaking that responded to broad political forces.³⁴

II. SOFTWARE

A. *Industry-Specific Patent Concerns*

Software patents have been extremely controversial from the outset because historically they have tested the limits of what is patentable subject matter,³⁵ and now, in light of the open source movement, they increasingly raise significant interoperability concerns in the technology community.³⁶ Software is often characterized as a complex or cumulative³⁷ technology, and patents in this field have been criticized as reducing the freedom to operate among software engineers.³⁸ Another aspect of software patents that scholars perceive as reducing the need for the patent monopoly grant in this area is the low research and development expenditures necessary to undertake software innovations.³⁹

³⁴ McCubbins and Schwartz, *supra* note 26 (holding that if policymakers respond to interest group pressure, it is expected that administrative agencies will then subsequently respond to policymakers' concerns under the principal-agent theory of administrative decision-making); see Cornelius M. Kerwin, RULEMAKING: HOW GOVERNMENT AGENCIES WRITE LAW AND MAKE POLICY 220–21 (1st ed. 1994).

³⁵ Robert E. Thomas, *Debugging Software Patents: Increasing Innovation Reducing Uncertainty in the Judicial Reform of Software Patent Law*, 25 SANTA CLARA COMP. & HIGH TECH. L.J. 191,197 (2008) (stating that “software clearly does not satisfy the physical transformation test”).

³⁶ See FED. TRADE COMM'N, TO PROMOTE INNOVATION: THE PROPER BALANCE OF COMPETITION AND PATENT LAW AND POLICY 48 (2003), available at <http://1.usa.gov/ixpdVn> (stating, “[o]pen source software has received considerable attention in recent years due to: (1) its rapid adoption, particularly by expert users and corporations; (2) significant capital investments in open source projects by corporations such as Hewlett Packard, IBM, and Sun Microsystems; and (3) the hailing of its collaborative nature of development by business and trade press as an important organizational innovation”); see also Yochai Benkler, *Coase's Penguin, or Linux and the Nature of the Firm*, 112 YALE L. J. 369, 379 (2002).

³⁷ See Orozco and Conley, *supra* note 19, at 115. Cumulative industries comprise technologies that incorporate many patents and include information and technology communications, semiconductors, biotechnology, and software. Proponents of open software are particularly critical of Internet-related business methods because these patents may block open access to software and technology. See Lawrence Lessig, *The Problem with Patents*, THE INDUSTRY STANDARD (Apr. 23, 1999), available at <http://www.anonymous-insider.net/software-patents/research/1999/0423.html>.

³⁸ Thomas, *supra* note 35, at 211–12 (discussing discrete innovations vs. cumulative innovations), 221 (discussing how software, as a cumulative industry, requires narrow patent scope).

³⁹ See generally JAMES BESSEN & MICHAEL J. MEURER, PATENT FAILURE: HOW JUDGES, BUREAUCRATS, AND LAWYERS PUT INNOVATORS AT RISK 9 (2008) (arguing that vague patent claims in the high tech sector raise costs for the majority of firms); cf. Ronald J. Mann, *Do Patents Facilitate Financing in the Software Industry?*, TEXAS L. REV. 979 (2005) (finding that small software companies spend proportionally more on R&D, and that patents play a larger role for later stage start-ups); Stuart J.H. Graham et al., *High Technology Entrepreneurs and the Patent System: Results of the 2008 Berkeley*

The Supreme Court, in *Diamond v. Diehr*, clarified the legal basis of software patents.⁴⁰ Prior to *Diehr*, software alone was considered too abstract to qualify as patentable subject matter, similarly to the principle that laws of nature or abstract ideas are beyond patentability.⁴¹ The *Diehr* Court, however, held that an otherwise patentable invention did not become unpatentable simply because a computer and an algorithm were involved.⁴² Ever since *Diehr*, however, software-related inventions have been upheld by the courts as patentable subject matter, even though they have been severely criticized as unduly broad and undeserving of patent protection; in some cases they have been declared unpatentable “abstract ideas.”⁴³

Another source of industry criticism related to software patents concerns their perceived low quality. According to some, too many low quality software patents have been granted by the PTO. A commonly held view is that patent examiners lacked the necessary training to adequately assess software-related patents against the prior art. This is because many software inventions had, prior to the patent application, been practiced as trade secrets and therefore were not included in any prior art databases.⁴⁴

B. Institutional Pressure

1. The Legislature

Unlike with business methods or gene patents, Congress never devoted a hearing to specifically address software as a unique category of patents.⁴⁵ But Congress has, on a few occasions, indirectly heard testimony related to software patents. A proponent of the open-source community testified

Patent Survey, 24 Berkeley Tech. L.J. 1255, 1270–71 (2009) (67% of software start-ups backed by venture capital owned patents).

⁴⁰ *Diamond v. Diehr*, 450 U.S. 175 (1981).

⁴¹ See *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972) (“Phenomena of nature, though just discovered, mental processes, and abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work.”). For an exhaustive discussion of the development of software patent jurisprudence, see Thomas, *supra* note 35.

⁴² See *Diamond*, 450 U.S. at 191–93.

⁴³ See Susan J. Marsnik & Robert E. Thomas, *Drawing a Line in the Patent Subject Matter Sands: Does Europe Provide a Solution to the Software and Business Method Patent Problem?*, 34 B.C. INT’L & COMP. L. REV. 227, 264 (2011). Recently, the CAFC reheard *CLS Bank International v. Alice Corporation en banc*. The en banc opinion is expected to clarify the unsettled question of what comprises an “abstract idea” within the field of software patents.

⁴⁴ Kevin M. Baird, *Business Method Patents: Chaos at the USPTO or Business as Usual?*, 2001 U. ILL. J.L. TECH. & POL’Y 347, 354–55 (2001) (discussing the problems the PTO has experienced examining software and business method patents).

⁴⁵ Orozco, *supra* note 4, at 23–24.

against the dangers of software patents. The General Counsel of Red Hat, Inc., a leading open-source software company, in a hearing testified that:

The open source community largely disdains patent protection of software. The community does so in part because of a strong perception that by extending patent protection to software, software developers are provided two bites at the intellectual property apple: one under copyright, and a second under patent. The open source community also believes that patents on software have actually stifled innovation, rather than promoted it, because software development occurs at a much more rapid pace than one finds in the other patent arts.⁴⁶

In a separate Senate hearing, the Deputy General Counsel for intellectual property at Microsoft, Marshall Phelps, testified,

[T]he IT industry, like so many others, is encountering the enormous cost of dealing with patents of questionable quality. Today hundreds of patent infringement cases are pending against computer software and hardware companies, costing the industry hundreds of millions of dollars each year. Too many of these cases are brought by speculators who do not develop, make, or distribute anything. Our industry is particularly vulnerable to such claims because our complex products often have hundreds of patent or patentable features contained in them.⁴⁷

On another occasion, Congress introduced a modification to the Patent Act⁴⁸ that would benefit patent owners by making it illegal to infringe on domestic patents abroad. However, a proposed modification to this pro-patent statutory change would exempt software patent owners from this protection if adopted into the final bill. The proposed modification would effectively provide an exemption for companies to practice software patents abroad without incurring liability. One industry representative who supported software patents and was, therefore, critical of this proposed measure testified,

[T]he language in Section 10 of the Committee Print is much broader than necessary for that purpose and will create a loophole that will allow software and firmware houses to avoid liability for patent infringement of U.S. patents by exporting their wares as "intangible" e-mail signals and files on master disks with full knowledge that they will be converted to tangible, physical form when received by their overseas customers. At best, the language of Section

⁴⁶ *Patent Reexamination and Small Business Innovation, Hearing Before the Subcomm on Courts, the Internet, and Intellectual Property of the H. Comm. on the Judiciary*, 107th Cong. 49 (2002) (statement of Mark H. Webbink, General Counsel, Red Hat, Inc.), available at http://commdocs.house.gov/committees/judiciary/hju80321.000/hju80321_0.HTM.

⁴⁷ *Perspective on Patents: Harmonization and Other Matters: Hearing Before the Subcomm. on Intellectual Property of the S. Comm. of the Judiciary*, 109th Cong. 10 (2005) (statement of Marshall C. Phelps, Jr., Deputy General Counsel for Intellectual Property, Microsoft, Inc.), available at <http://www.gpo.gov/fdsys/pkg/CHRG-109shrg24582/html/CHRG-109shrg24582.htm>.

⁴⁸ 35 U.S.C. §§ 1–390 (2012).

271(f)(3) constitutes discrimination which favors the software industry over traditional hardware manufacturers . . .⁴⁹

The proposed software patent loophole was never enacted. As will be discussed below, however, in *Microsoft v. AT&T*, the Supreme Court essentially endorsed creating such a loophole for software companies to avoid infringing software patents that are practiced abroad and imported to the U.S.

2. The Judiciary

Recently, in *Microsoft v. i4i*, the Supreme Court upheld a clear and convincing standard of proof for patent validity challenges.⁵⁰ The case dealt with the non-practicing entity i4i asserting a software patent against Microsoft related to a document-editing process. Although the case dealt with the broader issue of the standard of proof in patent challenges, it was also an indirect attack on software patents. Several *amici* supporting the defendant critiqued software patents as a unique category of low-quality patents.⁵¹ In this case, the Supreme Court refrained from targeting software patents in a *sui generis* manner.⁵²

In the prior *Microsoft v. AT&T* case,⁵³ however, the Supreme Court took the opportunity to weaken the reach of software patents. In that case, the CAFC had agreed with AT&T that § 271(f) of the Patent Act applied to software and provided extraterritorial protection abroad to domestic patents that were infringed overseas and imported to the U.S.⁵⁴ The Supreme Court, however, reversed the CAFC.⁵⁵ In its opinion, the Court considered the loophole that would be created in reference to software patents as a separate patent category. The Court was ultimately not persuaded by the loop-

⁴⁹ *Committee Print Regarding Patent Quality Improvement: Hearing Before the Subcomm. on Courts, the Internet & Intellectual Property of the H. Comm. on the Judiciary*, 109th Cong. 200 (2005) (statement of Jack Haken, Vice President, Intellectual Property & Standards, U.S. Philips Corp.), available at <http://www.gpo.gov/fdsys/pkg/CHRG-109hrg20709/html/CHRG-109hrg20709.htm>.

⁵⁰ *Microsoft v. i4i Ltd. P'ship*, 131 S. Ct. 2238, 2240 (2011).

⁵¹ *See, e.g.*, Amicus Curiae Brief of the Business Software Alliance in Favor of Petitioner, *i4i Ltd.*, 131 S. Ct. at 6–7 (“The PTO simply cannot and does not guarantee that it will consider all relevant prior art during patent prosecution. This is particularly true in industries (such as the technology sector) where scholarly publications and databases of prior art are incomplete.”).

⁵² *Cf. eBay Inc. v. MercExchange*, 547 U.S. 388, 390 (2006); *Bilski v. Kappos*, 130 S. Ct. 3218, 3220–21 (2010).

⁵³ *Microsoft v. AT&T*, 550 U.S. 437 (2007).

⁵⁴ 35 U.S.C. § 271(f)(1) (2012) (providing that patent infringement occurs when one “suppl[ies] . . . from the United States,” for “combination” abroad, a patented invention’s “components”).

⁵⁵ The Court decided whether software qualified as a component for the purposes of § 271(f). *Microsoft*, 550 U.S. at 448–49. The Court explained that it could not because software is not capable of being combined when it is detached from its medium, and only copies of it are combinable. *Id.* at 449.

hole argument, although it recognized its potential in the software industry when it stated, “[t]he ‘loophole,’ in our judgment, is properly left for Congress to consider, and to close if it finds such action warranted.”⁵⁶

In re Bilski was a recent case involving a business method that had important ramifications for software patents. In *Bilski*, the CAFC revisited the holding of *State Street Bank v. Signature Financial Group*,⁵⁷ which allowed the patenting of business methods. Business methods are often expressed as software claims. *Bilski* dealt with a method for hedging commodity risk, and the CAFC held that methods, including software, had to meet the machine-or-transformation test to be patent eligible.⁵⁸ On appeal, the Supreme Court held that the machine-or-transformation test is not the sole test for assessing the subject matter patentability of business methods.⁵⁹ Notably, the Court found that exclusively applying the machine-or-transformation test might actually hinder software patents.⁶⁰

More recently, the CAFC held oral arguments en banc in the case of *CLS Bank vs. Alice Corp.*⁶¹ Commentators believe that this case will settle questions related to the patentability of software claims—particularly, what test should be used to determine what constitutes a computer specially designed to perform a particular function.⁶² According to one commentator, none of the parties argued that software, apart from its computer implementation, is patent-eligible.⁶³

3. The Executive Branch

In what might be the first instance of fire alarms related to software patents, industry lobbied the executive branch in a 1966 presidential commission report to prevent patents from applying to software.⁶⁴ More recently, the Federal Trade Commission (FTC) has taken the lead in raising the

⁵⁶ *Id.* at 457.

⁵⁷ *State St. Bank & Trust Co. v. Signature Fin. Grp., Inc.*, 149 F.3d 1368, 1374 (Fed. Cir. 1998) (finding that a process that yields a “useful, concrete and tangible result” satisfies § 101 of the Patent Act).

⁵⁸ In *Bilski* the CAFC held that a “claimed process is surely patent-eligible under § 101 if: (1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing.” In *re Bilski*, 545 F.3d 943, 954 (Fed. Cir. 2008) (en banc), *cert. granted sub nom.*, *Bilski v. Doll*, 129 S. Ct. 2735 (2009).

⁵⁹ *Bilski v. Kappos*, 130 S. Ct. 3218, 3227 (2010).

⁶⁰ *Id.*

⁶¹ *CLS Bank Int'l v. CLS Servs. Ltd.*, 484 F. App'x 559 (Fed. Cir. 2012) (decision forthcoming).

⁶² Dennis Crouch, *CLS Bank v. Alice Corp: Oral Arguments Lead to More Questions*, PATENTLY-O (Feb. 9, 2013), <http://www.patentlyo.com/patent/2013/02/cls-bank-v-alice-corp-oral-arguments-lead-to-more-questions.html>.

⁶³ *Id.*

⁶⁴ See Pamela Samuelson, *Benson Revisited: The Case Against Patent Protection for Algorithms and Other Computer Program-Related Inventions*, 39 EMORY L.J. 1025, 1028 n.3 (1990).

alarms related to software patents within the executive branch. The FTC is a prominent administrative agency that has been critical of certain patenting activities. In October 2003, the FTC published a report, *To Promote Innovation: The Proper Balance of Competition and Patent Law and Policy*,⁶⁵ which has been cited by the Supreme Court⁶⁶ and in congressional hearings.⁶⁷

The FTC report criticizes both business methods and software patents by stating that, “a questionable patent that claims a single routine in a software program may be asserted to hold up production of the entire software program. This process can deter follow-on innovation and unjustifiably raise costs to businesses and ultimately, to consumers.”⁶⁸ The FTC praised the “second-pair-of-eyes” review that the PTO implemented for business methods⁶⁹ and went on to advocate its implementation in the field of software patents.⁷⁰

Interestingly, the PTO held a hearing in 1994 where testimony was submitted on the use of the patent system to protect software-related inventions.⁷¹ At this hearing, various speakers commented on the challenges unique to patenting software-related inventions, and diverse viewpoints were offered on the merits of granting patent protection to software-related inventions. A common thread in the discussions, however, was the need to improve the patent examination process by improving prior art databases and training available to software patent examiners. For example, a representative of the Software Publishers Association, which represents a wide swatch of companies, made the following statement:

Many difficulties or many objections to the current system of patent protection for software-related inventions stem from difficulties in uncovering prior art. Typical complaints focus on the unavailability of pertinent prior art and an expanded prior art collection would help the U.S. PTO make more informed judgments about whether a particular invention meets the statutory tests of novelty and nonobviousness. These difficulties are not unique to software technology, but developing a comprehensive prior art

⁶⁵ F.T.C., *To Promote Innovation: The Proper Balance of Competition and Patent Law and Policy* (2003) [hereinafter *FTC Report*], available at <http://www.ftc.gov/os/2003/10/innovationrpt.pdf>.

⁶⁶ See *Microsoft v. i4i Ltd. P'ship*, 131 S. Ct. 2238, n.11 (2011); *eBay Inc. v. MercExchange*, 547 U.S. 388, 396 (2006).

⁶⁷ See *Committee Print Regarding Patent Quality Improvement: Hearing Before the H. Subcomm. on Intellectual Property, Competition & the Internet*, 109th Cong. 17–24 (2005) (statement of Richard J. Lutton, Jr., Chief Patent Counsel for Apple, Inc.).

⁶⁸ *FTC Report*, *supra* note 65, at 7.

⁶⁹ The second-pair-of-eyes review that the PTO implemented for business methods is one of the administrative patent levers adopted in response to the business method institutional fire alarms.

⁷⁰ *FTC Report*, *supra* note 65, at 14.

⁷¹ *Public Hearing on Use of the Patent System to Protect Software-Related Inventions: Hearing Before the USPTO passim* (1994).

database has proven more difficult for software than other disciplines, such as biotechnology.⁷²

Lastly, in *Microsoft v. AT&T*, (mentioned earlier involving the extra-territoriality of software patent patents infringed abroad and imported to the U.S.) the executive branch was active in its advocacy against the reach of software patents.⁷³ In that case, the U.S. Solicitor General filed a friend-of-the-court amicus brief arguing that the Supreme Court should review the issue.⁷⁴ The Solicitor General's amicus brief sided with Microsoft's position and argued that software could not be a component for purposes of § 271(f) liability.⁷⁵

C. *The PTO's Software-related Administrative Patent Levers*

Given the significant criticisms of software patents, positive political theory would predict that these patents would be subject to greater regulation than those of other, less controversial technological fields. According to some commentators, the CAFC was in the best position to narrow the scope of software patents given the software industry's unique characteristics,⁷⁶ yet it failed to do so—although it might provide guidance in the pending *CLS Bank v. Alice Corp.* case.⁷⁷ Similarly, the Supreme Court also had the opportunity to address the patentability of software and other abstract method claims, but it largely shied away from doing so in *Bilski*. From various accounts, the courts have largely failed to constrain the harms posed by software patents.⁷⁸ This technological area is therefore, in theory, particularly well suited for regulation by the PTO's administrative patent levers. What follows is an account of several administrative patent levers initiated by the PTO to heighten the requirement for obtaining software patents.

⁷² *Id.* at 6 (statement of Mark Traphagen, Counsel, Software Publishers Assoc.).

⁷³ *Microsoft*, *supra* note 53, at 437.

⁷⁴ Amicus briefs, particularly from influential parties, can be an effective advocacy mechanism. See Orozco & Conley, *supra* note 19; see generally Colleen V. Chien, *Patent Amicus Briefs: What the Courts' Friends Can Teach Us about the Patent System*, 1 U.C. IRVINE L. REV. 395 (2011) (finding that courts listen to, or at least agree with, their friends about which cases are important but failing to find any relation to the amount of amicus briefs filed on each side).

⁷⁵ See Robert A. McFarlane & Timothy V. Fisher, *Software Patents Under 35 U.S.C. § 271(F): Should Congress Amend § 271 to Harmonize Protection Between Tangible and Intangible Inventions?*, 2 HASTINGS SCI. & TECH. L.J. 183, 199 (2010).

⁷⁶ See Thomas, *supra* note 35, at 233.

⁷⁷ *CLS Bank Int'l v. Alice Corp. Pty. Ltd.*, 484 F. App'x 559 (Fed. Cir. 2012) (decision forthcoming).

⁷⁸ See, e.g., Julie Cohen & Mark Lemley, *Patent Scope and Innovation in the Software Industry*, 89 CALIF. L. REV. 1, 4 (2001).

The PTO's implementation of administrative patent levers took shape after the PTO defined the requirements for obtaining software patents in light of the machine-or-transformation test articulated in *State Street*.⁷⁹ In 2005, the PTO implemented its *Interim Guidelines for the Examination of Patent Applications for Patent Subject Matter Eligibility*.⁸⁰ The guidelines state as follows:

To satisfy [S]ection 101 requirements, the claim must be for a practical application of the Sec. 101 judicial exception, which can be identified in various ways:

The claimed invention "transforms" an article or physical object to a different state or thing.

The claimed invention otherwise produces a useful, concrete and tangible result, based on the factors discussed below.⁸¹

This rule change may not qualify as an administrative patent lever since it is largely an implementation of *State Street*. But, according to some scholars, these guidelines exemplify the PTO's opposition to the patentability of computer-related inventions and have reduced the amount of statutory subject matter rejections among software patents.⁸²

More recent PTO examination guidelines do qualify as administrative patent levers. For example, the PTO's Board of Patent Appeals and Interferences (BPAI) issued precedential opinions in cases involving software patents. In the case of *Ex parte Gutta*,⁸³ the BPAI set out a new set of rules for assessing the patentability of algorithms. In this precedential case dealing with a software patent and algorithm, the BPAI defined a two-pronged test to determine the algorithm's patentability in light of *Bilski*. The first prong asks whether the claim was limited to a tangible practical application that results in a real world use. The second prong asks whether the claim encompasses substantially all practical applications of the mathematical algorithm. After applying this novel two-part test, the BPAI rejected the patent application.⁸⁴

In addition to these more restrictive patent examination guidelines, the PTO reached out to industry when it established its peer-to-patent pilot pro-

⁷⁹ See Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility, Off. Gaz. Pat. & Trademark Office (Oct. 22, 2005), available at <http://www.uspto.gov/web/offices/com/sol/og/2005/week47/patgupa.htm>.

⁸⁰ See *id.*

⁸¹ *Id.*

⁸² See Kristen Osenga, *Ants, Elephant Guns and Statutory Subject Matter*, 39 ARIZ. ST. L.J. 1087, 1091 (2007).

⁸³ *Ex parte Gutta*, No. 2008-4352 (B.P.A.I. Aug. 10, 2009).

⁸⁴ *Id.*

gram, which allows third parties to submit prior art to a patent examiner. The peer-to-patent project was an effort undertaken by the PTO in June 2007 to open up the application review process to external reviewers who may submit relevant prior art and statements to a patent examiner.⁸⁵ Originally, this limited pilot project was undertaken to examine software patents, but shortly after its announcement, business methods were added to its scope.⁸⁶ The PTO stated as follows:

Recently a group of academic and business professionals have proposed a collaborative, online process in which members of the public pool together their knowledge and locate potential prior art. This pilot will test whether such collaboration can effectively locate prior art that might not otherwise be located by the Office during the typical examination process.⁸⁷

The project has been conducted on a purely voluntary basis, with patent applicants choosing to opt into the peer-to-patent review process. In exchange for volunteering, the applicant receives an expedited review process and, in theory, a more robust examination that yields a higher quality issued patent. Although the PTO participated in the project, it was conducted in collaboration with the Community Patent Review Project of the Institute for Information Law and Policy at New York Law School.⁸⁸ In the second anniversary report of the peer-to-patent project, it was stated that a total of 187 patent applications had been reviewed as of May 2009.⁸⁹ The PTO has deemed the initial two-year pilot program a success and agreed to continue the project. The extended period for receiving peer-to-patent submissions into accepted applications ended on September 30, 2011.⁹⁰

Finally, the PTO has collaborated with industry to expand the level of prior art databases available to its corps of examiners. One frequently as-

⁸⁵ *Peer Review Pilot Program Original*, USPTO, http://www.uspto.gov/patents/init_events/fy07_peer_pilot.jsp.

⁸⁶ USPTO, EXTENSION AND EXPANSION OF PILOT CONCERNING PUBLIC SUBMISSION OF PEER REVIEWED PRIOR ART 2, <http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/peerreviewexpansion071708.pdf>.

⁸⁷ *Id.*

⁸⁸ *Id.* The PTO, however, took effort to state its independence from the project in the following disclaimer:

“The Office and the Community Patent Review Project are independent entities, and are not agents of each other. Peer-to-Patent is a non-Office website developed by the Community Patent Review Project of the Institute for Information Law and Policy at NY Law School. Peer-to-Patent is responsible for the management of the Internet based review process by the public. The Office does not set the membership or agenda, nor assume authority or control over Peer-to-Patent or the Community Patent Review Project. Neither party is authorized or empowered to act on behalf of the other with regard to any contract, warranty or representation as to any matter, and neither party will be bound by the acts or conduct of the other.” *Id.*

⁸⁹ CTR. FOR PATENT INNOVATION AT N.Y. LAW SCH., PEER TO PATENT SECOND ANNIVERSARY REPORT 5, http://dotank.nyls.edu/communitypatent/CPI_P2P_YearTwo_lo.pdf.

⁹⁰ Inst. for Info. Law & Policy, *Peer to Patent Pilot 2*, SLIDESHARE slide 17 (Oct. 10, 2012), <http://www.slideshare.net/acasillas11/peer-to-patent-pilot-2>.

served criticism of software patents is the PTO's inability to secure comprehensive and up-to-date prior art databases to assess software patent applications with the prior art in this field.⁹¹ The PTO has proven to be responsive to fire alarms sounded by industry constituents. In both PTO and Congressional hearings, participants criticized the poor quality of software patents and the PTO's inadequate prior art databases.⁹² As these constituents have argued, software is a rapidly evolving field, and it is extremely difficult for the PTO to keep its databases current in light of this challenge. To overcome this problem, the PTO has partnered with the software industry to help update its technical literature databases in the software-related arts. In one interesting development, the PTO partnered with the open source community to provide the PTO with more current and broad software-related prior art.⁹³ The PTO's partnership with industry to improve software-related prior art is extraordinary in many ways.⁹⁴

D. *The America Invents Act's Impact on the PTO's Software Patent Policymaking*

Section 18 of the AIA will significantly impact some software patent owners.⁹⁵ This section allows those who have been sued for infringing a financial method patent to challenge the patent's validity at the PTO.⁹⁶ Furthermore, § 18 specifically applies to a "method or corresponding apparatus for performing data processing or other operations used in the practice, administration, or management of a financial product or service, except that the term does not include patents for technological inventions."⁹⁷

A substantial number of financial method patents are implemented with the use of software.⁹⁸ For example, Lincoln National Life Insurance Company sued Transamerica Financial Life Insurance Company, alleging infringement of an insurance-related patent that incorporated software in

⁹¹ See Baird, *supra* note 44.

⁹² See, e.g., *Patent Quality Improvement: Hearing Before the H. Subcomm. on Courts, the Internet & Intellectual Prop.*, 109th Cong. (2005) (statement of Mr. Richard J. Lutton).

⁹³ Press Release, USPTO, USPTO Partners with Open Source Community to Expand Patent Examiner Access to Software Code (Jan. 10, 2006), available at <http://www.uspto.gov/news/pr/2006/06-02.jsp>.

⁹⁴ The PTO engages in partnerships with industry in other controversial technological areas, e.g. business methods. Orozco, *supra* note 4.

⁹⁵ See Leahy-Smith America Invents Act § 18, 35 U.S.C. § 2(b)(2)(G) (2012).

⁹⁶ H.R. 1249 § 18(a)(1)(B), 112th Cong., 125 Stat. 284 (2011) (enacted) (stating, "A person may not file a petition for a transitional proceeding with respect to a covered business method patent unless the person or the person's real party in interest or privy has been sued for infringement of the patent or has been charged with infringement under that patent").

⁹⁷ H.R. 1249 § 18(d)(1), 112th Cong., 125 Stat. 284 (2011) (enacted).

⁹⁸ Osenga, *supra* note 82, at 1101 n.106.

the claims.⁹⁹ Another high profile example of a company asserting financial method patents with software elements is litigation initiated by Data Treasury with respect to its check imaging patents. Data Treasury has successfully asserted its check imaging patents against some of the largest financial institutions, resulting in \$350 million in verdicts and settlements thus far.¹⁰⁰

According to some accounts, the Financial Services Roundtable¹⁰¹ lobbied for the inclusion of § 18 in the AIA as a limitation on check processing patents that rely on a scanning method.¹⁰² Section 18 was introduced into the bill by Senator Charles Schumer of New York.¹⁰³ An interesting empirical question is whether the PTO will view the introduction of § 18 in the AIA as a signal regarding the merits of software claims related to financial products. Also, the pending case of *CLS Bank v. Alice Corp.* may provide guidance regarding how the judiciary and the CAFC in particular, view the issue since that case deals with software-related inventions pertaining to financial “settlement risk.”¹⁰⁴ The introduction of § 18 and the *CLS Bank v. Alice Corp.* case might send additional signals to the PTO that more administrative action is necessary to regulate software patents, particularly those related to financial operations.

III. BIOTECHNOLOGY

A. Industry-Specific Patent Concerns

Biotechnology is another technological field where the utility and desirability of patents has been challenged.¹⁰⁵ A frequent concern in this area

⁹⁹ *Lincoln Nat'l Life Ins. Co. v. Transamerica Fin. Life Ins. Co.*, 592 F. Supp. 2d 1087, 1087–91 (N.D. Iowa, 2008).

¹⁰⁰ Robin Y. Richardson, *Bank Lawyers Seek Mistrial*, MARSHALL NEWS MESSENGER (Mar. 19, 2010), http://www.marshallnewsmessenger.com/news/article_7801bc0e-33d4-11df-b240-001cc4c03286.html.

¹⁰¹ The Financial Services Roundtable's mission is to “protect and promote the economic vitality and integrity of its members and the United States financial system.” The Roundtable's membership includes representatives from the 100 largest U.S. banks. *History of the Roundtable*, FIN. SERVS. ROUNDTABLE, <http://www.fsround.org/fsr/about/default.asp> (last visited May 30, 2013).

¹⁰² Robert E. Thomas & Cassandra Aceves, *From TRIPs to ACTA and America Invents – The Increasingly Difficult Battles to Maintain Hegemony over Creative and Inventive Works*, in *THE CHANGING FACE OF AMERICAN PATENT LAW AND ITS IMPACT ON BUSINESS STRATEGY* 15–41 (Daniel R Cahoy & Lynda J. Oswald eds., 2013).

¹⁰³ Mike Marsnik, *Chuck Schumer to Introduce Patent Reform Bill to Make it Cheaper to Fight Back Against Patent Trolls*, TECHDIRT (May 1, 2013, 7:52 AM), <http://www.techdirt.com/blog/innovation/articles/20130430/22152622896/chuck-schumer-to-introduce-patent-reform-bill-to-make-it-cheaper-to-fight-back-against-patent-trolls.shtml>.

¹⁰⁴ *CLS Bank Int'l v. Alice Corp. Pty. Ltd.*, 484 F. App'x 559, 559–60 (Fed. Cir. 2012).

¹⁰⁵ See Simone A. Rose, *Semiconductor Chips, Genes, and Stem Cells: New Wine for New Bottles?*, 38 AM. J. L. & MED. 113, 117 (2012) (discussing how upstream genetic research patents “are the

relates to the desirability of subjecting fundamental and broad aspects of human biological science to the property system.¹⁰⁶ Patents related to genetic sequences, for example, have generated a significant amount of criticism.¹⁰⁷ Naturally occurring genes by themselves, however, are not patentable and claims related to genes vary widely in terms of their scope.¹⁰⁸

A critical distinction that is often overlooked in the popular media and policy debates involves the distinction between a patent claiming ownership of a product or process involving a genetic sequence and ownership of the underlying gene itself.¹⁰⁹ As a matter of law, genes occurring in nature are unpatentable natural phenomena.¹¹⁰ Difficulties arise when genes are manipulated, recombined or isolated in ways that do not occur in nature or when patent claims are attached to these gene-related discoveries.¹¹¹ Another problem involves the use of so called “research tools” involving genetic sequences.¹¹² These tools are used to screen the potential utility of pharmaceutical compounds or to detect genetic mutations that predispose individuals to disease.¹¹³ Research tool patents have generated controversy in high profile cases, as illustrated in the *Association of Molecular Pathology v. Myriad Genetics*¹¹⁴ case discussed *infra* Section I.B.2.

Another controversy surrounding biotechnology patents is their relation to the rising costs of drug treatments. Biotechnology patents are increasingly obtained to develop novel drug compounds and therapeutic techniques that reach consumers after securing regulatory approval.¹¹⁵ Biologic pharmaceuticals, which are derived from living organisms, represent the fastest growing segment of pharmaceuticals; currently twenty five percent of drugs in the development pipeline are biopharmaceuticals.¹¹⁶ This cate-

building blocks for developing a host of ‘downstream’ marketable products with specific utility. Upstream research products are viewed as ‘inchoate technology’ because their downstream uses remain undeveloped without additional research by a broad range of scientists”).

¹⁰⁶ See Michael A. Heller & Rebecca S. Eisenberg, *Can Patents Deter Innovation? The Anticommons in Biomedical Research*, 280 *SCIENCE* 698, 698–701 (1998).

¹⁰⁷ See Christopher M. Holman, *The Impact of Human Gene Patents on Innovation and Access: A Survey of Human Gene Patent Litigation*, 76 *UMKC L. REV.* 295, 352 (2007).

¹⁰⁸ See *id.* at 299–301.

¹⁰⁹ *Id.* at 301.

¹¹⁰ *Id.* at 311.

¹¹¹ *Id.* at 315–16.

¹¹² *Id.* at 340.

¹¹³ Holman, *supra* note 107, at 340.

¹¹⁴ *Ass’n for Molecular Pathology v. U.S. Patent & Trademark Office*, 702 F. Supp. 2d 181 (S.D.N.Y. 2010), *aff’d in part, rev’d in part*, 689 F.3d 1303 (Fed. Cir. 2012), *cert. granted in part*, *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 694 (2012).

¹¹⁵ See Donna M. Gitter, *International Conflicts over Patenting Human DNA Sequences in the United States and the European Union: An Argument for Compulsory Licensing and a Fair Use Exemption*, 76 *N.Y.U. L. REV.* 1623, 1624 (2001).

¹¹⁶ Donna M. Gitter, *Biopharmaceuticals Under the Patient Protection and Affordable Care Act: Determining the Appropriate Market and Data Exclusivity Periods*, in *THE CHANGING FACE OF*

gory of pharmaceuticals, however, accounts for a 17.4% increase in prescription spending, the fastest level of growth of any drug category.¹¹⁷

B. *Institutional Pressure*

1. The Legislature

In three separate circumstances since 1995, Congress held hearings on biotechnology patents. For example, during hearings related to the Biotechnology Process and Patent Protection Act,¹¹⁸ Congress heard testimony from biotechnology constituents advocating in favor of an amendment to the patent statute that would make it easier for biotechnology companies to obtain process patents for genes in light of the CAFC decision in *In re Durden* and PTO practice that had narrowed biotechnology process patents.¹¹⁹ That legislation was ultimately enacted, and biotechnology patents were thus afforded greater protection.

On July 13, 2000, the House of Representatives held a hearing to specifically address issues related to gene patents.¹²⁰ As with business methods, it was a rare instance when Congress devoted an entire hearing to a particular category of patent technology. This hearing specifically addressed the difficulties that the PTO faces when issuing gene patents and the risks of issuing gene patents that are overly broad. For example, Congressman Bruce Berman stated in his opening remarks,

Some are concerned that patent holders, public and private, will impose licensing terms on users of their inventions that will impede medical research or restrict patient access to affordable new clinical tests and therapeutic treatments. There have been a few notable cases already that suggest

AMERICAN PATENT LAW AND ITS IMPACT ON BUSINESS STRATEGY 211–30 (Daniel R Cahoy & Lynda J. Oswald eds., 2013).

¹¹⁷ *Id.*

¹¹⁸ This legislation amended § 103 of the Patent Act. The amendment permits claims for biotechnological processes where at least one of the starting materials or end products are novel and non-obvious. 35 U.S.C. § 103(b) (2012).

¹¹⁹ *Hearing on the Biotechnology Process Patent Protection Act, H.R. 587 Before the Subcomm. on Intellectual Prop., Competition & the Internet of the H. Comm. on the Judiciary*, 102d Cong. 1 (1995) (statement of Henry Linsert, Chairman and CEO, Mark Biosciences, Corp.) (“This legislation focuses on process patents. It is often difficult to obtain process patents for the genetic engineering method of making human proteins because under *In re Durden*, 763 F.2d 1406 (Fed. Cir. 1985), a new process is not patentable if its steps are obvious, even if it uses a novel starting material. The Chairman’s bill would provide protection for the process if the starting material is novel and non-obvious.”). *Id.* The PTO had interpreted *In re Durden* to limit the process patent applications for biotechnology patents in general. *Id.*

¹²⁰ *Gene Patents and Other Genomic Inventions: Hearing Before the Subcomm. on Courts, the Internet, & Intellectual Prop of the H. Comm. on the Judiciary.*, 106th Cong. 25 (2000).

that this is an issue that at least warrants discussion. Some are concerned that patents have issued that may not meet the statutory requirements for patentability and they are concerned that the Patent and Trademark Office will not adequately elevate the bar to patentability in their new utility guidelines.¹²¹

In 2007, Congressman Xavier Becerra introduced a bill that would have amended the Patent Act to make gene patents altogether unlawful.¹²² The negative public welfare consequences of biotechnology patents were also discussed in 2009 when Congress enacted the Biologics Price Competition and Innovation Act (BPCI). The BPCI allows manufacturers of follow-on proteins (biosimilars) to file abbreviated applications for Food and Drug Administration (FDA) approval.¹²³ This would allow the biosimilar manufacturers to avoid costly pre-clinical and clinical testing requirements. The BPCI also provides biosimilar manufacturers with access to data generated by the branded manufacturers.¹²⁴ All of these provisions were intended to reduce the high cost of entry that generic biosimilar drug manufacturers face due to biotechnology and gene therapy patents.

One can therefore glean from the congressional record that, like business method patents,¹²⁵ biotechnology patents are one of the few technological areas that Congress may be willing to directly oversee, signaling the controversial nature of this technological field. From a positive political theory standpoint, this indicates that Congress expects that this technological area will be subject to extraordinary levels of regulation. The PTO will then take that as a cue to regulate biotechnology patents with additional technology-specific rules.¹²⁶

2. The Judiciary

Gene patents have been attacked as unethical¹²⁷ and claimed as fundamental aspects of nature—given the advent of the Genome Project¹²⁸—and as impediments to innovation under an anti-commons theory.¹²⁹ The courts,

¹²¹ *Id.*

¹²² H.R. 977, 110th Cong. § 2 (2007).

¹²³ Gitter, *supra* note 116, at 215.

¹²⁴ *Id.* at 214.

¹²⁵ See generally Orozco, *supra* note 4 (discussing business method patents).

¹²⁶ See CORNELIUS M. KERWIN, RULEMAKING: HOW GOVERNMENT AGENCIES WRITE LAW AND MAKE POLICY 6 (1994) (discussing how administrative agencies engage in rulemaking to fill policy or legal vacuums under the Administrative Procedure Act, and that when the demands on these administrative institutions increase, the more likely administrative rulemaking expands).

¹²⁷ Lori B. Andrews & Jordan Paradise, *Gene Patents: The Need for Bioethics Scrutiny and Legal Change*, 5 YALE J. HEALTH POL'Y L. & ETHICS 403, 404 (2005).

¹²⁸ Heller & Eisenberg, *supra* note 106, at 698.

¹²⁹ *Id.*

however, have held a somewhat mixed view on this issue. The Supreme Court, for example, allowed a bio-engineered bacteria to be patented in *Diamond v. Chakrabarty*, famously saying that Congress intended patentable subject matter to include “anything under the sun that is made by man.”¹³⁰ Since that decision, the courts have held many sorts of organisms, even mammals, are patentable within the goals and meaning of the Patent Act.¹³¹

Recently, a federal district court held in *Association of Molecular Pathology v. Myriad Genetics* that a patent issued on a genetic sequence used to detect breast cancer was not patentable subject matter, reversing the settled expectations of several years of patent law precedent related to genetic sequences.¹³² On appeal, the CAFC reversed the district court’s holding that the genetic sequences in question were unpatentable per se.¹³³

The U.S. Supreme Court granted certiorari in the *Myriad* case in December 2012. The case will have a major impact on the patentability of genetic sequences. There is a chance that the Supreme Court will remove genetic sequences from patentability altogether or limit the decision to genetic sequences used in methods to diagnose the propensity to develop diseases such as cancer. The Supreme Court has vacated a CAFC decision in light of its recent holding in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, where the Court held that certain claims in medical diagnostic patents were unpatentable because they applied to natural phenomena.¹³⁴

3. The Executive Branch

The FTC did not criticize gene patents in its influential report, *To Promote Innovation: The Proper Balance of Competition and Patent Law Policy*.¹³⁵ The National Institute of Health (NIH),¹³⁶ however, has voiced concerns over gene patents and has exerted considerable influence over

¹³⁰ *Diamond v. Chakrabarty*, 447 U.S. 303, 309–18 (1980) (holding that living organisms can be patentable).

¹³¹ See U.S. Patent No. 4,736,866 (Issued Apr. 12, 1988) (the Harvard OncoMouse patent).

¹³² *Assoc. for Molecular Pathology v. Myriad Genetics, Inc.*, 2012 U.S. App. LEXIS 17679, *51 (Fed. Cir. 2012).

¹³³ *Id.* (holding that “the composition claims and the screening claim involving growing a transformed host cell meet the standards for patent eligibility, while the claimed methods for “analyzing” or “comparing” do not”).

¹³⁴ *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S.Ct. 1289, 1294 (2012).

¹³⁵ *FTC Report*, *supra* note 65, at 130 (“Although panelists agreed that poor patent quality can adversely affect innovation, disagreement existed whether patent quality in the biotechnology area was any different from that in other industries.”).

¹³⁶ The NIH is an agency of the Department of Health and Human Services and is the primary agency within the U.S. government responsible for biomedical and health-related research.

government and PTO policy with respect to gene patents. As stated by a top PTO official, the agency views the NIH as one of the most influential stakeholders in the field of gene patents.¹³⁷ One reason for this view is that the NIH is one of the primary federal funding agencies sponsoring genetic research that will become the subject of a patent application.¹³⁸ The NIH does not advocate for the categorical elimination of gene patents. It does, however, advocate in favor of information sharing and restraint in enforcing these rights. For example, according to the NIH,

[NIH] expects that NIH-supported genotype-phenotype data made available through the NIH GWAS data repository and all conclusions derived directly from them will remain freely available, without any licensing requirements, for uses such as, but not necessarily limited to, markers for developing assays and guides for identifying new potential targets for drugs, therapeutics, and diagnostics. The intent is to discourage the use of patents to prevent the use of or block access to any genotype-phenotype data developed with NIH support. The NIH encourages broad use of NIH-supported genotype-phenotype data that is consistent with a responsible approach to management of intellectual property derived from downstream discoveries, as outlined in the NIH's Best Practices for the Licensing of Genomic Inventions and its Research Tools Policy.¹³⁹

Another criticism of gene patents arose from a report issued by the Department of Health and Human Services Secretary's Advisory Committee on Genetics, Health, and Society. This report, entitled *Gene Patents and Licensing Practices and Their Impact on Patient Access to Genetic Tests*, was issued April 2010.¹⁴⁰ This report advocates for a statutory change that provides immunity from gene patent liability to "anyone who infringes a patent on a gene while making, using, ordering, offering for sale, or selling a genetic test for patient care purposes," or for "those who use patent-protected genes in the pursuit of research."¹⁴¹

¹³⁷ *Gene Patents and Other Genomic Inventions: Hearing on H.R. 400 Before H. Subcomm. on Intellectual Property, Competition & the Internet*, 106th Cong. 35 (2000) (statement of Todd Dickinson, Director of the PTO) ("NIH is one of our most important customers in this area. As a matter of fact, the largest number of gene sequence patents that issue have issued to the NIH, so they are very concerned about this topic. In some of the areas in which they've done research, the human genome project, for example, they decided not to file patent applications and dedicated that information to the public.")

¹³⁸ Anna Schissel, Jon F. Merz & Mildred K. Cho, *Survey Confirms Fears About Licensing of Genetic Tests*, 402 NATURE 117, 117–18 (1999) (stating that among thirty-three gene patents surveyed in 1999, sixty-seven percent had been funded, at least partially, by the U.S. federal government).

¹³⁹ DEP'T OF HEALTH AND HUMAN SERVS., NIH POLICY FOR SHARING DATA OBTAINED IN NIH SUPPORTED OR CONDUCTED GENOME-WIDE ASSOCIATION STUDIES (GWAS) (2008), available at <http://grants.nih.gov/grants/guide/notice-files/NOT-OD-07-088.html>.

¹⁴⁰ DEP'T OF HEALTH AND HUMAN SERVS. SEC'Y'S ADVISORY COMM. ON GENETICS, HEALTH AND SOC'Y, GENE PATENTS AND LICENSING PRACTICES AND THEIR IMPACT ON PATIENT ACCESS TO GENETIC TESTS (Apr. 2010), available at http://oba.od.nih.gov/oba/sacghs/reports/SACGHS_patents_report_2010.pdf.

¹⁴¹ *Id.*

In 2006, the National Research Council (NRC) published, *Reaping the Benefits of Genomic and Proteomic Research: Intellectual Property Rights, Innovation, and Public Health*.¹⁴² In this comprehensive report, the NRC provided recommendations that support the NIH's policy of information-sharing and universities, continuing the right to retain "in their license agreements the authority to disseminate their research materials to other research institutions and to permit those institutions to use patented technology in their nonprofit activities."¹⁴³

Additionally, in response to rising healthcare costs, President Obama has called for the biologic pharmaceutical exclusivity term under the BPCI to be shortened from twelve years to seven years to promote economic growth and reduce the deficit by reducing public healthcare costs.¹⁴⁴ In 2011, the FDA decided whether it could, under the BPCI, begin to review biosimilar applications during the twelve-year exclusivity period mentioned in the statute.¹⁴⁵ In response to calls from the Executive branch and some senators who advocated for increased public access to biosimilars, the FDA resolved the issue in favor of allowing biosimilar manufacturers to submit their applications within the twelve-year exclusivity period.¹⁴⁶

Finally, the Department of Justice filed an amicus brief in the Supreme Court case *Association for Molecular Pathology v. Myriad Genetics*.¹⁴⁷ It is very rare for the Department of Justice to file an amicus brief in a patent case. In this case, the Department of Justice took the position that isolated, naturally occurring human genetic sequences are not patentable.

C. *The PTO's Biotechnology-related Administrative Patent Levers*

The PTO was caught in a difficult scenario after the implementation of the Biotechnology Process and Patent Protection Act,¹⁴⁸ because that legislation was aimed at facilitating the patenting of biotechnology-related innovations in light of the PTO's and the CAFC's narrowing of the scope of biotechnology patents. The PTO still had to balance the competing concerns expressed by stakeholders related to the potentially chilling effect of gene patents on innovation. To deal with this scenario, the PTO published the *Revised Interim Utility Examination Guidelines* in the Federal Register

¹⁴² NAT'L RESEARCH COUNCIL, REAPING THE BENEFITS OF GENOMIC AND PROTEOMIC RESEARCH: INTELLECTUAL PROPERTY RIGHTS, INNOVATION, AND PUBLIC HEALTH (2006), available at http://www.nap.edu/catalog.php?record_id=11487.

¹⁴³ *Id.* (Recommendations 1 & 5).

¹⁴⁴ Gitter, *supra* note 115, at 214.

¹⁴⁵ Gitter, *supra* note 115, at 216.

¹⁴⁶ *Id.*

¹⁴⁷ Brief for the United States as Amicus Curiae Supporting Neither Party, *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 2107 (2013) (No 12-398).

¹⁴⁸ 35 U.S.C. §103 (2012).

on December 21, 1999.¹⁴⁹ The rules were adopted to deal with fears that upstream genes would be patentable and hinder research and innovation through patent thickets.¹⁵⁰ The PTO was required to clarify the level of utility that genetic sequence patents would have to satisfy, because neither the courts nor Congress had spoken on this matter.¹⁵¹ As scholars have noted, the patent-utility requirement is often a policy lever that the courts have used to narrow or expand patent scope in cases where technological challenges are present.¹⁵² In this case, the PTO used this well-known policy lever to suit its own purposes.

Speaking on this topic at a congressional hearing, the PTO Director stated,

In order to assure the highest standards of utility, the PTO recently published revised utility examination guidelines in the Federal Register. These new utility guidelines, which we expect to finalize this fall, require patent applicants to explicitly identify, unless it's already well established, a specific, substantial, and credible utility for all inventions. In other words, one simply can't patent a gene itself without also clearly disclosing a real world use . . . [o]ne simply cannot patent a gene itself without also clearly disclosing a use to which that gene can be put. As a result, we believe that hundreds of genomic patent applications may be rejected by the PTO, particularly those that only disclose theoretical utilities.¹⁵³

A white paper issued by the PTO in 2000 also targeted gene patents and discussed using patent pools as a method for reducing their harmful impact on information sharing and innovation:

The use of patent pools in the biotechnology field could serve the interests of the public and private industry, a win-win situation. The public would be served by having ready access with streamlined licensing conditions to a greater amount of proprietary subject matter. Patent holders would be served by greater access to licenses of proprietary subject matter of other patent holders, the generation of affordable pre-packaged patent "stacks" that could be easily licensed, and an additional revenue source for inventions that might not otherwise be developed. The end result is that patent pools, especially in the biotechnology area, can pro-

¹⁴⁹ Revised Interim Utility Examination Guidelines: Request for Comments, 64 Fed. Reg. 71440, 71441(1999).

¹⁵⁰ Benjamin & Rai, *supra* note 6, at 303.

¹⁵¹ As stated by the PTO in its guidelines, "[a] purified DNA *molecule* isolated from its natural environment, on the other hand, is a chemical compound and is patentable if all the statutory requirements are met. An isolated and purified DNA molecule may meet the statutory utility requirement if, *e.g.*, it can be used to produce a useful protein or it hybridizes near and serves as a marker for a disease gene. Therefore, a DNA molecule is not *per se* unpatentable for lack of utility, and each application claim must be examined on its own facts." Utility Examination Guidelines, 66 Fed. Reg. 1092–02, 1094 (Jan. 5, 2001) (emphases in original).

¹⁵² Burk & Lemley, *supra* note 17, at 1644–45.

¹⁵³ *Hearing on Gene Patents and Other Genomic Inventions Before the Subcomm. on Intellectual Property, Competition & the Internet, Comm. on the Judiciary of the H.R.*, 106th Cong. 4 (2000) (statement of Todd Dickinson, Director of the PTO), available at <http://www.uspto.gov/web/offices/ac/ahrpa/opa/bulletin/genomicpat.pdf>.

vide for greater innovation, parallel research and development, removal of patent bottlenecks, and faster product development.¹⁵⁴

In 2010, the PTO expanded its pilot peer-to-patent process to encompass biotechnology patents.¹⁵⁵ The peer-to-patent project was an effort undertaken by the PTO in June 2007 to open up the application review process to external reviewers who may submit relevant prior art and statements to a patent examiner.¹⁵⁶ Originally, this limited pilot project was undertaken to examine software patents, but shortly after its announcement business methods and biotechnology were added to its scope.¹⁵⁷

D. *The America Invents Act's Impact on the PTO's Biotechnology Policymaking*

The AIA has a provision that specifically directs the PTO to engage in a study on "effective ways to provide independent, confirming genetic diagnostic test activity where gene patents and exclusive licensing for primary genetic diagnostic tests exist."¹⁵⁸ The sponsor of the AIA amendment requiring the PTO's study was Representative Debbie Wasserman, a cancer survivor.¹⁵⁹ The goal of this study is to shed light on patents that involve genetic diagnostic tests and to determine whether patients suffer detriment because of the exclusivity granted to these testing procedures. The study will be prepared by the PTO's Chief Economist and will be submitted to Congress, with recommendations for potentially excluding genetic testing procedures from patentability or by allowing for compulsory licenses that would allow third parties to provide second opinion genetic diagnostic tests. This provision in the AIA is interesting because the findings in the PTO's study may be used to promote substantive changes to the law and motivate further congressional hearings on the role of genetic testing patents. This also highlights the potentially important policy role that the PTO's Office

¹⁵⁴ PTO, PATENT POOLS: A SOLUTION TO THE PROBLEM OF ACCESS IN BIOTECHNOLOGY PATENTS? 11 (Dec. 5, 2000), available at <http://www.USPTO.gov/web/offices/pac/dapp/opla/patentpool.pdf>.

¹⁵⁵ PTO, *Peer Review Pilot FY2011*, available at http://www.uspto.gov/patents/init_events/peerpriorartpilotindex.jsp (last modified May 31, 2011).

¹⁵⁶ PTO announcement, *Peer Review Pilot Program—Original (Closed)*, available at http://www.USPTO.gov/patents/init_events/fy07_peer_pilot.jsp (last modified Nov. 8, 2011).

¹⁵⁷ PTO announcement, *Extension and Expansion of Pilot Concerning Public Submission of Peer Reviewed Prior Art*, available at <http://www.USPTO.gov/web/offices/pac/dapp/opla/preognotice/peerreviewexpansion071708.pdf>.

¹⁵⁸ Leahy-Smith America Invents Act, Pub. L. No. 112-29, §27(a), 125 Stat. 284 (2011).

¹⁵⁹ See Richard Leiby, *After Cancer, Lawmaker Urges Tests*, WASHINGTON POST (Mar. 24, 2009), http://articles.washingtonpost.com/2009-03-24/news/36811490_1_wasserman-schultz-breast-early-act.

of the Chief Economist might play in future substantive patent policymaking within the PTO and in collaboration with other key government actors.

The PTO's study has been extended beyond the original due date to collect more information. It is also likely that the PTO is awaiting the Supreme Court's highly relevant decision in *Association for Molecular Pathology v. Myriad Genetics*. As discussed above, that case involves a review of the patentability of methods using human genes to diagnose the propensity to develop cancer.

IV. CLEAN TECHNOLOGY

A. *Industry-Specific Patent Concerns*

The perception of clean technology patents is not that they are controversial and that PTO administrative patent levers are necessary to constrain them as in the cases of software or gene-related patents. Rather, the argument is that clean technology patents should be promoted with patent levers as a matter of national security and competitiveness in response to fire alarms raised by industry and policymakers. Interestingly, this category of innovation triggers institutional concerns that, from a policy perspective, veer towards aggressive encouragement rather than mitigation. According to one scholar, the clean technology industry needs governmental support for three reasons: (1) America's over dependence on foreign energy; (2) global climate change concerns; and (3) an international race to dominate the renewable energy industry.¹⁶⁰

Regulating clean technology patents, however, poses several challenges. One major challenge involves fairly classifying the technologies that need support.¹⁶¹ Defining clean technology is not a straightforward matter. For example, some clean coal technologies might reduce greenhouse gas emissions yet still emit pollutants. It is unclear whether to label such a technology as a clean technology since its environmental impact is mixed.¹⁶² Clean technologies are defined by the United Nations as energy generating technologies that have the potential for reducing greenhouse gases.¹⁶³

¹⁶⁰ Sarah Tran, *Expediting Innovation*, 36 HARV. ENV. L. REV. 123, 129–37 (2012).

¹⁶¹ This challenge is also present in the business method-related arts. Orozco, *supra* note 4, at 22–24.

¹⁶² UNITED NATIONS, *Patents & Clean Energy: Bridging the Gap Between Evidence and Policy*, 14–15 (2010), available at http://www.unep.ch/etb/events/UNEP%20EPO%20ICTSD%20Event%2030%20Sept%202010%20Brussels/Study%20Patents%20and%20clean%20energy_15.9.10.pdf.

¹⁶³ *Id.*

B. *Institutional Pressure*

1. The Legislature

The clearest signal Congress has sent regarding the importance of clean technology patents was expressed by Senator Robert Menendez, when he introduced a section in the America Invents Act that allows the PTO to prioritize applications based on nationally important technologies. The Senator specifically made the case for clean technologies when he introduced the amendment and stated,

My amendment would allow the Patent Office to prioritize patent applications that are vital to our national interests. Specifically, the amendment says the Patent Office Director may prioritize the examination of applications for technologies that are important to the national economy or national competitiveness, such as green technologies designed to foster renewable energy, clean energy, biofuels, agricultural sustainability, environmental quality, conservation, or energy efficiency. Currently, the Patent Office runs a green technology pilot program. An application for green technologies may be fast-tracked, leading to an expedited decision. This fast-track process is reserved for a small number of applications that are vitally important, so it has little to no adverse impact on other patent applications.¹⁶⁴

2. The Judiciary

The courts have had the chance to rule on clean-technology patents. In some instances, courts endorsed the proposition that green technologies are socially useful activities that should be widely diffused under particular circumstances.¹⁶⁵ There is, for example, growing concern that the courts need to restrict the harmful economic impact of clean-technology patents held by non-practicing entities. The courts are well equipped to prevent this by applying the policy levers related to awarding a reasonable royalty instead of granting a permanent patent injunction. This shifts the patent system from a property rule to a liability rule regime in cases where this is warranted.¹⁶⁶

In *Paice v. Toyota*, a district court refused to grant Paice a permanent injunction after a jury had returned a verdict of infringement against Toyo-

¹⁶⁴ 157 Cong. Rec. S1052-53 (daily ed. Mar. 1, 2011) (amendment no. 24 and statement of Sen. Robert Menendez).

¹⁶⁵ *Paice LLC v. Toyota Motor Corp.*, No. 2:04-CV-211, 2006 WL 2385139 (E.D. Tex. Aug. 16, 2006) (finding that Toyota could continue to infringe Paice's patents and pay a reasonable royalty, and stating that "Toyota's dominance in the hybrid industry and the popularity of its infringing vehicles have enhanced Toyota's reputation as a 'green' company").

¹⁶⁶ *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 392-93 (2006).

ta.¹⁶⁷ Applying the *eBay v. MercExchange* factors for determining equitable relief, the district court judge found that the balance of hardships would fall on Toyota and an injunction would likely stifle “the burgeoning hybrid market.”¹⁶⁸ According to one commentator, the impact of *eBay v. MercExchange* has been to encourage settlements in cases that involve other green technologies, such as LED lights and smart grids.¹⁶⁹

3. The Executive Branch

The issue of energy security has risen to the forefront of policy discussions within the Executive branch of government. President Obama has prioritized energy security as a top-level concern within his administration. In 2011, the White House published its *Blueprint for a Secure Energy Future*.¹⁷⁰ This report reiterates the President’s goal of generating 80% of domestic electricity from a variety of clean sources.¹⁷¹ In August 2012, the Obama Administration also issued the final version of new rules that require automakers to nearly double the average fuel economy of new cars and trucks by 2025.¹⁷² Proponents of the new rules argue that the rules could generate hundreds of thousands of jobs by increasing demand for new clean technologies.¹⁷³

The impetus for clean technology has international dimensions as well.¹⁷⁴ As stated by the President, the issue involves one of national security and competitiveness in light of the fact that many clean technologies are being developed by and are owned by other nations, such as China.¹⁷⁵

¹⁶⁷ Paice LLC v. Toyota Motor Corp., No. 2:04-CV-211, 2006 WL 2385139, *5–*6 (E.D. Tex. Aug. 16, 2006).

¹⁶⁸ *Id.* at *6.

¹⁶⁹ Eric L. Lane, *Keeping the LEDs on and the Electric Motors Running: Clean Tech in Court after eBay*, 2010 DUKE L. & TECH REV. 13, 31–35 (2010).

¹⁷⁰ THE WHITE HOUSE, *BLUEPRINT FOR A SECURE ENERGY FUTURE* (Mar. 30, 2011), available at http://www.whitehouse.gov/sites/default/files/blueprint_secure_energy_future.pdf.

¹⁷¹ *Id.* at 6.

¹⁷² Bill Vlasic, *U.S. Sets High Long-Term Fuel Efficiency Standards*, N.Y. TIMES, Aug. 28, 2012, at B1.

¹⁷³ *Id.*

¹⁷⁴ For example, the United Nations Framework Convention on Climate Change (UNFCCC) article 4.5 requires developed countries to “take all practicable steps to promote, facilitate and finance, as appropriate, the transfer of, or access to environmentally sound technologies and know-how to other Parties, particularly developing country parties to enable them to implement the provisions of the Convention.” United Nations, *United Nations Framework Convention on Climate Change*, art. 4.5 (1992).

¹⁷⁵ See President Barack Obama, State of the Union Address (Jan. 25, 2011), in 157 CONG. REC. H457-62 (daily ed. Jan. 25, 2011); see also Daniel R. Cahoy, *Inverse Enclosure: Abdicating the Green Technology Landscape*, 49 AM. BUS. L.J. 805, 822–23 (2012).

Clean technologies also reduce dependence on foreign oil, which is viewed as a national security risk.¹⁷⁶

C. *The PTO's Clean Technology-related Administrative Patent Levers*

The most significant administrative patent lever implemented by the PTO to deal with clean technology is the Green Technology Pilot Program (Pilot Program). This program accelerates processing of applications on environmentally beneficial inventions. The program was criticized as being overly narrow in its admissions criteria,¹⁷⁷ and in 2010, the PTO announced a revision to the Pilot Program that eliminated the narrow eligibility criteria for expedited processing under the original program.¹⁷⁸

However, the Pilot Program is not the only patent prioritization program.¹⁷⁹ For example, the Accelerated Examination Program allows patent applicants across any technology field to obtain a prioritized examination so long as the applicants comply with some rather onerous requirements, such as submitting an "Information and Disclosure Statement" to the PTO. In general, the PTO has the administrative authority to prioritize applications based on its statutory authority to "facilitate and expedite the processing of patent applications."¹⁸⁰ Commentators point out that the significant backlog at the PTO justifies prioritizing certain patents over others.¹⁸¹ Currently, the Pilot Program is closed because the program met its goal of receiving 3,500 applications.

D. *The America Invents Act's Impact on the PTO's Clean Technology Policymaking*

The AIA's broad language allows the PTO to prioritize patent applications that are important for national competitiveness. The AIA states that the PTO,

¹⁷⁶ Cahoy, *supra* note 33, at 808.

¹⁷⁷ See Eli Segall, *Green Technology Patent Push Has Some Worried*, SILICON VALLEY BUS. J., Feb. 14, 2010, available at <http://www.bizjournals.com/sanjose/stories/2010/02/15/story3.html?page=all>.

¹⁷⁸ See Lily J. Ackerman, *Prioritization: Addressing the Patent Application Backlog at the United State Patent and Trademark Office*, 26 BERKELEY TECH. L.J. 67, 74 (2011).

¹⁷⁹ See Tran, *supra* note 160, at 138–39. For example, the Accelerated Examination Program allows patent applicants across any technology field to obtain a prioritized examination as long as they comply with some rather onerous requirements such as submitting an Information and Disclosure Statement to the PTO.

¹⁸⁰ 35 U.S.C. § 2(b)(2)(C) (2012).

¹⁸¹ See Tran, *supra* note 160, at 138 ("the mounting backlog . . . diffuses the incentives for the innovation and commercialization of key technologies").

may, subject to any conditions prescribed by the Director [of the PTO] and at the request of the patent applicant, provide for prioritization of examination of applications for products, processes, or technologies that are important to the national economy or national competitiveness without recovering the aggregate extra cost of providing such prioritization, notwithstanding section 41 or any other provision of law.¹⁸²

Given the legislative history behind this unique provision and the support Senator Menendez exhibited for this provision in relation to environmentally beneficial inventions,¹⁸³ it seems natural that the PTO will use this provision to expand its use of administrative patent levers involving the prioritization of clean technology patents. In addition, fire alarms raised in the executive branch will likely propel the PTO to regulate patents in this technology in an expedient manner consistent with positive political theory.

V. CONCLUSION

This article has highlighted additional technological areas where the PTO seeks to expand its substantive policymaking role. As illustrated in this article, the PTO develops administrative patent levers to implement broad substantive policy-oriented goals. Administrative patent levers are defined as substantive PTO rules that are technology-specific and guided primarily by policy motivations and institutional signals sent by actors across all branches of government.¹⁸⁴

In light of the AIA, the PTO is likely to increase its activities that cross into the boundary of substantive and policy-oriented rulemaking. This behavior has the potential to address some technology-specific challenges facing the PTO and the nation. However, this activity is likely to generate controversy because the CAFC will likely limit the PTO's authority, as evidenced by its prior decisions that have limited the PTO's substantive rulemaking authority. Defining the specific limits and contours of the PTO's substantive rulemaking authority is an important legal issue that will likely have to be resolved by the courts in the near future.

¹⁸² 35 U.S.C. § 2(b)(2)(G) (2012).

¹⁸³ See *supra* Part III.B.1.

¹⁸⁴ Orozco, *supra* note 4, at 1.



THE 20TH CENTURY DECLINE IN THE PRIVATE COST TO WOMEN
OF NON-MARITAL SEX: CAUSES AND CONSEQUENCES

*Lloyd R. Cohen**

*Sexual intercourse began
In nineteen sixty-three
(Which was rather late for me)—
Between the end of the Chatterley ban
And the Beatles' first LP.
Up till then there'd only been
A sort of bargaining,
A wrangle for the ring,
A shame that started at sixteen
And spread to everything.
Then all at once the quarrel sank:
Everyone felt the same,
And every life became
A brilliant breaking of the bank,
A quite unlosable game.
So life was never better than
In nineteen sixty-three
(Though just too late for me)—
Between the end of the Chatterley ban
And the Beatles' first LP.*

PHILIP LARKIN, *Annus Mirabilis*, in HIGH WINDOWS 34 (1974).

INTRODUCTION

Non-marital sex in the United States—premarital, extramarital, and postmarital—went through a radical change over the course of the twentieth

* J.D., Ph. D., Professor, George Mason University School of Law. I am grateful for the generous support of the Law and Economics Center at George Mason University School of Law and the International Center for Economic Research (ICER) in Torino, Italy. I am also particularly grateful to my colleague Nelson Lund for one of his typical off-the-cuff, insightful comments that led me to rethink and broaden the central dynamic of my thesis, and to the invaluable research help of Vanessa Shakib and Jason Allan Derr.

century. It both increased markedly in frequency and availability and changed dramatically in character. The pace of change was most rapid in a period of perhaps ten years beginning in the early 1960s.¹ What accounts for this revolution in such a core human activity? How and why did we shift from a world in which sex outside of marriage—while, while not unavailable—was not nearly so abundant, was generally unreliable, tawdry, and for women, usually shameful, to one in which it was readily and widely available, seen as part of the natural course of unmarried life, and where the failure to engage in sex with some regularity was generally viewed as harmful and shameful?²

I am aware of no fundamental change in the drive for sex or its ontological and psychological meaning that explains this revolution. I will spend most of this article providing an economic explanation of this transformation, and particularly its pace in the 1960s. I will focus primarily on the plummeting costs to women of engaging in sex.

That waning of cost came in two different, but related, dimensions. First, there was a dramatic amelioration and even reversal in the negative material consequences of sex. Second, the reputational price that women

¹ See Linda J. Waite & Kara Joyner, *Emotional Satisfaction and Physical Pleasure in Sexual Unions: Time Horizon, Sexual Behavior, and Sexual Exclusivity*, 63 J. MARRIAGE & FAM. 247, 247 (2001). For detailed histories of the sexual revolution in America, see generally DAVID ALLYN, *MAKE LOVE, NOT WAR: THE SEXUAL REVOLUTION: AN UNFETTERED HISTORY* (2000) (discussing the sexual revolution); STEVEN MINTZ & SUSAN KELLOGG, *DOMESTIC REVOLUTIONS: A SOCIAL HISTORY OF AMERICAN FAMILY LIFE* (1998); JOHN HEIDENRY, *WHAT WILD ECSTASY: THE RISE AND FALL OF THE SEXUAL REVOLUTION* (1997); JOHN D'EMILIO & ESTELLE B. FREEDMAN, *INTIMATE MATTERS: A HISTORY OF SEXUALITY IN AMERICA* (2d ed. 1988); ELAINE TYLER MAY, *HOMEWARD BOUND: AMERICAN FAMILIES IN THE COLD WAR ERA* (1988).

² See, e.g., E. Kay Trimberger, *Blossoming in Middle Age: It's Not All About Sex for Women from 45 to 59*, S.F. CHRON., Apr. 23, 2006, <http://www.sfgate.com/opinion/article/Blossoming-in-middle-age-It-s-not-all-about-sex-2498779.php> (noting that “[w]omen were not expected to enjoy sex, and any female with a strong libido—especially a middle-age’ woman—was regarded as suspect or even deviant. But now the pendulum has swung in the opposite direction. All women are expected to retain a strong sex drive well into middle age. For female Boomers who want women to remain sexually active, it’s great to have this new cultural validation. But women with less sexual desire or opportunity may feel inadequate and inferior”); WENDY SHALIT, *A RETURN TO MODESTY: DISCOVERING THE LOST VIRTUE* 36 (1999) (observing that the contemporary pressures on young women are such that “[a]s long as you seem to be ‘hooking-up’ on a regular basis, no one has a thing to say to you, but if you’re alone, people become very concerned and start to give you lots of advice”). An examination of today’s popular television shows reveals the adoration of sex as a form of recreation, to be engaged in as often, and with as few strings attached, as possible. The exchange between three single friends in their 30s on the highly rated cable show, *Sex and the City*, is typical:

Samantha: I never leave underwear at a guy’s place because I never see it again.

Charlotte: What happens to it?

Samantha: Nothing; I just never go back.

Carrie: Doesn’t that get a little expensive, disposing of lingerie every time you sleep with a guy?

Samantha: That’s why I stopped wearing underwear on dates.

Sex and the City: Evolution (HBO television broadcast Aug. 15, 1999).

had to pay for engaging in non-marital sex plummeted in a manner analogous to a neighborhood “tipping” model.³ Beyond exploring the causes, I am concerned with the consequences of this change in practice and attitude. I will discuss the immense negative externalities—both pecuniary and real—that have come in the train of our more libertine practices and attitudes. That I will suggest that the earlier more prudish and chaste sexual culture had a number of broad societal benefits that have now been eroded will hardly be surprising. Grounding such an observation in the language and concepts of economics will, I hope, prove informative and thought provoking.

I. THE MARKET FOR SEX

How are we to understand the economics of sex? We begin with a simple proposition that men want women, and women want men.⁴ Each wants a variety of things from the other, the most important of which are relationships. It is not merely that, as in all relational contracts the process of exchange is facilitated by a relationship entailing some degree of mutual understanding and trust, but rather that the relationship itself is the principal good that is desired.

Do not misunderstand me. The word *relationship* in the modern argot of romantic/sexual dealings between men and women has taken on the meaning of a necessarily positive, productive, quasi-religious bond. My use of the term is more agnostic and extends to brutal, subjugating, and otherwise exploitive relationships, valued by one or both parties precisely because of those qualities. Whatever the relation in which one desires to stand with respect to another, it requires, or at least is facilitated by, the other’s reciprocal positioning. And so the acquiescence and cooperation of the other are required. This is not so much true because we live in a free society in which all are at liberty to enter and exit the relationships they chose as it is a matter of the nature of human consciousness. The owner of a slave with the stoic bearing of Epictetus could never feel like his master—though he still might get a good deal of work out of him.

A relationship (sexual or asexual) between a man and a woman—if voluntary in an inward sense—is itself an exchange even in the absence of the provision of other supplementary goods or services by either party. But, these relationships are most interesting and important as social, economic, legal, and political phenomena because they entail other emotional and

³ See Thomas C. Schelling, *A Process of Residential Segregation: Neighborhood Tipping*, in *RACIAL DISCRIMINATION IN ECONOMIC LIFE* 157–84 (Anthony H. Pascal ed., 1972) (explaining the operation of the neighborhood tipping model in the context of residential segregation).

⁴ The sex we are concerned with is an exchange between men and women. I exclude from the current discussion those with other sexual orientations.

concrete exchanges as well. While men, women, and their relationships are heterogeneous, members of each category can usefully be understood as sharing broad similarities. It is first of all those broad similarities that I will explore. Thus, I beg the reader's indulgence to forswear the response that not all men, women, and relationships are as I describe them.⁵

What is the character of this exchange between men and women? First, in comparison to other affective relationships between contemporaries, considerably more of both the purely relational exchanges and virtually all the concrete exchanges between men and women are reciprocal rather than symmetrical. That is, this is less about sharing the same functions, and thereby gaining scale economies and insurance, than it is about performing different functions so that each is provided with services from the other that he/she cannot nearly—if at all—so well provide for him/herself. This core reciprocity is considerably less prominent in our era than it was in times past. The many markets and state services available in an advanced economy allow men and women to acquire or earn what they otherwise would have required a wife or husband to supply. That said, the core sexual and procreative function still generally requires a member of the opposite sex.

Second, given that marriage, the quintessential long-term relationship, is the principal non-consanguineous relationship between men and women, it is hardly surprising that exchanges do not remain cabined within discrete "services." In virtually all "sexual" exchanges between men and women—and in marriage most completely—the exchange is typically not: sex for sex; sex for companionship; companionship for protection; or—as in the typical market exchange—any of these things for money. Instead, the entire congeries of relationships, services, and things provided by one are exchanged for a reciprocal set provided by the other.

Sex is thus a grand and complex exchange with the roots of the constituents' desires and their satisfaction deep in the human soul. Humility might caution a humble economist to give this subject a wide berth; it is seemingly beyond comprehension let alone modeling. But, the virtue of the shallow discipline of economics is that it is a sturdy tool that, while not yielding deep insights, does reveal simple and often overlooked truths.

Our investigation must begin somewhere, so I choose the one obvious entry point, sex in the small. I start with sex in the narrow sense for two reasons. First, because it lies at the bottom both of the relationship between

⁵ By way of illustration of the breadth of this heterogeneity, consider the fact that there are hundreds of cases nationwide of unconsummated marriages. Brian Alexander, *When the Train Never Leaves the Station*, NBCNEWS.COM (Aug. 14, 2008, 8:34 AM), http://www.nbcnews.com/id/26161185/ns/health-sexual_health/t/when-train-never-leaves-station/#.Ua0-zLXvvAt. In her 36-year career, Dr. Domeena Renshaw, a psychiatry professor at Loyola University Health System has treated 202 couples that have not consummated their marriages despite a strong desire of both parties to do so. *Id.* Educated estimates indicate that approximately one percent of married couples have not had intercourse, with the reasons ranging from ignorance about sexual functions to anxiety. *Id.*

men and women, and second, it is the good whose declining cost and consequently increased supply with which this article is concerned. The value of sexual intercourse and accompanying sexual acts, because they carry powerful meanings to the parties that are rooted in how the other and the relationship to the other are perceived, cannot be treated as a homogeneous commodity; sex with one person is not equivalent to sex with another. And, the meanings that attach to the act usually require that in order to maximize the sum of the value to the parties the exchange must take the form of barter rather than a cash transaction. That is—as I will discuss more fully shortly—sex with a woman who only acquiesces in exchange for cash is generally less satisfying and therefore less valued than sex with a woman who does so for love or lust (holding all the other characteristics of the woman constant). And the loss of value on the other side of exchange is perhaps even more pronounced—offering most women cash for sex is usually not a very promising path to the bedroom.

Though the presence of a highly heterogeneous barter market to some degree obscures the general character of the exchanges, there are certain common salient features. We begin with which gender desires sex more. Both men and women have sex drives, the power of which—physiologically and psychologically—vary both randomly and systematically. Age, for example, has a systematic differential effect on each gender's drive. The sex drives of men and women manifest themselves, if not first, then certainly most powerfully, at puberty,⁶ rise for a period of time and then decline—though the rise and decline seem to follow different patterns for men and women, with some studies showing women's drives not reaching their peak until middle age.⁷

But, the systematic variation we are most concerned with is not caused by differences in age, but by differences in gender. The median man—especially in his youth—has a considerably stronger sex drive than the median woman.⁸ Although there are independent biological measures of this

⁶ See, e.g., Jeanne Brooks-Gunn & Frank F. Furstenberg, Jr., *Coming of Age in the Era of AIDS: Puberty, Sexuality, and Contraception*, 68 MILBANK QUARTERLY 59, 63 (1990) (explaining that “pubertal changes set the stage for an increase in sexual feelings” and noting that both male and female sexual arousal is linked to increased testosterone levels).

⁷ See Judith A. Easton et al., *Reproduction Expediting: Sexual Motivations, Fantasies, and the Ticking Biological Clock*, 49 PERSONALITY AND INDIVIDUAL DIFFERENCES 516, 520 (2010) (reporting the findings of a recent study that indicated women in their late-20s to mid-40s experience an increased motivation for sex that may be driven by a “biological clock” that seeks to maximize a woman's remaining years of fertility).

⁸ An examination of gender differences in sex drive by behavioral index comparisons found that “[o]n every measure, men were found to display greater sexual motivation than women.” Roy F. Baumeister & Kathleen D. Vohs, *Sexual Economics: Sex as Female Resource for Social Exchange in Heterosexual Interactions*, 8 PERSONALITY & SOC. PSYCHOL. REV. 339, 342 (2004) (citing Roy F. Baumeister et al., *Is There a Gender Difference in Strength of Sex Drive? Theoretical Views, Conceptual Distinctions, and a Review of Relevant Evidence*, 5 PERSONALITY & SOC. PSYCHOL. REV. 242,

difference, e.g., hormone levels, such evidence is considerably less accessible and persuasive than the cultural and market responses to which those fundamental biological phenomena give rise. Take for example the market for pornography. It is a commonplace observation hardly requiring formal empirical support that men vastly outnumber women as consumers.⁹ Moreover, it is well known in the industry that the lowest paid performers in the industry are “straight” males.¹⁰

The issue becomes more clouded when one looks to other sexual markets such as prostitution and the sexual bargaining during dating. All observations of market demand are of net desire rather than gross desire—so too for sex. That is, if there is a cost to purchase or consume the sexual product or service—monetary or otherwise—then the observed quantity demanded and the intensity with which that demand is expressed will surely under-represent the strength of the desire. So, whether we are observing the willingness to view pornography, purchase the services of a prostitute, or engage in sexual intercourse outside of marriage, the consumer is motivated not merely by the expected “benefits” but by those benefits minus the expected costs of acquiring and consuming the service.

While the monetary cost of purchase may be the same for women as for men in all these markets (true for pornography, less clear for prostitution), the risks of pregnancy, injury, disease, and damage or enhancement of one’s standing or status will differ markedly between the genders. For pornography, given the private nature of the consumption, the costs to men and women are likely virtually identical. But, as will be explored in greater depth below, the costs of actually engaging in heterosexual activity are con-

242–73 (2001) [hereinafter *Gender Difference*]). According to the work of Baumeister, Catanese, and Vohs:

Men think about sex more often, experience more frequent sexual arousal, have more frequent and varied fantasies, desire sex more often, desire more partners, masturbate more, want sex sooner, are less able or willing to live without sexual gratification, initiate more and refuse sex less, expend more resources and make more sacrifices for sex, desire and enjoy a broader variety of sexual practices, have more favorable and permissive attitudes toward most sexual activities, have fewer complaints about low sex drive in themselves, (but more about their partners), and rate their sex drives as stronger than women.

Id. at 264. As for women, “there were no measures that showed women having stronger [sex] drives than men.” *Id.*

⁹ See, e.g., ROBERT WRIGHT, *THE MORAL ANIMAL: EVOLUTIONARY PSYCHOLOGY AND EVERYDAY LIFE* 43 (1994) (explaining that “virtually all pornography that relies sheerly on visual stimulation—pictures or films of anonymous people, spiritless flesh—is consumed by males”). A 2008 study of 813 undergraduate and graduate students from six colleges and universities (ages 18 to 26) found that 69% of men view pornography at least once a month, and 69% of women do not view pornography at all. Jason S. Carroll et al., *Generation XXX: Pornography Acceptance and Use among Emerging Adults*, 23 *J. ADOLESCENT RES.* 6, 18 (2008). Moreover, the same study found that 48% of men, but only 3% of women, watch pornography on a weekly basis. *Id.*

¹⁰ Private communication with Kate Darling, IP research specialist, Massachusetts Institute of Technology Media Lab, Cambridge Mass. KDarling@MIT.EDU, author of *What Drives IP without IP: A Study of the Online Adult Entertainment Industry* (in draft).

siderably higher for women than for men. So, whatever we may be able to say about the pure un-cost-constrained desire for sex, the desire as measured by net benefits demonstrates men's greater demand for sex. Whether we look at the market for prostitution or the dynamic of the most mundane of dating transactions between men and women, all make plain that at the median it is men who more strongly lust for women rather than the reverse. It is men who pay and women who are paid¹¹—and when non-consensual heterosexual encounters occur, it is men who rape and women who are raped.¹² A core result then is that given men's stronger demand, there is a positive price that women can extract for their participation in consensual sex, whether that participation amounts to mere acquiescence or something more enthusiastic.

II. THE INCREASED DEMAND FOR SEX

Sex has always been with us—were it not so we would not be here. And given its primal character one might be inclined to think that the *demand* for sex is unchanging. But all desires trade off against one another, and there is reason to believe, that, at the margin, sex is a more important economic good to twenty-first century Western man than it was to our ancestors. Why?

Consider the well known economic paradox of water and diamonds. While the consumer surplus in the market for water is immeasurably greater than that in the market for diamonds, because of the vastly greater supply of the former, its price and marginal value is much less than that of the latter. The situation is not entirely different with regards to sex. While the inherent drive and desire for sex is greater than that for diamonds, it is not the strongest human drive. It normally ranks behind the drives for food, warmth, homeostasis, and excretion.¹³ But, the singular truth of modern

¹¹ See Lena Edlund & Evelyn Korn, *A Theory of Prostitution*, 110 J. POL. ECON. 181, 184 (2002) (explaining that “[b]oth women and men sell commercial sex,” but that, “[b]uyers are . . . almost invariably male” and that “[f]emales outnumber males as sellers”) (citations omitted). The Shady Lady Ranch in Nevada is an illustrative example of how much females outnumber males in the supply of commercial sex. Henry Brean, *First “Prostitute” Leaves Shady Lady Ranch*, LAS VEGAS REVIEW-JOURNAL (Mar. 25, 2010, 5:35 PM), <http://www.lvrj.com/news/first--prostitute--leaves-shady-lady-ranch-89211477.html> (last visited Jan. 30, 2012). After receiving local government approval to hire Marcus, Nevada's first male prostitute, the Shady Lady Ranch announced that Marcus would be “just taking a little break” due to the twin causes of only receiving ten customers in a period of three months and an unfortunate “electrical problem in the bungalow he was using.” *Id.*

¹² See e.g., Shannan Catalano et al., *Female Victims of Violence*, BUREAU OF JUSTICE STATISTICS, U.S. DEP'T OF JUSTICE at 5 (Sept. 2009), available at <http://bjs.ojp.usdoj.gov/content/pub/pdf/fvv.pdf> (reporting that the “rates of rape or sexual assaults against females and males in 2008 were 1.4 and 0.3 per 1,000 persons age 12 or older, respectively”).

¹³ See Abraham Maslow, *A Theory of Human Motivation*, PSYCHOL. REV., Jul. 1943, at 375.

economic life is that man's ingenuity has succeeded in largely satisfying our other core, primal needs. We have moved far down our demand curves for the primitive material goods that concerned our ancestors. We are now trolling in regions where the marginal utilities of additional units of food and body covering are low indeed. Not so with respect to our demand for sex, either in the small, or in the large.

In speaking of a demand for sex, I am knowingly amalgamating and collapsing a congeries of relationships varying immensely in depth and character, everything from the "hook-up" to the lifetime marriage. I beg the reader's indulgence on this point. Human intentions and demands shade into one another along the sex continuum, and there are useful things we can say about the entire spectrum. Most importantly, our marginal demand for sex along the entire spectrum remains strong, indeed perhaps stronger than ever, not despite, but rather, *because* of the increased wealth of modern life. There is simply no technological fix that allows us to satisfy our demand for sex significantly differently or better than did our prehistoric ancestors. Indeed modern life has provided more and better devices to excite that desire.

Greater wealth does allow more people to enter the market for sex in its broadest and most committed sense, as they are more able to afford the bearing and rearing of children, but that increase is modest for a couple of reasons. First, because the desire to procreate has always been strong, much else will be sacrificed to satisfy it. Second, until little more than a century ago, children were as much investment goods as consumption goods. Now, of course, they are for many people almost luxuries.¹⁴

More significantly, precisely because other primal needs are more easily satisfied in modern economies, the demand for sex (narrow or broad) becomes more prominent. This is in addition to the effect of greater physical vigor brought on by more balanced and nutritious diets. In effect, the demand curve, already quite inelastic, has pivoted in a clockwise direction and become more vertical, that is, more inelastic. To the extent that there are no good substitutes for either the broad or narrow versions of sex, and the supply is limited by the members of the opposite gender who are available, the proportion of our desire that is satisfied is hardly greater now than it was 10,000 years ago. As long as the relative numbers of available and willing men and women are kept in equipoise, the demand curves of each only rise vertically with increased wealth, and the intersection does not change its position much in relation to the quantity axis; a paltry few more can satisfy their demand now than could in the distant past.

¹⁴ See John H. Langbein, *The Twentieth-Century Revolution in Family Wealth Transmission*, 86 MICH. L. REV. 722, 725, 733 (1988) (explaining the change from the nineteenth century when "the family was not only the primary unit of production, it was the primary education entity as well" to the twentieth century when "the process of delivering educational advantage to children begins . . . very young" and for "propertied parents" can include "private schools" and "private colleges").

III. AN ASIDE ON PROSTITUTION

One of the oldest jokes in the book is about the man—some say Churchill, others George Bernard Shaw—who asked a woman if she'd sleep with him for a million dollars. When she said yes, he asked if she'd sleep with him for five dollars, and indignant, she exclaimed, "What do you think I am?"

What is the famous answer? "We've already established what you are, ma'am, now we're just haggling over the price."

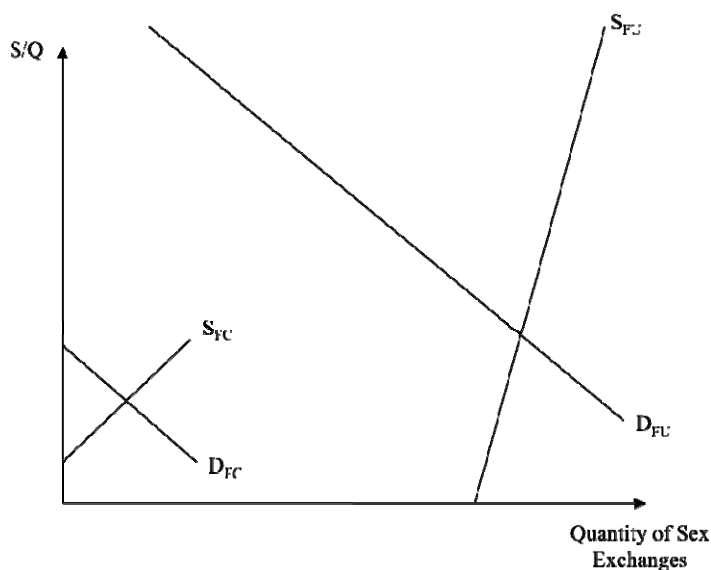
It is nearly a sacred doctrine of economic theology that, while quantity demanded of any good is a function of price, demand itself remains invariant with either the level, or very existence, of a price. That postulate is generally well founded; but there are exceptions. The exceptions arise most forcefully when the transaction one is contemplating engaging in is the establishment of a "relationship." Some relationships are precluded or severely compromised when putatively entered into in exchange for financial (or similar) compensation. Thus, when one little boy offers his friendship to another in exchange for half of the latter's potato chips, it is plain not merely to the observer, but usually also to the owner of the chips, that there is no real friendship being offered in the transaction. In the realm of sex, the commercialization of the exchange is similarly problematic. If a married male reader of this article were to go home tonight wishing to partake in sexual intercourse, and after learning that his wife was not similarly inclined, to offer two hundred dollars as an inducement, I suspect that in most cases he would not thereby have increased his wife's enthusiasm.

For both men and women, sex in exchange for money is a decidedly different good than sex undertaken for reasons of love, lust, procreation, cementing of a relationship, etc. As a general matter for both parties, the belief that the motive of the other party to the transaction is one of the latter set rather than—for women, financial remuneration, or for men, a belief that the woman expects or would acquiesce in response to modest financial remuneration—makes the transaction considerably more valuable.

The two related but fundamentally different markets are depicted graphically in Figure 1. The lines S_{FU} and D_{FU} depict, respectively, a supply and demand for sex in which there is no expectation of financial exchange between the parties (that is, sex is financially uncompensated), while the lines S_{FC} and D_{FC} reflect, respectively, supply and demand where such a transfer of funds between the parties is central to the exchange (that is, sex is financially compensated). The slope of women's supply curve S_{FU} should be understood as thoroughly hypothetical. It reflects something akin to women's greater willingness to engage in sex with a specific man given that they are compensated for doing so by someone or thing other than that man or his agent—either directly or indirectly. Given that I know of no such market, the only operative point on the curve is the place where it crosses the X-axis. On the other hand, the man's downward sloping de-

mand curve D_{FU} is all too real. It reflects the wealth that men are willing to expend—*though not to pay to the woman*—in order to woo her; expenditures on clothes, grooming, dates, etc.¹⁵ The number of exchanges that will occur will generally correspond not to the intersection of the supply and demand curves but rather to the point at which the supply curve crosses the X axis. At that price, the quantity demanded far exceeds the quantity supplied. The available supply will be rationed among the men in part by their natural characteristics and how those characteristics play into the utility functions of women, and in part on men's expenditures to make themselves available and attractive to women.

Figure 1



¹⁵ Given the importance of this good in men's utility functions it is not surprising that men have sought not only to appeal to women's utility functions but to mislead and seduce those functions as well. For example, Ross Jefferies, a "UCLA graduate student and former comedy writer," has written a book entitled, *How to Get the Women You Desire Into Bed*, which teaches men quasi-hypnosis and "neurolinguistic programming" for the purpose of seducing women. Charlotte Allen, *The New Dating Game*, THE WKLY. STANDARD, Feb. 15, 2010, at 21. Jefferies has been so successful with his techniques—or merely his marketing?—that copycats abound selling CDs and DVDs with titles like "Grow Your Game," "Double Your Dating," "Alpha Seduction," and "Blissnosis." *Id.*

The curves S_{FC} and D_{FC} are something else again. They reflect the supply and demand for financially compensated sex—admittedly a substitute good, but a very different good entirely. For men, the services of a prostitute are, in general, a much inferior substitute for uncompensated sex—even when finding the willing partner for uncompensated sex is far more costly than paying a prostitute. And on the supply side, the female providers of uncompensated sex—the joke that begins this section notwithstanding—would generally not offer their services in the compensated market for any reasonable compensation. While some would characterize a man paying for dinner and entertainment on a date as a kind of compensation, it is not accepted by the women and, generally, is not offered by the men in that spirit. Indeed, if a woman believes that the man is offering it in the spirit of compensation for sex, she is likely to turn down the offer, or if she were inclined to accept compensation, would demand considerably more—preferably in cash. No, the spirit of the expenditure on a date harkens back to earlier, more universal male courting practices, in which one demonstrates to prospective spouses that (1) one has the resources to support a wife, and (2) this particular woman is deemed attractive enough—in the broadest sense—for repeated investments of time and wealth in the courtship process.

There are a variety of ways in which a man might seek sexual release: vaginal intercourse with a prostitute, lover, spouse; sodomy in all its various forms with the same set of potential partners; and autoerotic activity. But, that does not make them equivalent activities. Prostitution and uncompensated sex are substitutes, but not nearly so close as they might appear when examined as purely physical acts.

Sex is most valued for its psychological meaning. Were it not so, fantasy and imagination would not play such a large part in both auto-erotic and inter-personal sex,¹⁶ and it would be as common for men to fantasize about masturbation during intercourse as the reverse.

¹⁶ While early views of sexual fantasy were characterized as dysfunction and perversion, more modern views assess sexual fantasy as a healthy outlet of desire. Literature from the 1960s onward has suggested that sexual fantasy aids arousal, supports a functioning ego, and may increase with more sexual intercourse and masturbation. See, e.g., J. Kenneth Davidson, Sr. & Linda E. Hoffman, *Sexual Fantasies and Sexual Satisfaction: An Empirical Analysis of Erotic Thought*, 22 J. SEX RES. 184, 184 (1986) (finding that sexual fantasy, rather than being undesirable, actually “help[s] many married women to achieve sexual arousal and/or orgasm during sexual intercourse, irrespective of their current sex life status”). A 2004 study of heterosexual men and women concluded that while most people experience sexual fantasy, men tend to fantasize about pleasing aroused female partners, whereas women tend to focus on themselves. For women, sexual fantasy may serve as a safer outlet of desire; women may explore desire through fantasy without risking rape, pregnancy, harassment, or violating traditional notions of femininity. Eileen L. Zurbriggen & Megan R. Yost, *Power, Desire, and Pleasure in Sexual Fantasies*, 41 J. SEX RES. 288, 288–300 (2004).

In the uncompensated market, the willingness of a woman to have sex with a man is a demonstration that he is worthy of that act. It is a powerful affirmation of his manhood. If instead, the act is only performed in exchange for financial compensation then it is not lust, love, desire, admiration, or any other emotion triggered by the personal positive characteristics of this particular man that induces the woman to give herself to him, rather it is the universal homogeneous indiscriminate solvent of cash that serves as the necessary inducement. Still, the powers of fantasy can sometimes permit the man to imagine otherwise, at least during the carnal act.

Let me illustrate this by recalling for you a scene from a popular film of four decades ago—the title of which captures the subject well—*Carnal Knowledge*.¹⁷ Near the end of the film, the character played by Jack Nicholson enters an apartment occupied by an attractive and seductive woman. She tells him what a wonderful lover he is, and how much she adores and desires him. Suddenly he gets angry. It quickly becomes apparent that she is a prostitute and has flubbed a line from a script that he has prepared for her, and that she has recited many times before. In that instant, Nicholson's character is exposed as not a self-contained man and great lover adored by women, but a pathetic creature, who not only must pay a woman to engage in sex with him, but so craves even the pretense of the adoration that such an act implies—if uncompensated—that he would debase himself to orchestrate and pay for a patent sham. Why? Because, for humans, sex is most importantly not about orgasmic relief, rather it is about meanings that attach to the act.

Since the sex that most men want requires that they believe that the woman is willingly surrendering herself to him out of passion or love, and women were—at least in the past—usually unwilling to do so outside of marriage, the market for sex resolved itself into largely a market for marriage. So, yes, sex with a prostitute is a substitute for sex with a girlfriend or date, but in most cases a very poor one.

That said, there are instances in which, for a minority of men, it is a superior alternative. Because sex with a prostitute is bottomed on a purely financial relationship, it is a less socially and emotionally complicated affair, and can for that very reason be valued. On the other side of the transaction, sex with a man who views one as a prostitute carries a decidedly different meaning for a woman than sex with a man who views one as a lover. The woman wishes the man to appreciate that she is highly selective in the men on whom she bestows her favors. If he believes that her principal criterion for selection is his willingness to pay the fare, then she cannot be giving herself to him in any fundamental way. Why do women care about this?

¹⁷ CARNAL KNOWLEDGE (Metro-Goldwyn-Mayer Studios 1971).

Some might explain this as a product of evolution. There is the old humorous line that runs “momma’s baby, daddy’s maybe.” It is a fundamental truth that paternity is uncertain. A state of nature in which males were as a behavioral matter—even if not as a cognitive one—unconcerned with the paternity of their putative offspring would be evolutionarily unstable. And so, men’s preference for chaste and sexually modest women for long-term affective relationships, and still more so for procreation and marriage, is fully evolutionary explicable.¹⁸ But, whatever its root, there is deeply embedded in male consciousness a strong preference for a woman who surrenders herself exclusively to him because of his particular characteristics. And, women implicitly, and usually explicitly, appreciate this. Thus, in her effort to find a life-mate who will support her and their joint offspring, a woman understands that men who view her as a whore are not promising candidates.

So, while the supply curves of non-compensated sex and prostitution are clearly related to one another in that the suppliers broadly speaking share the same inputs and the demand curves are clearly related in that the physical act remains largely the same and the imagination can carry much of the weight, neither on the demand side nor the supply side is there a very high cross-elasticity.

IV. THE DECLINING COST OF SEX TO WOMEN

Even if we were to assume that men and women were equally biologically driven to engage in sex, women would still be more reticent and discriminating in practice.¹⁹ While on the demand side of the equation, we can do little more than speculate about the inner drive and lust of the individual, on the cost side, we can observe objective burdens that vary systematically by gender. The cost to women of engaging in sex, especially premarital and extramarital sex, are inherently and historically much greater than the cost to men. The central thesis of this article is that this collection of costs to women fell markedly over the course of the 20th century, and that decline in costs moved women’s supply curve of both financially compensated—and more importantly—uncompensated sex rapidly and substantially to the right. What are those costs? And, how and when did they fall?

¹⁸ See WRIGHT, *supra* note 9, at 66 (explaining the evolutionary and empirical support for the fact that men are intensely concerned about the sexual behaviors of their female partners, and stating, “Not long for this world are the genes of a man who spends his time rearing children who aren’t his”).

¹⁹ The evolutionary reasons to expect that men and women differ systematically in the strength of their sex drives are obvious. Waite and Joyner write, “[T]he fact that men can have many children without investing much in any of them makes their optimal reproductive strategy to father children with a number of women. The fact that women can have relatively few children over their reproductive lives and must invest a great deal in each one pushes them toward stable, long-term relationships with men who will support them and their children.” Waite & Joyner, *supra* note 1, at 248.

We begin with pregnancy. Pregnancy is not always a cost. Indeed it is a great benefit when one wishes to bear a child sired by the man with whom one has had intercourse. Under most other circumstances, however, it is and has always been an enormous burden to a woman. Bearing a child when not married frequently meant embarking on a life of degradation, isolation, poverty, and early death.²⁰ And, terminating the pregnancy was a risky choice that could result in death, illness, and infertility.²¹

But, even leaving aside pregnancy, the other costs of sex to women were substantial. Perhaps most prominent was the reputational cost in the eyes of men. The woman of easy virtue would have a harder time—controlling for quality—finding a mate. It was out of express or implied recognition of that cost that we have the old question, “will you respect me in the morning?” Add to this the reputational cost in the eyes of other women, chaste and virtuous women would not wish to be associated with “loose” women.²² And, beyond all that, we have the costs of sexually

²⁰ During the period 1815–1830, for example, the usual motives of young women who committed suicide were pregnancy, abandonment, or both. PAUL JOHNSON, *THE BIRTH OF THE MODERN: WORLD SOCIETY 1815-1830* 753 (1991). In a study of “ruined girls” in New York from 1890-1920, Joan Jacobs Brumberg addresses changing concerns over extra-marital sexuality. Joan Jacobs Brumberg, “*Ruined*” *Girls: Changing Community Responses to Illegitimacy in Upstate New York, 1890-1920*, J. OF SOC. HIST. 247–72 (1984). In the 17th century, courts did not distinguish between bastardy, adultery, premarital pregnancy, and premarital intercourse; all fell under an umbrella term of “fornication.” *Id.* at 248. In the 18th century, premarital pregnancy triggered concerns regarding child support, which ultimately shaped legal and moral codes. *Id.* By the 19th century, private networks and institutions began to grow, as financial anxieties surrounding illegitimacy began to affect the individual, family, and community. *Id.* at 249. In this context, unmarried mothers became sources of embarrassment and economic drain, as states such as New York required certain services for out-of-wedlock children and mothers. *Id.* Tracking down reluctant fathers often proved a waste of time and money. *Id.* Among the wealthier, children out of wedlock posed difficulties in handling intergenerational inheritance. *Id.* Faced with economic strain routed through social humiliation, ostracism, and family reputational loss, unmarried mothers in the late 19th century coped through abortion, abandonment, infanticide, or anonymity. *Id.* at 248. An emblematic example is the case of Nettie Mayers. *Id.* at 247–48. Nettie adopted the pseudonym of “Minnie Evans.” *Id.* at 247. An 18-year old unmarried mother in 1898, Nettie gave birth in a home for “wayward and erring girls” supported by a women’s Christian organization in New York. *Id.* Although Nettie claimed to have no family, she escaped from the “home,” threw her baby off a bridge, and returned to her family. *Id.* Nettie’s father had her medically examined and committed into an insane asylum to avoid Nettie’s imprisonment. *Id.* at 248.

²¹ See, e.g., Patricia Barthalow Koch, *The United States of America: Contraception, Abortion, and Population Planning*, in THE INT’L ENCYC. OF SEXUALITY (Robert T. Francoeur ed., 1997-2001), <http://www2.hu-berlin.de/sexology/IES/xmain.html> (last visited Feb. 18, 2012) (stating that abortion methods were “violent exercises” that include “uterine insertions” and “the use of drugs” and that although abortions “may have been no more dangerous than pregnancy . . . it has been suggested that these methods were also a common cause of death for women”).

²² Popular magazines and romance novels in Nineteenth-century America conveyed the message that women who engaged in premarital sex faced “social humiliation, depravity, illness, madness, spiritual decline, and even death.” Jane E. Larson, *Women Understand So Little, They Call my Good Nature “Deceit”: A Feminist Rethinking of Seduction*, 93 COLUM. L. REV. 374, n.13 (citing Barbara Welter, *The Cult of True Womanhood, 1820-1860*, 18 AM. Q. 151, 154–59 (1966)). Purity was an essential

transmitted disease and possible violence in circumstances in which a remedy might not be forthcoming because of the illicit nature of the relationship.

While all these categories of costs remain in force, their magnitude has fallen steadily over the last two centuries, most markedly in the thirty years following the Second World War. The driving forces behind this fall were massive increases in wealth and extraordinary technological innovation. Let us do a quick tour. Consider pregnancy. It is not only the most significant cost, but it drives most of the others. The decline in the cost of pregnancy was three-fold: (1) reducing its likelihood; (2) facilitating its termination; and (3) easing the burden of unmarried motherhood. First, the development of many more contraceptives—the birth control pill in particular because it was within the control of women—meant that the likelihood of unwanted pregnancy was reduced.²³ Next, the routinization of abortion, finally ending with its legalization, meant that terminating an unwanted pregnancy was a relatively easy matter.²⁴ Third, there was the financial cost

female virtue during this time, and “without it [a young woman] was, in fact, no woman all, but a member of some lower order.” Barbara Welter, *The Cult of True Womanhood, 1820-1860*, 18 AM. Q. 151, 154 (1966). Young women that were viewed as “fallen” were “unworthy of the celestial company of her sex.” *Id.*

²³ See, e.g., Timothy Reichert, *Bitter Pill*, *FIRST THINGS* (May 2010), available at <http://www.firstthings.com/article/2010/04/bitter-pill> (explaining the effect of contraception on sex and stating that “contraception technology provides the assurance that participating in the sex market will not result in pregnancy”); Jane E. Hutchings et al., *The IUD After 20 Years: A Review*, *FAM. PLANNING PERSP.* at 244 (1985) (explaining that beginning in the early 1900s, cervicouterine devices were used as a contraceptive, though these early devices were designed with intervaginal stems made from bone, glass, or wood, and caused serious infections that, prior to the advent of antibiotics, were fatal); Johannah Cornblatt, *The Evolution of Birth Control*, *NEWSWEEK* Slide 9, <http://www.thedailybeast.com/newsweek/galleries/2009/10/28/the-history-of-birth-control.html#slide9> (last visited Jun. 14, 2013) (illustrating different “feminine hygiene” products that were marketed as having additional contraceptive benefits during the Great Depression; these products were cheap and dangerous and could result in vaginal scalding); *id.* at Slide 8 (describing the work of Margaret Sanger, who coined the phrase “birth control,” initiated a movement that informed women about contraceptive techniques through her own newspaper, *The Woman Rebel*, and in 1921, began the American Birth Control League, known today as Planned Parenthood); Koch, *supra* note 21. In 1960, the oral contraceptive known as “the pill” was formally approved by the Food and Drug Administration. Once introduced to the market, the pill had a dramatic effect because “[w]omen now had the option of engaging in intercourse with minimal threat of pregnancy” and could “separate the act of coitus from the action taken to restrict fertility (ingestion of the pill).” Koch, *supra* note 21; see also Cornblatt, *supra* note 23, at Slide 10 (showing that by 1964 the pill had become “the most popular method of birth control”); *id.* at Slide 11 (explaining that in 1965, the Supreme Court established the constitutional right to privacy and struck down Connecticut’s law prohibiting the use of birth control in *Griswold v. Connecticut*); *Griswold v. Connecticut*, 381 U.S. 479, 497 (1965). When the foregoing is coupled with the development and usage of condoms—which became incredibly cheap as early as 1840 with Goodyear’s invention of the vulcanization process—the modern figures show that over seventy-one percent of “unmarried women aged 15 to 19 used contraception during their first sexual encounter.” Koch, *supra* note 21.

²⁴ Before the 1970s, a woman could not obtain a legal abortion in the United States. Koch, *supra* note 21. In this environment, particularly during the 1950s, approximately one million illegal abortions

of bearing a child out of wedlock. A world of widespread use of contraceptives and easy abortions meant there was a dearth of newborns for adoption.²⁵ Thus a young woman could bear a child and—if the baby was healthy—have every expectation that there would be an army of financially secure infertile couples eager to adopt.²⁶ More importantly, both for the rich and—much more significantly—for the poor, the financial disaster of raising a child out of wedlock has been massively reduced. Most importantly, at the lower end of the social and economic spectrum, ever more generous government support for unwed mothers and their children meant that the material horror of raising a child without resources no longer held.²⁷ When opportunity cost is taken into account, this change clearly had more purchase for some women than for others. Those with fewer good employment or marriage prospects would be more inclined to avail themselves

occurred each year, involving more than one thousand annual deaths. *Id.* In 1970 New York State enacted the first legislation permitting “abortion on demand through the twenty-fourth week if it was done in a medical facility by a physician.” *Id.* In January of 1973, only a short time after New York’s legislation was passed, the Supreme Court decided the case of *Roe v. Wade* and held that the constitutional right to privacy was “broad enough to encompass a woman’s decision whether or not to terminate her pregnancy.” *Id.*; see also *Roe v. Wade*, 410 U.S. 113, 166 (1973). Since these statutory and case law developments, “legally induced abortion” has become “the most commonly performed surgical procedure in the United States.” Koch, *supra* note 21; see also Karen Pazol et al., Ctrs. for Disease Control & Prevention, Morbidity and Mortality Weekly Report: Abortion Surveillance—United States, 2007 (Feb. 25, 2011), available at http://www.cdc.gov/mmwr/preview/mmwrhtml/ss6001a1.htm?s_cid=ss6001a1_w (reporting that in 2007 the number of abortions in the United States reached 827,609, with the abortion rate at 16 abortions per 1,000 women aged 15–44 years, and the abortion ratio at 231 abortions per 1,000 live births. The CDC also reported that “[i]n 2006, the most recent year for which data were available, six women were reported to have died as a result of complications for known legal induced abortions. No reported deaths were associated with known illegal induced abortions”).

²⁵ See, e.g., Marianne Bitler & Madeline Zavodny, *Did Abortion Legalization Reduce the Number of Unwanted Children? Evidence from Adoptions*, 34 PERSP. ON SEXUAL & REPRODUCTIVE HEALTH 25 (2002), available at <http://www.guttmacher.org/pubs/journals/3402502.html> (“The estimated effect of abortion legalization on adoption rates is sizable and can account for much of the decline in adoptions, particularly of children born to white women, during the 1970s.”); see also Nat’l Ctr. for Health Statistics, U.S. Dep’t of Health & Human Servs., *Vital and Health Statistics: Adoption Experiences of Women and Men and Demand for Children to Adopt by Women 18-44 Years of Age in the United States, 2002* (2008), available at http://www.cdc.gov/nchs/data/series/sr_23/sr23_027.pdf. In addition to the effect of legalized abortion on adoption, lower teenage birth rates and legislation requiring that “reasonable efforts be made to preserve and reunify families (e.g., The Adoption Assistance and Child Welfare Act of 1980), and to give preference to placement of children with relatives who meet state standards for child safety (e.g., The Personal Responsibility and Work Opportunity Reconciliation of 1996)” have reduced the number of infants available for adoption. *Id.* at 2.

²⁶ As a related example of this effect, consider the fact that the decrease in the domestic supply of children for adoption has forced “more affluent women and couples” to adopt from overseas. Nat’l Ctr. for Health Statistics, *supra* note 26, at 2 (“Between 1990 and 2001, the number of children adopted from other countries has increased from 7,093 to 19,237.”).

²⁷ CHARLES MURRAY, *LOSING GROUND: AMERICAN SOCIAL POLICY, 1950–1980*, at 7–9, 124–33, 154–62 (1994).

of government largesse. Though one should not exaggerate its significance, secular changes in the economic life of the nation meant that the cost of out-of-wedlock childbearing was reduced for better-educated women as well. Labor saving devices at home and high incomes available in the labor market meant that many single women could raise a child in middle-class comfort.

As for the reputational costs to women in the eyes of men, they too have fallen. When most unmarried women were chaste until marriage, or at least betrothal, most men could afford to insist on only marrying a virgin. I recall when teaching at a small private university in the Midwest thirty-five years ago, being told by a couple of coeds that the saying about the various sororities was “Thetas to bed, Deltas to wed” (or was it the other way around?). Such ordinary language expressions evidence women’s belief—quite likely correct—that a reputation for sexual availability reduced one’s value on the marriage market. The decline in female chastity initiated by a fall in the costs of possible pregnancy meant that men could not afford to be so choosy on this issue. So as a practical matter the marriage prospects of unchaste women were no longer substantially different from that of virgins. In addition, cognitive dissonance made it hard for men to hold unchaste women in disdain. After all, with each passing year it became ever more likely that one’s future wife and the mother of one’s children would not be a virgin when you met her.²⁸ Women also faced a declining reputational cost in the eyes and behavior of other women. The nature of this cost and its decline will be explored more fully below. Suffice it to say for the moment that, as those who sought to impose this cost fell in number and those on whom it was imposed grew, the cost on each unchaste woman fell.

Finally, we have sexually transmitted disease. The great panoply of such diseases that were the scourge of earlier generations, including gonorrhea, syphilis, and chlamydia, while not eliminated, have been much reduced in their prevalence and cost.²⁹ The development of more advanced diagnostic devices and treatment with anti-biotic drugs are the principal explanation. Alas, in the last twenty-five years the spread of AIDS and herpes have raised the cost again.

²⁸ See MARK REGNERUS & JEREMY UECKER, *PREMARITAL SEX IN AMERICA: HOW YOUNG AMERICANS MEET, MATE, AND THINK ABOUT MARRYING* 24 (2011). In the 1920s, just twelve percent of women reported having a sexual partner before marriage. *Id.* However, today, over twenty-five percent of adult women report having had five to ten sexual partners, and about ten percent of adult women report sex with ten or more partners. *Id.* at 25.

²⁹ See *id.* at 43 (“[C]hlamydia and gonorrhea . . . can be gotten rid of and are typically passed from person to person by infected bodily fluid such as blood, semen, and vaginal or pre-ejaculate Syphilis and gonorrhea are also considerably rarer than they used to be.”).

So, for all these reasons, the costs to women of engaging in sex outside of marriage fell precipitously, and so, the practice that type of sex increased. All save one of the costs to women of sex discussed above require no more elaborate explanation. The costs of pregnancy and disease are self-explanatory. As for the reputational cost in the eyes of men it requires but two small steps. First, women wish to marry. Second, expectations of fidelity by one's wife matters to a man if for no other reason than that he wants to be secure about the paternity of his wife's offspring, and premarital chastity is a predictor of post-marital fidelity. There are indeed more important and deeper psychological reasons for this concern with one's mate's sexual fidelity. But, we need not trouble ourselves with the source of the desire as long as we recognize its power.

The puzzle is why female chastity should matter to other women. The answer is twofold. First there is the notion of something akin to guilt by association. One cannot wear one's chastity as a badge on one's sleeve. Its value rests on establishing a reputation and maintaining it. That reputation will be based on an amalgam of things, including inferences drawn from characteristics and behaviors of the person in question. None of these sources are entirely reliable. In an earlier era, "loose" women—other than prostitutes—would seek to dress and carry themselves as chaste women, while in our era it may be the reverse.

It is only reasonable to assume that a woman who socializes with loose women partakes of the same sexual behavior. Thus, it was generally in the interest of chaste women to dissociate themselves from the unchaste. But, the reaction of the putatively chaste to the unchaste goes well beyond that. More than disassociation, it has the character of disdain and opprobrium. Such zeal is partially explicable as a tactical effort by the chaste—and those who would like to appear so—to make the break more dramatic. But, why would disdain and opprobrium seem called for and justified? What gives rise to this anger? That brings us to the second answer as to why a woman's chastity is valued by other women: the "women's cartel."

V. THE WOMEN'S CARTEL³⁰

A cartel is a collusive agreement among a group of suppliers. Suppliers who face a relatively inelastic portion of a demand curve for their product or service are in a position to extract monopoly rents if they can successfully collude in decreasing the supply and raising the price; so it is in the market for sex.

³⁰ See generally *Lysistrata: Translated from the Greek of Aristophanes*, THE PROJECT GUTENBURG (October 24, 2012), <http://www.gutenberg.org/files/7700/7700-h/7700-h.htm> (reporting that Aristophanes' *Lysistrata* is the oldest literary reference to a women's cartelization of the market for sex, in which women withhold sex in order to get men to end the Peloponnesian war).

The principle market for sex is not a cash market, but one of barter. Sex is exchanged for sex; sex is exchanged for love; sex is exchanged for commitment; sex is exchanged for support; and sex is exchanged for protection. In this barter market, it is women who more often seek the supplementary non-erotic aspects of the sexual relationship. The title under which the most all-encompassing and important exchange takes place is marriage. And, while both men and women find much to gain from marriage, it has been women who have historically most vigorously pursued marriage, a covenantal relationship in which they expected to be financially supported by a husband. In exchange for such support, women promised fidelity as well as the performance of various uxorial services.

In the past, in most cultures, the financial and other consequences for women who bore children out of wedlock were horrific, and birth control was a risky activity at best, even when carried out with the cooperation of the man. And so, most—though not all—women had a strong incentive to refrain from sex until marriage or commitment, and even more so to recoil from pregnancy and childbearing outside of marriage. The price that these women sought to extract for providing sexual access to a man was entrance into and adherence to lifetime marriage.

On the other side of the exchange, whether for purely rational and prudent reasons, or perhaps because those rational and prudent reasons have resulted in a transformation in men's genetically driven preferences, men have a decidedly more libertine sexual attitude than women. Many men, if they could, would more than willingly have sex with as many women as possible, and freely impregnate as many as they could.³¹

Now, given that the demand for women by men—or supply curve of men to women—and the supply curve of women—or demand curve for men by women—are both highly inelastic.³² The price at which exchanges take place is inherently unstable. That is, relatively small shifts to the left or right of either curve will result in large changes in equilibrium prices. Further, because of the mutual inelasticity, the imposition of an artificially high or low price will not have a large effect on the number of transactions or their “efficiency” as compared to its effect on the transfer of wealth. In other words, if women succeed in artificially raising the price that they, as a

³¹ See REGNERUS & UECKER, *supra* note 28, at 56; see also Russell D. Clark III & Elaine Hatfield, *Gender Differences in Receptivity to Sexual Offers*, J. PSYCHOL. & HUMAN SEXUALITY 39 (1989) (describing a series of studies conducted in 1978 and 1982 that rather starkly reveals this point: on the campus of Florida State University, a group of attractive male and female researchers approached college-aged students of the opposite sex, explained that they were attracted to the subject, and then asked them one of three questions: “Would you go out with me tonight?; Would you come over to my apartment tonight?; or Would you go to bed with me tonight?” In response, 75% of men agreed to go to bed with the requester, but not a single woman agreed).

³² Describing the demand curves as highly inelastic, though not precisely economically accurate, metaphorically captures the nature of the issue in that the price of sex is not exacted in dollars, but rather in the depth of the commitment.

group, receive for sex, the number of exchanges will fall only slightly, and women will gain a great deal. The universe of women will receive an immense *ex ante* gain, while a few will suffer a considerable *ex post* loss because they will be precluded from any successful and satisfactory exchange in the market.³³

Some readers may wonder whether I am confusing sex with marriage. Clearly, one could have sex with an enormous number of partners in a sufficient period of time, and thus, if one's tastes ran in that direction there is no cultural constraint on elasticity *per se*. So, the elasticity of men's demand for sex might be considerably above zero.

But there are a number of reasons to treat the demand for sex as equivalent to a demand for marriage. First, as the idiom goes, "it takes two to tango," and as women generally have less of a taste for casual sex than men do,³⁴ it is women who create the limiting constraint on men's satisfaction of their demand for sex. Second, to the extent that the cartel is vigorous and strong—making non-marital sex degrading to women—the supply of willing women is further limited, and more men are driven into the marriage market to satisfy sexual desires. Third, the desire for sex in the broader sense is also a desire for procreation, and perhaps parenthood, and that will generally be fulfilled satisfactorily for women—and for many, perhaps most, men—only through marriage. So, given that (1) most women are willing to refrain from sex if the conditions are not attractive, and (2) for most of recorded history, women in European and Asian cultures have viewed either marriage or at a minimum exclusivity as a requirement for them to willingly participate in sex, men have frequently been limited to a choice of one lifetime sexual partner or none.

But most importantly, the reason to think of the demand for sex as inelastic—for men as well as women—is that the portion of the demand curve we are concerned with is the region from 0 to 1. Even if men have elastic portions of their demand curve when the quantity of sexual partners exceeds one, they have an inelastic demand for sexual partners in the range 0 to 1. The heart of the argument is that men have a very strong demand for one partner and will sacrifice a great deal to obtain that one partner, thus raising the price they must pay will not drive them out of the market.

³³ Some large factor of this inelasticity is a product of the cultural constraints on obtaining sexual partners. In a monogamous culture, men only have the option of being married to one woman at a time, and women to only one man. While successful and powerful men in other cultures and in other eras have sometimes had more than one wife, women have not had the same opportunity. Judging from the ersatz polygamy entailed in extra-marital relationships, women generally seem to have less of a taste for having more than one husband.

³⁴ *Gender Difference*, *supra* note 8, at 250 (2001).

So what does this mean for the market for sex? Women can capture the rents men would otherwise receive from easy access to sex and procreation. This capture only rarely comes expressly in the form of a direct transfer of wealth. Rather, it is by bundling the exchange of current sex in the contract or covenant of marriage that women can capture rents in cash and in kind. Because of biological imperatives, men's desire for sex and procreation is greatest when they are young, but because young men have limited wealth, they are not well positioned to pay a heavy price for sex. It is in women's strong interest to make the contract for sex with men a long-term, or ideally lifetime, commitment, so that they can extract the rents from men over the course of a lifetime.

Drawing an analogy to a commercial cartel, the task for women—and their male supporters³⁵—was to raise the price of sex, eliminate or degrade substitutes offered by non-cartel members, and develop rules for dividing the market that will lead to less cheating and the unraveling of the cartel. The problem for women is especially difficult because of the heterogeneity of the service and product they offer and the indivisibility and non-transferability of the compensation they receive from men to other women. In other words: (1) women differ in looks, age, intelligence, race, religion etc., and thus do not all offer products in identical or even overlapping markets; and (2) if they succeed in selling at a high price—that is, in marrying and in particular, marrying well—they can not, even if they wanted to, transfer a portion of their gain to those women who, because of bad luck or having less to offer, did not do so well in the market.

The overall thesis of this article is quite simple. Until about sixty years ago, the price that women received for sex was considerably higher than it is today. This proposition rests on two related sub-theses. First, the material cost of sex to women fell precipitously during the 20th century, especially in the 1950s and 1960s. When costs fell, women found it in their interest to supply more readily; this in turn gave rise to a massive negative externality—real or pecuniary—to other women. Because the supply had increased, the price that women could extract for sex fell precipitously. Second, the pre-existing cartel-like mechanism in the market for sex between men and women collapsed, further reducing the cost of non-marital sex to women in a rapid downward spiral.

The core of this article is about changes in the cost to women and their supply of non-marital sex, and so, the subject of a cartel is a natural extension. A cartel is designed to restrict the supply and thereby raise price above the market-clearing level. The principal tool of the women's cartel was to increase the cost of non-marital sex to women. In referring to a "women's cartel," I use the word cartel neither quite literally nor purely metaphorically. While I do not mean to convey an image of women's lead-

³⁵ I have in mind here not only their fathers and other male kin, but men who see salutary effects for society as a whole when channeling young men into lifetime marriage.

ers gathered in Mrs. Gary's drawing room³⁶ to set the price of sex over cigars and brandy, I do mean to suggest in the mind of the reader something that lasted longer and functioned considerably more effectively than any commercial cartel in raising the implicit price that women received for sex. The operation of the cartel consisted of individual women charging a higher-than-market-clearing price for sex, and both men and women—but especially women—individually and collectively (1) punishing those women who either sold at too low a price, or who violated the market sharing rules, (2) punishing those men who purchased from them, or (3) supporting those women who played by the rules of the cartel even though, in some sense, it did not serve their personal interests. Because this was an implicit cartel rather than an explicit one, there is no “smoking gun” such as a written agreement. That said, history and sociology are rife with evidence that is consistent with and illustrative of the underlying story—evidence that makes the case not only more persuasive but, more importantly, more readily imagined and visualized. Though there is no smoking gun, the story itself accords with our understanding of the interest of the parties, historical memory, social mores, and the current predicament of women.

VI. THE RULES OF THE CARTEL

Consider the following set of moral and social rules, listed in something like a descending order of their moral and social force in most societies with which we are familiar:

1. No childbearing prior to or outside of marriage.³⁷
2. No adultery (especially by females).³⁸
3. No sex prior to, or outside of, marriage.³⁹

³⁶ See VICTORIA BISSELL BROWN, *THE EDUCATION OF JANE ADDAMS* 231 (2004).

³⁷ In the early American colonies, a significant amount of “shame . . . could be felt by young couples and their families when an overly advanced pregnancy disclosed premarital sexual relations.” MARY BETH NORTON, *FOUNDING MOTHERS & FATHERS: GENDERED POWER AND THE FORMING OF AMERICAN SOCIETY* 71 (1996). In fact, young couples would engage in inter-colonial travel and even falsify marriage documents in order to avoid the humiliation. *Id.*

³⁸ Research on the perceptions of men and women who are unfaithful frequently find that women who engage in “extradyadic sex” are judged “more harshly and are seen as more guilty for their actions than men who engage in similar practices.” Baumeister & Vohs, *supra* note 8, at 348. In addition, historical penalties for female infidelity were “often more severe than those for male infidelity, and in some cultures they involved having the interloper compensate the cuckolded man with money or goods.” *Id.*

³⁹ In 17th century New England, it was a criminal offense to have sex with “any single woman,” and the penalties imposed included “fine[s], whipping, and ‘enjoyning to Marriage.’” NORTON, *supra*

4. No divorce.⁴⁰
5. No sex with, or marriage to, divorced men.⁴¹
6. Marriage to be restricted to one's own age cohort.⁴²
7. No remarriage by women following divorce.⁴³
8. Remarriage by widows not favored.⁴⁴

Each of these moral and social rules of proper sexual relations existed in European and American culture, and all served to advance the interests of a women's cartel. As a general matter, the rules accomplished two things: (1) most importantly, they restricted women's supply of sex and degraded its quality when provided outside of marriage, thereby setting the conditions that allowed women to extract as much of the rents as possible from men to transfer to women—and their children and (2) they divided those resources among women in as fair an *ex ante* fashion as possible—subject to the constraint of monogamy. The individual effect of each rule was either to substantially deny sex to men except in the context of marriage or to limit women to “one bite of the apple.” These rules in their totality reflected an effort to restrain the competition among women for the

note 37, at 335 (emphasis added). Modern society has taken a more cavalier attitude. For individuals born before 1900, “37 percent of men but only 3 percent of women reported having had premarital intercourse by age 18.” REGNERUS & UECKER, *supra* note 28, at 18. For the female side of this statistic, it is important to note that the 3% figure may reflect a desire by women at the time to “give a socially desirable answer.” *Id.* As of 2007, “nearly two-thirds of all 18 year olds reported having already had vaginal sex.” *Id.*

⁴⁰ As an example of the strength of this moral and social rule, there were fewer than two divorces per year in England from 1800 to 1850. Griselda Rowntree & Norman H. Carrier, *The Resort to Divorce in England and Wales, 1858-1957*, 11 POPULATION STUD. 188, 200 (1958).

⁴¹ In early colonial America, divorces were more like separation agreements, which would allow “husbands and wives to live apart and provid[e] for a distribution of the property or the continuing maintenance of the wife, *but not permitting remarriage for either partner.*” NORTON, *supra* note 37, at 389 (emphasis added).

⁴² Marrying men and women were separated by an average of over four years in 1890. REGNERUS & UECKER, *supra* note 28, at 78. Interestingly, the marital age gap in America has narrowed over time. As of 1960, the marital age gap was to 2.5 years; currently the gap is just under two years. *Id.*

⁴³ See Baumeister & Vohs, *supra* note 8, at 349.

⁴⁴ For example, in the 1850s in Victorian England, when a widow remarried there was “a faint distaste for her action: she was being unfaithful to the memory of her dead husband, which was almost as bad as physical infidelity.” JUDITH FLANDERS, *INSIDE THE VICTORIAN HOME: A PORTRAIT OF DOMESTIC LIFE IN VICTORIAN ENGLAND* 385 (2003). In addition, when a widow remarried, her second ceremony was conducted without bridesmaids and without a veil; instead, the widow would wear “a colored silk dress and bonnet.” *Id.* at 237.

attention of men and channel that competition into certain socially acceptable pathways.⁴⁵

Not all the listed rules carried the same moral and social weight. The rules that dealt with maintaining a high price for sex were most stringently enforced, while those that spoke to setting and administering the implicit market sharing rules were enforced with a lighter more subtle, touch. The violation of these rules brought forth punishment by those who sought to maintain the cartel.⁴⁶ Some of this punishment came by way of the legal system. Consider the torts of “criminal conversation” and “alienation of affections,” and the crimes of adultery, fornication and prostitution.⁴⁷ But, though carrying significant symbolic weight, those legal responses were relatively minor in their social and economic weight and operated at the periphery. And, while some of the enforcement came through administra-

⁴⁵ See WRIGHT, *supra* note 9, at 63–64 (explaining that in a high male parental investment species, such as ours, a female will seek to “monopolize their dream mate” by “steer[ing] his social and material resources toward her offspring,” which results in fierce female competition for a partner that is anything but “passive and guileless”; in fact, females “will sometimes be the natural enemies of one another”).

⁴⁶ For example, a study of rural Wisconsin from 1850 to 1920 reveals the tendency of neighbors to report girls and young women for moral violations. See Joan N. Jensen, *Sexuality on a Northern Frontier: The Gendering and Disciplining of Rural Wisconsin Women, 1850-1920*, 73 AGRICULTURAL HISTORY 136, *passim* (1999). Rose Wilcox, resident of Pilot Knob, Wisconsin, wrote to Governor Robert M. La Follette in 1901, asking the governor to arrest her neighbor, Cora. *Id.* at 147–48. According to Rosa, Cora was “leading a low and degraded life” and that she and the man with whom she was “carrying on” were in danger of “white capping” (a form of “hooded vigilante punishment”). *Id.* Wilcox added that Cora’s children were “contaminating” other children, and signed her letter, “I remain yours for purity, Mrs. Rose Wilcox.” *Id.* In Britain, “prewar [WWI] endeavors to establish a female police force derived mostly from social purity convictions that only women could effectively tackle problems of female immorality.” Philippa Levine, “Walking the Streets in a Way No Decent Women Should”: Women Police in World War I, 66 J. MODERN HISTORY 34, 35–36 (1994). In the mid-1860s to the mid-1880s, male police would work undercover to catch female prostitutes with authority granted by the Contagious Disease Act. *Id.* at 35. The social purity movement, coupled with notions of separatist feminism, lead to an increase in female police officers to deal with female prisoners, particularly those kept overnight. *Id.* In England, social purity feminists, through the Criminal Law Amendment Committee, fought for female inclusion in the inspections of lodging houses. *Id.* at 38. Such housing was suspected of encouraging immoral behavior and feeding English girls into the “white slave trade.” *Id.* Additionally, the committee sought to have female patrols to overlook places of amusement and to be included in cases involving solicitation. *Id.* These female officers “patrolled public places, separating couples thought to be bracing too closely, following those they suspected might be about to embark on unsavory courses of behavior, and warning youngsters of the dangers of overly casual behavior.” *Id.* at 45. The early recruits were “frequently older and married, but, unlike male police, they tended to be socially privileged and often well educated.” *Id.* at 46. The movement was not unique to Britain. In fact, “Britain lagged noticeably behind other nations.” *Id.* at 35. New York had “police matrons” in 1845, and many more America cities joined by the 1870s. *Id.*

⁴⁷ See generally RICHARD A. POSNER & KATHARINE B. SILBAUGH, A GUIDE TO AMERICA’S SEX LAWS (Univ. of Chi. Press 1996) (summarizing the laws of regulating personal sexual activity and revealing gaps, anachronism, anomalies, inequalities and irrationalities within them, as well as providing an empirical basis for studies of sexual regulation).

tive institutions when women entered the public sphere,⁴⁸ the principal form of enforcement and punishment largely came in the form of social sanctions.⁴⁹

To illustrate this point, consider the case of Margaret O’Neale Eaton, better known as “Peggy Eaton.”⁵⁰ Peggy was the attractive daughter of a Washingtonian innkeeper.⁵¹ At a young age, Peggy married John Timberlake, a Navy purser who spent considerable time at sea.⁵² He died suddenly at sea under “mysterious circumstances.”⁵³ It was widely rumored that he had committed suicide because of his wife’s alleged infidelity.⁵⁴ In the 1820s, she attracted the attention of a number of powerful men, including Senator John Eaton of Tennessee, a close friend of Andrew Jackson, whom she married.⁵⁵ Eaton was the then appointed Secretary of War by Jackson.⁵⁶

⁴⁸ For example, the entry of women in the army during World War II aroused fears of women as sexual or victims of sexual abuse. Leisa D. Meyer, *Creating G.I. Jane: The Regulation of Sexuality and Sexual Behavior in the Women’s Army Corps During World War II*, 18 FEMINIST STUDIES 581, 581–82 (1992). Female soldiers were stereotyped as either “loose” or “manish.” *Id.* at 584. Colonel Oveta Culp Hobby, member of an elite, white female network, organized the army’s response. *Id.* at 581. Hobby’s strategy was to emphasize the Victorian femininity and morality of women in the armed forces—rejecting the army’s health and combat-readiness approach applied to male soldiers. *Id.* at 584–86.

⁴⁹ The varieties and settings of these sanctions are too numerous and tedious to catalog, so I will only offer a small sampling. Consider the Menonites. Among Holdeman Mennonites, where female clothing is perceived as an expression of religiosity and sexual restraint, women informally police female sexuality by gossiping about the deviating member. Linda B. Arthur, *Deviance, Agency, and the Social Control of Women’s Bodies in a Mennonite Community*, 10 NWSA J. 75, 78 (1998). If this is inadequate in pushing the deviant member toward compliance, the deviating woman’s best friends will approach her directly about her behavior. *Id.* at 90. Young girls and unmarried women, however, are given a bit more leeway. *Id.* at 94. For younger single women, the understanding was that “the rules of modesty can be bent during this short time in a woman’s life, since marrying is of utmost importance.” *Id.* at 94. Another interesting example of female social sanctioning is the role played by midwives in America’s early colonial period. In the mid-1600s, childbirth was the central female experience, characterized by a continuous cycle of “pregnancy, nursing, weaning, pregnancy, nursing, weaning.” NORTON, *supra* note 37, at 222. For the women of this early American period, the only true place where they could gather outside of the presence of men was the “birthing room.” *Id.* at 222–23. Present in the birthing room was the midwife. *Id.* at 223. One of the key functions played by midwives during this period was that of interrogator. In the early 1600s, midwives that “presided over the birth of an illegitimate child” were “expected to interrogate the mother about its paternity,” under the belief at the time that “a woman could not lie about the identity of her child’s father while giving birth.” *Id.* at 225. Because of their recognized role in obtaining evidence of illegitimate children, women who did not obtain midwives were considered suspicious characters. *Id.* at 226. If a woman did not hire a midwife she was “immediately suspected of trying to hide the identity of the child’s father.” *Id.*

⁵⁰ Kirsten E. Wood, *One Woman so Dangerous to Public Morals: Gender and Power in the Eaton Affair*, 17 J. EARLY REPUBLIC 237, 237 (1997).

⁵¹ *Id.* at 244.

⁵² *Id.* at 245.

⁵³ *Id.* at 246.

⁵⁴ *Id.*

⁵⁵ *Id.*

⁵⁶ Wood, *supra* note 50, at 238.

It is here that the story becomes richly revealing of the functioning of the women's cartel. The wives of the other cabinet members were outraged that a woman with Mrs. Eaton's allegedly lurid past would be insinuated into their social circle.⁵⁷ Their ostracism of her was complete.⁵⁸ The other ladies, led by Floride Calhoun, wife of Vice President John C. Calhoun, refused to talk to her at White House receptions, and would neither accept nor return social visits from Mrs. Eaton.⁵⁹ They openly said they were scandalized that Mrs. Eaton was even invited to participate in polite Washington society.⁶⁰ The social crisis spilled over into government procedure. The situation deteriorated to the point where it became difficult even for Jackson's cabinet to conduct its regular business—so preoccupied were the members with the Eaton affair.⁶¹ And, in the end, the Peggy Eaton affair was instrumental for Martin Van Buren, rather than Calhoun, succeeding Jackson as President.⁶²

This story is widely known because it involved major public figures of the time and actually affected the operation of government. It is otherwise unremarkable as a representation of the workings of the women's cartel. The cartel was a serious affair, not some trifling amusement.⁶³

But, the cartel did not deal with enforcing merely the grosser rules of sexual behavior. The subtler, less belligerent, and strict market sharing rules were perhaps even more interesting. They capture how all-encompassing was the sexual morality of the women's cartel. I offer as an illustration a story from my wife's family. My wife's maternal grandmother was one of nine children, born in 1900 into an observant Catholic family. Two of her older brothers divorced and re-married. She and her sisters were not only disapproving of her brothers for divorcing and remarrying but also disapproved of one of her brother's new younger "trophy" wife, not because of any personal characteristics of this kind, generous, and gentle lady, but because she had married a divorced man who was considerably older than herself, and thus, violating rule six and rule seven above.

VII. THE ROLE OF MEN IN SUPPORTING THE CARTEL

In traditional industrial organization analysis, cartels are bad things because they reduce social wealth by charging an inefficiently high price.

⁵⁷ *Id.* at 246, 249.

⁵⁸ *Id.* at 238, 246–49.

⁵⁹ *Id.* at 249, 253.

⁶⁰ *Id.* at 249.

⁶¹ *Id.* at 259–60.

⁶² Wood, *supra* note 50, at 263.

⁶³ A large number of middle- and upper-class white women believed that it was a moral and social obligation to police the sexual behavior of other women, with the view being that this was in the best interest of the whole community. *Id.* at 250.

The women's cartel would seem to have had much of the same character—men with very strong preferences for sex were denied sex by women who may also have had strong desires for sex, or at least were not seriously averse to the prospect. But, in a deeper sense there were not only group benefits to women as a whole in supporting the cartel, but also wider external benefits to society in the enforcement of the cartel. The cartel succeeded in harnessing men to the yoke of marriage. As long as the cartel operated, the only reliable access a man could get to women for sex and procreation was through marriage, and marriage entailed supporting a family and living a responsible life. In the absence of marriage, many men would—and do—live degenerate dissolute lives.⁶⁴ Thus, there was a general interest in enforcing the cartel.

Men and women had, in effect, three separate preferences with respect to sex. First, each, when viewing this from a purely private and personal perspective, had a desire for sex that was balanced by the possible costs to the activity. In the old world of 80 years ago (and still today, but to a lesser degree) the desire was stronger for men and the costs were considerably lower. Thus, men generally wanted easy access to women, while women had less clear or uniform desires. The second strongest set of preferences had to do with one's children and spouses. With respect to one's spouses, both parties—but especially men—wanted fidelity, and wanted a society that made infidelity less possible and less attractive. With respect to one's children, parents wanted a society in which one's children, especially one's daughters, but one's sons as well, had a prospect of secure lifelong marriage. With respect to one's son, one might have an interest in him getting some sexual experience prior to marriage, but hardly wanted that to be the entire course of his life. Finally, there were the set of interests with respect to society as a whole. One wanted a society in which children were raised in secure marriages, and men had substantial familial obligations to fulfill.⁶⁵ Thus, many men, and certainly older politically and socially powerful men had a great deal of interest in supporting the cartel—at least in their public activities.⁶⁶

⁶⁴ See, e.g., J.W. Welte et al., *Gambling Participation and Pathology in the United States—a Sociodemographic Analysis Using Classification Trees*, 29 *ADDICTIVE BEHAVIORS* 983, 987 Fig. 3 (2004) (among white men, those that are divorced or have never been married are significantly more likely to be problem gamblers).

⁶⁵ From an evolutionary biology perspective, “children with two parents may have had an educational edge over children with one.” WRIGHT, *supra* note 9, at 58–59.

⁶⁶ At times, this was done through the use of criminal and civil commitment. For example, in 1897, Ontario enacted the Female Refuges Act (FRA), which allowed magistrates to incarcerate women for “unmanageability and incorrigibility.” Joan Sangster, *Incarcerating “Bad Girls”: The Regulation of Sexuality Through the Female Refuges Act in Ontario, 1920–1945*, 7 *J. HIST. OF SEXUALITY* 239, 239–40 (1996). In 1919, the FRA was amended to allow any person to report an immoral woman to the magistrate. *Id.* at 240. One woman, Mildred, was sentenced for one year and nine months at the age of nineteen to treat her venereal disease and “teach her some discipline.” *Id.* at 239. From 1920 through-

VIII. THE CAUSE OF THE CARTEL'S COLLAPSE: DECLINING COST

While the logic of the women's cartel is clear, it—like all cartels—does not result from the natural private self-interested behavior of its members. All cartels offer opportunities and incentives for defection, and so, all require policing and punishment. As in most commercial cartels, in the women's cartel it is the participants themselves who—if they do not defect or cheat—are called upon, and have an incentive, to punish those who do defect and cheat. The principle means of enforcement has been social ostracism. The power of social ostracism turns first on numbers—the number of those in the group that shuns and the number of those in the group that is shunned. Ostracism raises the costs of breaking the cartel rules either by selling at too low a price or not adhering to the sharing rules. As a simple economic calculation, if the private internal costs of a given behavior plus the costs of ostracism exceed the benefit, then a woman will desist from that behavior, and if not, then not. And, the costs of ostracism will be a function of what one is being ostracized from. Thus, if 95% of women are ostracizing 5%, the costs to those ostracized will be far greater than if 50% are ostracizing the other 50%.

As each woman moves from adherent to defector, she increases by one the number of defectors to be punished and reduces by one the number of enforcers to do the punishing.⁶⁷ So, this cartel in equilibrium, like any cartel, may have some stable number of providers operating outside the cartel. That is, the maintenance of an effective cartel does not require that every woman adhere to it, only that a sufficient number do so to maintain the price of the sex they offer sufficiently above the market-clearing price that those women who remain in the cartel have enough to gain by adhering to the rules in their own behavior and of imposing the costs—if it be such to them—of not adhering to the rules on others.

A more or less stable equilibrium can be maintained for a very long time—centuries or millennia—unless and until there is some significant shock to the system. The general transformation of life in the past two centuries and the decline in the material cost of sex to women outlined above was just such a shock—disease, pregnancy, and unplanned birth were not the dangers and disasters that they had been in the past, women saw it in their interest to engage in sex more freely. The decline in each woman's marginal cost curve moved her equilibrium to the right. But, the mere fall in cost is not enough to eliminate the cartel. What is crucial in moving from a state of a stable cartel to one of collapse is the move in the net per-

out the 1950s, the FRA allowed “parents, police, welfare authorities, and the Children’s Aid Society to use incarceration as a means to regulate the sexual and moral behavior of [young] women perceived to be ‘out of sexual control.’” *Id.* at 240.

⁶⁷ It is, of course, sometimes the case that if someone can cheat secretly they will publicly continue to punish other cheaters.

sonal value of sex for a large number of women from negative to positive. As (1) contraception became easier and safer, (2) abortion legal and routine, and (3) single motherhood less punishing, sex became a net positive for more women. It is one thing to hold a cartel together when it is a question of raising a positive price, it is another when the goal is to charge a high positive price and the market equilibrium price is negative. It is especially difficult for people to sacrifice if they have no personal payoff. Before the precipitous decline in the cost of sex to women, most women saw virtue in chastity *and* virtue in the cartel, and so, they kept it going. The precipitous decline in the cost of sex to women over the last century lent spiritual support to an alternative moral philosophy, that of the “sexual revolution” and “The Playboy Philosophy.”⁶⁸ This new ideology proved a powerful counterpoise to the more prudish ideology that enforced the cartel.

The requirements of participation in the cartel were more or less binary; refrain from sex outside the bonds of marriage. The opportunity cost of adhering to that standard rose with the decline in the cost of sex and so many women, especially younger women near the margin, found it in their interest to cross the line. As they did so the numerical balance changed as the number of sexually active unmarried women rose and the number of chaste women fell, the power of the chaste to punish the unchaste by social ostracism fell in step. This is a “Schelling Tipping Model”⁶⁹—as more women cross the line, the payoff to women remaining gets smaller and smaller, and the crossing accelerates until effectively no cartel remains in the general society—though it may retain its vigor in specific insulated sub-cultures.

In addition to the drop in costs there were substantial independent sources of the inability of the cartel to enforce its rules and punish violators. The increased physical and social mobility, and urbanization of the American population meant that those with soiled reputations could more easily start a new life in a new place.⁷⁰ And, in large urban environments people could remain strangers to one another though immediate neighbors. Thus, the probability of chaste women imposing significant social costs on the unchaste was further reduced.⁷¹

⁶⁸ Interview with Hugh Hefner, George Washington University, <http://www.gwu.edu/~nsarchiv/coldwar/interviews/episode-13/hefner1.html> (Jan. 10, 1999).

⁶⁹ See THOMAS C. SCHELLING, *MICROMOTIVES AND MACROBEHAVIOR* 101–02 (1978).

⁷⁰ In traditional, non-mobile communities, identities of members are known; among the transient and more mobile societies, individuals are able to create identities. Lawrence M. Friedman, *Crimes of Mobility*, 43 *STAN. L. REV.* 637, 658 (1991).

⁷¹ Note also that urban living and mobility meant that women faced greater difficulties in imposing costs on men who would not play by the female rules. See WRIGHT, *supra* note 9, at 62–64 (1994). While human males have high male parental investment, a “mixed strategy” of sex and abandonment is not incompatible with eventual pair bonding. *Id.* In a typical hunter-gatherer society and throughout evolutionary development, however, humans tended to remain with their group, village, or community. *Id.* at 62. This means that the pool of “betrayable women” was smaller and more finite than in contem-

While I think there is much to be understood about the market for sex by employing the metaphor of cartel, I do not want it to be taken too literally. Specifically, I think one must always remember that the cartel was not a self-conscious thing. Women as a group did not generally articulate the “economics” of what they were doing to themselves or one another. When the costs of pre-marital and extramarital sex to women fell—for various reasons—the internal—psychological—sanctions that held the cartel together started to erode, and after them the external social ones did so as well.

The gains to defecting from the cartel were particularly high for younger women. An important aspect of the cartel was the lifetime profile of costs and benefits of participating in it. Women in general gain particularly in the out-years of a marriage. The principal gain of maintenance of the cartel for women is marriage, not merely in inducing men to marry but in inducing them to remain married, faithful, and devoted. One of the variables that will powerfully affect men’s willingness to abide by their marriage vows is the prospect of attractive opportunities for breach. Thus, one of the quid pro quos of the cartel is that women abstain and sacrifice when younger in order for a payoff when they are older. The collapse of the cartel was then particularly cruel to many middle-aged women who abided by the rules when they were young only to find no payoff when they were older and found that their husbands could abandon marriage because of the prospects of expanding sexual relationships.⁷²

Cruel though this was to older women, it was informative to younger women. They could look ahead and see that the prospects of a secure lifetime marriage were declining, so why make great sacrifices now when their value in the sexual marketplace was the highest? Why hold out for a long-term contract/covenant when the prospects of actual performance and enforcement were declining apace?

porary society, and males would have to face the reputational costs of lying (although some men did leave villages or maintain polygamous lifestyles). *Id.* at 62–63. But, in a modern, transient setting, “seducing and abandoning available women year after year after year, without making any of them targets for ongoing investment . . . is not a distinct, evolved, sexual strategy. It is just what happens when you take the male mind with its preference for varied sex partners, and put it in a big city replete with a contraceptive technology.” *Id.* at 63.

⁷² From an evolutionary perspective, men are attracted to and have an interest in selecting a younger mate, capable of reproduction because female fertility decreases with age and ends at menopause. *Id.* at 65. When women are younger, they can bear more children. *Id.* Since “beauty” is associated with youthful attributes in women, men target “beautiful women,” whereas women may be less selective, as male fertility does not vary with age. *Id.*

IX. A CAUTION ON INTERPRETING THE CARTEL AND ITS COLLAPSE

I fear that my emphasis on the women's cartel and its collapse may mislead some readers in two related ways. First, because I have spent so many words on this aspect of the decline in the cost of non-marital sex to women, some readers may draw the inference that I am arguing that it is the singularly largest source of that decline. I am not. Indeed, as I argued above, by far the greatest source of the decline in the cost of non-marital sex to women rests directly on pregnancy: avoiding it, terminating it, and bearing a child out of wedlock. I have spilt more ink on the cartel and its collapse because it is the more subtle, less appreciated source of the decline in the cost of sex to women, and so requires greater explication and support.

Second, my use of the term "cartel" is largely, though not entirely, metaphorical. It is, I think, a very useful and informative metaphor that captures much of the how and why of women policing and punishing other women in the market for sex. But, as with all metaphors it is easy to draw out the wrong analogies. Thus, when one thinks of a cartel and its collapse, there is a natural move to think of the suppliers being better off before the collapse and worse off after. In this instance, that is not clearly the case. Indeed, the historical evidence seems to be strongly in the opposite direction. Women in the developed west are by virtually all objective measures generally living richer, freer lives than they did in the recent past. This does not contradict my argument about the cartel and its collapse. Indeed, that is largely what has brought about the collapse of the cartel. The heart of the argument is that costs to women of engaging in sex outside of marriage were enormous barely a century ago, and the costs of life outside of marriage were also enormous. It is that both sets of costs to women fell dramatically, thereby much improving the lives of women in their own estimation, that set the condition for the increased supply of sex outside of marriage and the consequent precipitous erosion of the women's cartel. So, the normal inference that suppliers are worse off after the collapse of the cartel than before must be avoided. That inference might be true *ceteris paribus*, but in this case, the very reason for the collapse of the cartel is that there was an enormous decline in the cost to women of a core activity of life.

X. CONSEQUENCES

There is a somewhat troubling and informative irony at play here. As a general matter we view it as an immense and largely unambiguous personal and social good when the cost of things that we value greatly decline. So it is with respect to clothing, housing, health-care, food, and the myriad of other goods we value. But wait—is it really so unambiguous? It is surely a good thing that food is now so plentiful and inexpensive that no one in

the developed world need suffer starvation or even serious hunger. But, somehow we have not arrived at a pleasant state of satiation. Instead, there is a growing problem of obesity, type II diabetes, and a variety of related diseases, which with even greater irony have become diseases particularly associated with poverty.⁷³ And, as for health-care, our ability to forestall death is not an entirely and unambiguously good thing. There is now an expanding army of the senile and utterly dependent aged, living the most unenviable of lives.

So, though there are those who treat the concept of utility maximization as a normatively rich civic religion in which it is and must be something akin to an analytic *a priori* truth that anything that reduces costs of things we value is all to the good, my view is more agnostic on the question. Whether it is that we are imperfect judges of, and actors on behalf of, our interests, or that there are substantial externalities at play such that what serves the interest of the individual damages the more weighty interests of the group, there are substantial reasons to not be completely sanguine about declining costs.

In the remainder of this article, I shall outline—if only in miniature—the likely form of these two sets of unanticipated consequences and costs to women on the one hand, and to society more generally on the other, that have come in the wake of the massive decline in the cost of sex to women in the last century.

The declining cost of sex to women, like the declining cost of food, has not affected all strata of society in the same way. So, while some people have chosen to purchase more nutritious fresh food and eat well balanced diets at modest cost, others have indulged their gluttonous proclivities in consuming large amounts of refined carbohydrates to ill effect. Thus, the same decline in price has provided some with an enormous benefit, while allowing others to fall into a dark dietary hole.⁷⁴

In the same spirit, the declining cost of sex to women has meant that some women have been able to delay marriage, invest in a career, search the market for mates, and then enter long, relatively stable, marriages, all without having to deny themselves sex in the interim, while not being in great danger of disease, pregnancy, and out-of-wedlock birth. While this has not been all gain for these women and the men they eventually marry, its effect has been decidedly more benign than the effect on those in other strata of society.

⁷³ See, e.g., Sandra L. Hofferth & Sally Curtin, *Poverty, Food Programs, and Childhood Obesity*, 24 J. OF POL'Y ANALYSIS & MGMT. 703, 703 (2005) (stating, "Although in developing countries, low income has traditionally been associated with underweight as a result of poor diet, researchers have pointed to a paradox in the U.S., which is that low income and obesity can coexist in the same population") (internal citations omitted).

⁷⁴ See generally Daniel Akst, *Cheap Eats*, 27 WILSON Q., Summer 2003, at 30 (summarizing the benefits and costs of the declining price of food in America).

For lower class women the effect of the declining cost of sex has been decidedly different. Rather than merely having non-procreative sex outside of marriage, in rapidly growing numbers they have been having procreative sex outside of marriage.⁷⁵ This has resulted in a revolution in family formation and child-rearing. Overwhelmingly it is not the “Murphy Browns” who have been having babies out of wedlock but those with little or no financial resources or human capital.

The economic source of this radical divergence is clear. It is all a matter of opportunity costs. Remember, the fall in the cost of sex came in a variety of dimensions: disease, contraception, abortion, child-rearing, and reputation. The crucial dividing line between lower class women and other women turned on procreation. For some women the great boon that resulted from the declining costs of sex was the ability to avoid and postpone childbirth either through contraception or abortion, while for others it was the ability to bear a child out-of-wedlock without the crushing economic consequences that would have otherwise befallen them. Which side of that divide a woman chooses to occupy comes down to opportunity costs. For virtually all middle class young women, having a child out-of-wedlock is still seen as a disaster to be avoided, but for lower class women the choice went in a different direction.⁷⁶ For lower class women, the state offered support that did not differ much—or in any clear direction—from that which could be provided by the median prospect of a husband in their community.⁷⁷ So, the margin on which they responded was in having children out-of-wedlock. Note, this is not women having babies to get “welfare,” but rather, having babies to have babies; it is just that “welfare” is paying for it at a decidedly more generous level than it was a century ago.⁷⁸

⁷⁵ See, e.g., CHARLES MURRAY, *COMING APART: THE STATE OF WHITE AMERICA 1960-2010*, at 161–62 (2012) (analyzing the Natality Public Use Files of the Centers for Disease Control and stating that white women with at least a college-level education “almost never” give birth outside of marriage, whereas among white women who did not finish high school over 60% of live births are non-marital).

⁷⁶ See *id.* at 211–16 (discussing Patricia Stern Smallacombe’s 2002 study of an inner-city white neighborhood in Pennsylvania and explaining Smallacombe’s findings that some teenage pregnancies are welcomed by lower class women because it may provide a “certain amount of social status” or a “way to get out of the house, either by moving in with a boyfriend or by going on welfare”).

⁷⁷ See Charles Murray, *The British Underclass*, 99 *PUB. INTEREST* 4, 25–27 (1990) (describing Britain’s rise in illegitimate births as a function of generous government benefits for single mothers that “lifted a large portion of low-income young women above the threshold where having and keeping a baby became economically feasible”).

⁷⁸ *Id.* Murray explains that the proper analogy for understanding how increased government benefits incentivize illegitimate birth is not “a young woman with a calculator” but “a pot com[ing] to boil.” *Id.* at 26. Little by little, incremental benefit increases become “steps in a quiet, cumulative process whereby having a baby as a single mother went from ‘extremely punishing’ to ‘not so bad.’” *Id.*

For the women of the lower class, state assistance simply makes it easier for young women do something that they are naturally inclined to do.⁷⁹ The incentive does not have the same bite further up the social/economic staircase because benefit levels are typically too far below the level of a middle class woman's expectations to provide a sufficient incentive for them to have a child.⁸⁰

So the effect on society is the "Coming Apart" that Charles Murray has recently exposed. One portion of society continues to marry, albeit later, and somewhat less securely, than they did in the past, but another portion has largely abandoned marriage formation and marital security entirely.⁸¹

Though this "Coming Apart" is a major theme of modern social life, it should not blind us to the other great truth that for all social classes the institution of marriage is increasingly becoming less secure and less necessary. Marriage is no longer necessary for the economic survival of women as post-World War II economic advancement permits women to not merely survive, but live comfortably, on a single paycheck—their own. Today, although women on average earn roughly twenty-three cents less per dollar than men, it is still more than sufficient to live on their own at a standard that would have seemed positively luxurious a century ago.⁸² In addition, as discussed above, the declining costs and dangers of non-procreative sex in all its forms have eliminated marriage as a prerequisite for sexual intercourse for the vast majority of people.⁸³ Among today's never-married

⁷⁹ *Id.* at 25.

⁸⁰ *Id.*

⁸¹ As an example of how American society is separating out by class, Murray estimates that the non-marital birthrate in upper class, predominantly white municipalities is "6 to 8 percent of all births," whereas the non-marital birthrate in lower class, predominantly white municipalities is "around 43 to 48% of all births." MURRAY, *supra* note 75, at 163 (2012). Murray's argument that American society is coming apart by the "seams of class" focuses on white America so that matters of race and ethnicity are removed and the reader can focus on the central thesis. *Id.* at 269; *see generally* George A. Akerloff, Janet L. Yellen & Michael L. Katz, *An Analysis of Out-of-Wedlock Childbearing in the United States*, 111 Q. J. ECON. 277–317 (1996).

⁸² Kate Bolick, *All the Single Ladies*, THE ATLANTIC, Nov. 2011, at 120. In a 2010 study of "single, childless urban workers between the ages of 22 and 30," the results showed that "women . . . earned 8 percent more than the men" and women were also "more likely than men to go to college." *Id.* Timothy Reichert has argued that women's increased participation in the workforce is actually part of a marital exit strategy. Timothy Reichert, *Bitter Pill*, FIRST THINGS (May 2010), available at <http://www.firstthings.com/article/2010/04/bitter-pill>. He explains that "the strategy is, in essence, to become more like men" by specializing in "marketable labor." *Id.* This strategy has the perverse effect of "erod[ing] the gains from trade that potentially exist in marriage," leading to a situation where "men and women become, quite simply, less interesting to one another" and increasing the likelihood of divorce. *Id.*

⁸³ In fact, it has been argued that the declining costs of sex have divided sex and marriage into two independent markets. *See id.* (arguing that in the post-contraception era the market for sex and the market for marriage is split); *see also* Claudia Goldin and Lawrence Katz, *The Power of the Pill: Oral*

eighteen to twenty-three year-olds, roughly 25% have had anywhere from five to ten sexual partners.⁸⁴ And finally, marriage is no longer necessary for procreation as evidenced by the fact that currently 40% of children are born to single mothers.⁸⁵

As the necessity of marriage declines, so does its frequency. In 1960, 88% of men and 87% of women were married; today, these figures have dropped to 66% and 67%, respectively.⁸⁶ Attitudes toward marriage have undergone such a generational shift that 44% of “Millennials” and 43% of “Gen Xers” think that marriage is “becoming obsolete.”⁸⁷ Even for those who choose marriage, the low cost of sex has meant that men and women can obtain it easier outside of marriage, which, of course, increases marital stress and the likelihood of divorce.⁸⁸

Marriage is a marvelous cultural invention that was designed “to harness men’s energies to support the only offspring they may legitimately have, or are likely to have, legitimately or otherwise, in a world in which marriage is the norm.”⁸⁹ This fundamental truth must remain within our view; despite the fact that it has been pushed aside in the last century as the once virtually universal conditions of poverty have been alleviated in wealthy Western and Eastern countries and it has become possible for women and their children to materially survive in some degree of economic comfort outside of marriage. The decline of marriage has wide-ranging consequences for the happiness, health, and prosperity of heterosexual couples and their children. Much of these benefits are obscured by the broad acceptance of the modern romantic marital mythology, which holds that marriage is not fundamentally about the practical benefits but is instead an outcome and exercise of “romantic love” forged in a bond of “equality.” These two concepts—romantic love and equality—are pernicious and harmful ways to think about marriage.

Contraceptives and Women’s Career and Marriage Decisions, 110 J. POL. ECON. 730 (2002); Pierre-Andre Chiappori & Sonia Oreffice, *Birth Control and Female Empowerment: An Equilibrium Analysis*, 116 J. POL. ECON. 113 (2008).

⁸⁴ REGNERUS & UECKER, *supra* note 28, at 24–25.

⁸⁵ *Id.* at 229.

⁸⁶ Allen, *supra* note 15, at 25.

⁸⁷ Bolick, *supra* note 82, at 120.

⁸⁸ See Megan M. Sweeney & Allan V. Horwitz, *Infidelity, Initiation, and Emotional Climate of Divorce: Are There Implications for Mental Health?*, 42 J. HEALTH & SOC. BEHAV. 295, 295–97 (Sept. 2001) (discussing the relationship between infidelity and divorce, and explaining that “infidelity is one of the most frequently cited factors leading to marital disruption”).

⁸⁹ Lloyd R. Cohen, *Rhetoric, The Unnatural Family, and Women’s Work*, 81 VA. L. REV. 2275, 2290 (1995) [hereinafter *Unnatural Family*]; see also Lloyd R. Cohen, *Marriage, Divorce, and Quasi Rents; or “I Gave Him the Best Years of My Life”*, 16 J. LEGAL STUD. 267, 269 (1987) (“In the romantic relationship between a man and a woman, the most significant investment in a specific asset is the bearing and raising of children.”).

The metaphor of “falling” in love expresses the out-of-control character of the emotion. When “in love” the object of our desire appears god-like. In time, however, such thoughts are exposed as illusions. The problem is not that love drives us temporarily insane and that we eventually discover that our mate is not whom or what we thought. The problem, instead, is that we accept the belief that taking on, and adhering to, the life-long responsibility of marriage and children should be tied to the continuance of so ephemeral a thing as romantic love. This flawed notion has led millions of people to seek divorce when romantic love faded. Today, such damaging behavior has received broad social acceptance, with the collateral result being that marriage vows are considered freely rescindable.

The mathematical and political concept of equality, as it has been inaptly applied to marriage, leads to an additional set of problems. The concept of equality has distorted our view of what marriage is about, and obscured the essentially reciprocal nature of marriage. At its core, marriage is fundamentally a long-term contract/covenant. Individuals enter into long-term contracts because one or both parties intend to invest in what economists call “specific assets.” Specific assets are those assets whose value is crucially dependent on maintaining an ancillary relationship. The asset will lose a substantial portion of its value to one or both parties if the relationship between the parties comes to an end. In the context of heterosexual coupling, the specific asset that dwarfs all others is a woman’s bearing and rearing the child of a specific man. It is the investment in sexual intercourse and the intended or unintended procreation that results that is the specific asset that explains the covenantal commitment of marriage.

In the long-term contract of marriage, a breach or rescission by one party does not lead to equal encumbrances on the two parties to the contract. Until very recently, it was always accepted and understood that a woman left with a minor child—bastard or not—had suffered a disaster. At the termination of a marriage the burdens on men and women are not identical and usually not equal. Due to burden of the marital children, higher mortality rates for men, and men’s penchant for younger women, divorce often improves the future mating prospects for men while the opposite occurs for women. So, equality is a most misleading metaphor inaptly applied to understand marriage and the consequences of its termination.

The avoidance of marriage and its ready termination are not generally good either for individual couples or for the broader society. Marriage provides numerous material benefits to men and women. Let's begin with happiness as self-perceived. Getting married is very nearly the best thing that two people can do toward the fulfillment of a happy and healthy life.⁹⁰ Acts as simple as spousal monitoring contribute to such activities as "regular sleep," "a healthy diet," and "moderate drinking."⁹¹ Moreover, the knowledge of having support during both sickness and health increases the happiness of each individual.⁹² Overall, 40% of married individuals report happiness with their life in general, as opposed to less than 25% for individuals who are single or cohabitating.⁹³ Married couples also prosper financially. Although the marriage advantage may partially suffer from selection bias, studies of how family structure relates to wealth reveal that married couples achieve a higher median net worth and accumulate more savings than their unmarried counterparts.⁹⁴

Divorce, perhaps obviously, has the opposite effect and often leads to a costly division of assets.⁹⁵ Additionally, despite being the butt of an incalculable number of jokes, the familial support of in-laws is an advantage that 17% of married couples receive as opposed to only 2% of divorced or unwed mothers that obtain support from the father's parents.⁹⁶

Most importantly, marriage serves the long-term well-being of children. Indeed, in the vein of marriage as a long-term contract, children are the primary specific asset of marriage. Children are valued particularly and peculiarly by their natural parents, with the costs and benefits spanning a long time period. In the event of divorce, a new partner faces the costs of a child without the corresponding benefits they would receive if the child were their own. Thus, a long-term marital relationship provides the optimal environment for the investment in children.

Married parents are quite simply better parents. Charles Murray writes:

No matter what the outcome being examined—the quality of the mother-infant relationship, externalizing behavior in childhood (aggression, delinquency, and hyperactivity), delinquency in adolescence, criminality as adults, illness and injury in childhood, early mortality, sexual decision making in adolescence, school problems and dropping out, emotional health, or any other measure of how well or poorly children do in life—the family structure that produces the best outcomes for children, on average, are two biological parents who remain

⁹⁰ See LINDA J. WAITE & MAGGIE GALLAGHER, *THE CASE FOR MARRIAGE: WHY MARRIED PEOPLE ARE HAPPIER, HEALTHIER, AND BETTER OFF FINANCIALLY* 47–77 (2000) (arguing that marriage provides significant health and happiness benefits and discussing various studies in support).

⁹¹ *Id.* at 55–57, 77.

⁹² *Id.* at 77.

⁹³ *Id.* at 67.

⁹⁴ *Id.* at 111–14.

⁹⁵ *Id.* at 118–20.

⁹⁶ WAITE & GALLAGHER, *supra* note 90, at 117–18.

married. . . . All of these statements apply after controlling for the family's socio-economic status.⁹⁷

Marriage serves children best because, as Linda J. Waite and Maggie Gallagher put it, “[m]arriage shapes children’s lives first and foremost by directing the time, energy, and resources of two adults toward them.”⁹⁸ Without the support of married parents, children are more likely to face poverty, experience health problems, receive less education, lack social connections to other adults in their community, and receive less love and support overall.⁹⁹

CONCLUSION

So the story we tell is really a simple one. The cost to women of a primal, core human activity, sex, has declined precipitously over the last two centuries, most dramatically in the period 1945–1975. The decline itself, and its causes in the broadest sense, are all economic. The costs or probability of disease, unwanted pregnancy, terminating pregnancy, out-of-wedlock birth, and social opprobrium have all been severely diminished.

⁹⁷ MURRAY, *supra* note 75, at 162 (citing Stacey R. Aronson & Aletha C. Huston, *The Mother-Infant Relationship in Single, Cohabiting, and Marriage Families: A Case for Marriage?* 18 J. FAM. PSYCHOL. 5, 5–18 (2004); *see also* Paula Fomby & Andrew J. Cherlin, *Family Instability and Child Well-being*, 72 AM. SOC. REV. 181, 181–204 (2007); Shannon E. Cavenagh & Aletha C. Huston, *Family Instability and Children’s Early Problem Behavior*, 85 SOC. FORCES 551, 551–80 (2006); Jacinta Bronte-Tinkew et al., *The Influence of Father Involvement on Youth Risk Behaviors Among Adolescents: A Comparison of Native-Born and Immigrant Families*, 35 SOC. SCI. RES. 181, 181–209 (2006); CYNTHIA C. HARPER & SARA S. McLANAHAN, FATHER ABSENCE AND YOUTH INCARCERATION, PRESENTATION AT THE AMERICAN SOCIOLOGICAL ASSOCIATION (1998); Andre Sourander et al., *Childhood Predictors of Male Criminality: A Prospective Population-based Follow-up Study from Age 8 to Late Adolescence*, 45 J. AM. ACAD. CHILD & ADOLESCENT PSYCHIATRY 578, 578–86 (2006); Laurie J. Bauman et al., *Cumulative Social Disadvantage and Child Health*, 117 PEDIATRICS 1321, 1321–27 (2006); Denise Kendrick et al., *Relationships Between Child, Family, and Neighbourhood Characteristics and Childhood Injury: A Cohort Study*, 61 SOC. SCI. & MED. 1905, 1905–15 (2005); David F. Warner & Mark D. Hayward, *Early-life Origins of the Race Gap in Men’s Mortality*, 47 J. HEALTH & SOC. BEHAV. 209, 209–26 (2006); Jennifer Pearson et al., *Parental Involvement, Family Structure, and Adolescent Sexual Decision Making*, 49 SOC. PERSP. 67, 67–90 (2006); Marcia J. Carlson, *Family Structure, Father Involvement, and Adolescent Outcomes*, 68 J. MARRIAGE & FAM. 137, 137–54 (2006); Susan L. Brown, *Family Structure Transitions and Adolescent Well-being*, 43 DEMOGRAPHY 447, 447–61 (2006)).

⁹⁸ WAITE & GALLAGHER, *supra* note 90, at 126.

⁹⁹ *See id.* at 126–40 (arguing that married families provide children with more financial support, stronger family ties, more social skills, better mental/ emotional health, and better quality education and discussing various studies on these matters). One particularly widespread social cost from non-marital procreation is the failure of men to support their own children. *Unnatural Family*, *supra* note 89, at 2289–90. This virus affects both the white and black communities. *Id.* In addition, there are cultures that follow this perverse ethic. In much of Africa, “[p]rocreation is not tied closely to marriage, and men are not expected or required to support their wives and offspring.” *Id.* at 2290.

As a direct consequence, women's supply curve of sex outside of marriage has shifted massively to the right. The consequences of this are that marriages are not formed at nearly the rate they once were and are dissolved with an alacrity unimagined in all of human history prior to the second half of the 20th century. Despite the many benefits to women directly and to men indirectly of this massive decline in costs, there is reason to be less than sanguine about the effects on the social and cultural fabric of society.



WHICH CAME FIRST THE COST OR THE EMBRYO? AN
ECONOMIC ARGUMENT FOR DISALLOWING
CRYOPRESERVATION OF HUMAN EMBRYOS

*Morgan De Ann Shields**

INTRODUCTION

Which came first, the cost or the embryo? This question, much like the chicken and the egg version, currently appears impossible to answer. One may think, at first blush, that the cost comes first—that couples suffering from infertility seek and pay for in vitro fertilization treatments (IVF) before an embryo is formed. Couples choosing to cryopreserve¹ some of their embryos, however, incur even more costs,² such as the cost of cryopreservation as well as the cost of storing the frozen embryos.³ In addition, unused and discarded embryos waste thousands of dollars.⁴ Finally, there are costs imposed on the United States judicial system. Some of these judicial costs arise when couples who possess frozen embryos seek a divorce and are unsure how to divide and dispose of their embryos,⁵ or when frozen embryos are used to posthumously conceive children.⁶ The question of which came first, the cost or the embryo, could be resolved, once-and-for-all, simply by adopting regulations that prohibit the cryopreservation of human embryos.

Many articles have been written about the regulation of currently stored frozen embryos and their disposition.⁷ Some suggestions include using a regime based on property rights,⁸ while other articles suggest a con-

* J.D., George Mason University School of Law, 2013; B.A. Political Science, LaGrange College, 2010. This article would not have been possible without the grace of God, the love and support of an amazing family—Gerald, Kimberly, Jordan, Paige, and Jared—or the support of my dear friends Carolyn Head and Nate Harris.

¹ The terms “cryopreservation” and “frozen” are used interchangeably throughout this paper.

² See *infra* Part II.A.

³ See *infra* Part II.A.

⁴ See *The Costs of Infertility Treatments*, RESOLVE, http://www.resolve.org/family-building-options/insurance_coverage/the-costs-of-infertility-treatment.html (last visited Jan. 30, 2013) (explaining general breakdown of the average cost of Assisted Reproductive Technologies); see also *infra* Part II.B.

⁵ See *infra* Part II.B.

⁶ See *infra* Part II.B.

⁷ See, e.g., Paul C. Redman II & Lauren Fielder Redman, *Seeking a Better Solution for the Disposition of Frozen Embryos: Is Embryo Adoption The Answer?*, 35 TULSA L.J. 583 (2000).

⁸ See, e.g., Bridget M. Fuselier, *The Trouble with Putting all of Your Eggs in One Basket: Using A Property Rights Model To Resolve Disputes Over Cryopreserved Pre-Embryos*, 14 TEX. J. C.L. & C.R. 143 (2009).

tractual rights regime to control frozen embryo disposition.⁹ Nevertheless, the confusion and costs associated with how to treat cryopreserved human embryos persist.¹⁰ Many of the issues, concerns, and costs associated with cryopreserved human embryos can be eliminated by adopting regulations that prohibit their existence in the first place.

No one knows exactly how many cryopreserved embryos are in the United States. However, there are many estimates,¹¹ some of which conclude that there are over 500,000 cryopreserved embryos in the United States.¹² No matter the current number of frozen embryos, some estimates postulate that the rate of frozen embryos will continue to increase at a rate of 18.8% per year.¹³ With such a large number of embryos stockpiling in the United States, regulations need to be adopted.

This Note will demonstrate that because cryopreservation of embryos creates economic waste, the United States should adopt regulations that ban the cryopreservation of human embryos. Section I provides a background on the process of IVF and cryopreservation. Section II analyzes the monetary costs of cryopreservation, the cost of results, and the costs to the judicial system that come from having an unregulated cryopreservation market in the United States. Section III analyzes the regulations of cryopreservation adopted by Germany and Italy.¹⁴ Finally, Section IV proposes regulations the United States should adopt given the current costs of the unregu-

⁹ See Sara D. Petersen, Comment, *Dealing with Cryopreserved Embryos Upon Divorce: A Contractual Approach Aimed at Preserving Party Expectations*, 50 UCLA L. REV. 1065 (2003); Ellen A. Waldman, *Disputing Over Embryos: Of Contracts and Consents*, 32 ARIZ. ST. L.J. 897 (2000).

¹⁰ Some of this confusion can be seen in recent court cases. See generally *Litowitz v. Litowitz*, 48 P.3d 261 (Wash. 2002) (disputing the disposition of the couple's cryopreserved embryos, specifically whether they should be put up for adoption or implanted into a surrogate); *J.B. v. M.B.*, 783 A.2d 707 (N.J. 2001) (disputing the disposition of seven cryopreserved embryos upon divorce, specifically whether they should be put up for adoption or discarded); *A.Z. v. B.Z.*, 725 N.E.2d 1051 (Mass. 2000) (disputing the disposition of cryopreserved embryos, specially whether they could be used for implantation in the ex-wife); *Davis v. Davis*, 842 S.W.2d 588 (Tenn. 1992) (disputing who had final control over the divorced couple's cryopreserved embryos).

¹¹ See, e.g., David I. Hoffman et al., *Cryopreserved Embryos in the United States and Their Availability for Research*, 79 FERTILITY & STERILITY 1063, 1064 (May 2003), available at http://www.asrm.org/uploadedFiles/ASRM_Content/News_and_Publications/Selected_Articles_from_Fertility_and_Sterility/cryoembryos_may2003.pdf.

¹² Shari Roan, *What Should be Done with Excess Frozen Embryos?*, SEATTLE TIMES (Oct. 12, 2008), http://seattletimes.nwsourc.com/html/nationworld/2008257408_embryos12.html.

¹³ Jill R. Gorny, Note, *The Fate of Surplus Cryopreserved Embryos: What is the Superior Alternative for Their Disposition*, 37 SUFFOLK U. L. REV. 459, 459 (2004).

¹⁴ Many countries regulate IVF. See Joseph G. Schenker, *Assisted reproduction practice in Europe: legal and ethical aspects*, 7 HUM. REPROD. UPDATE 173, 175 (1997). However, of the G12 countries that regulate IVF, only Italy and Germany prohibit the cryopreservation of human embryos. Kristen Riggan, *G12 Country Regulations of Assisted Reproductive Technologies*, THE CENTER FOR BIOETHICS & HUMAN DIGNITY (Oct. 1, 2010), <http://cbhd.org/content/g12-country-regulations-assisted-reproductive-technologies>.

lated system in the United States and lessons learned from Germany and Italy.

I. IN VITRO FERTILIZATION AND THE CRYOPRESERVATION OF HUMAN EMBRYOS

A. *The Process of In Vitro Fertilization*

IVF and embryo transfer (ET) are defined as “the process of fertilizing eggs in the laboratory.”¹⁵ IVF and ET are just two types of Assisted Reproductive Technology (ART).¹⁶ There are nine steps in an IVF and ET cycle.¹⁷ The first step is pre-stimulation treatment.¹⁸ During this step, some patients will need to begin oral contraceptives.¹⁹ Also during this step, the administration of GnRH Agonist, a hormone used to stimulate the ovaries, begins.²⁰ The patient will use the GnRH agonist until the date of human chorionic gonadotrophin (hCG) administration, which is usually done in step four.²¹ Around the time of the patient’s expected menstrual cycle, a baseline pelvic ultrasound is performed to examine the ovaries.²² At this stage cysts may be detected, which on occasion will have to be aspirated.²³

¹⁵ *Science: Assisted Reproduction*, GENETICS & PUBLIC POLICY CENTER, <http://www.dnapolicy.org/science.assist.php1> (last updated May 2006).

¹⁶ *Family Building Options: IVF/ART*, RESOLVE, <http://www.resolve.org/family-building-options/ivf-art.html> (last visited Jan. 3, 2013). Other types of ART include gamete intrafallopian transfer (GIFT), zygote intrafallopian transfer (ZIFT), and gestational carriers. *Id.* For purposes of this paper, the process of GIFT and ZIFT as compared to IVF and ET are not important. The focus of this paper is the cryopreservation of human embryos during any ART process. For conservation of space and time, the processes of GIFT and ZIFT have been left out of this paper, and only the process of IVF and ET are described because those procedures are by far the most common form of ART performed. CTRS. FOR DISEASE CONTROL & PREVENTION, ASSISTED REPRODUCTIVE TECHNOLOGY SUCCESS RATES: NATIONAL SUMMARY AND FERTILITY CLINIC REPORTS 42 (December 2010), available at http://www.cdc.gov/art/ART2008/PDF/ART_2008_Full.pdf.

¹⁷ *ART: Step-by-Step Guide*, SOCIETY FOR ASSISTED REPRODUCTIVE TECHNOLOGY, <http://www.sart.org/detail.aspx?id=1903> (last visited Feb. 3, 2013).

¹⁸ *Id.*

¹⁹ *Id.* Oral contraceptives are needed to regulate irregular cycles to ensure that GnRH (Gonadotropin Releasing Hormone) analog therapy will start at the proper time during the ART cycle. If a patient has more regular cycles, it is less likely that she will have to take oral contraceptives before she begins her ART cycle.

²⁰ *Id.*

²¹ *Id.*

²² *Id.*

²³ *ART: Step-by-Step Guide*, *supra* note 17. Some cysts will resolve spontaneously if further therapy is withheld for a few days. Other cysts will need to be aspirated (drained) through the insertion of a needle to drain the cysts.

Once menstrual bleeding starts, step two—ovarian stimulation—begins.²⁴ Here, medication is administered by injection either intramuscularly or subcutaneously to stimulate egg development.²⁵ While these injections are being administered, step three occurs, which is the monitoring of the egg development by ultrasounds and blood tests.²⁶ Step four begins when hCG is administered in a one-time injection.²⁷ hCG stimulates the final maturation of the oocytes.²⁸ Step five begins thirty-four to thirty-six hours after the hCG is administered.²⁹ Here, the oocytes are retrieved by collection of the oocytes and follicular fluid into a needle that is guided into the ovaries through the vaginal wall.³⁰ On average, eight to fifteen oocytes are retrieved per patient, with more than 95% of retrievals resulting in the recovery of at least one oocyte.³¹ The oocytes can only be fertilized during a short interval after retrieval—about twelve to twenty-four hours.³² Step six is the insemination of the oocytes.³³ After twelve to twenty hours, evidence of fertilization can usually be detected—typically, 70% of oocytes become fertilized.³⁴ The seventh step is ET.³⁵ ET usually occurs three to five days after the oocyte retrieval (step five).³⁶ The number of embryos that are transferred (in the absence of regulations) depends largely on the patient's age.³⁷ Step eight usually begins the day of or after oocyte retrieval in step five.³⁸ This step is the administration of daily progesterone supple-

²⁴ *Id.*

²⁵ *Id.*

²⁶ *Id.* The ultrasounds and blood tests are performed frequently to ensure that the proper dose of medication is being administered. Once the largest egg (follicle) reaches 16–18 mm, the development will be monitored daily. *Id.*

²⁷ *Id.*; see also AM. SOC'Y FOR REPROD. MED., ASSISTED REPRODUCTIVE TECHNOLOGIES: A GUIDE FOR PATIENTS 21 (Patient Information Series, 2008), available at http://www.sart.org/uploadedFiles/ASRM_Content/Resources/Patient_Resources/Fact_Sheets_and_Info_Booklets/ART.pdf. For purposes of this paper, the term “oocyte” and “egg” are used interchangeably.

²⁸ *ART: Step-by-Step Guide, supra* note 17.

²⁹ *Id.*

³⁰ *Id.*

³¹ *Id.*

³² *Id.*

³³ Insemination can occur several ways. In some instances, the sperm are placed in a culture dish with the oocytes and then the dish is placed into an incubator. *Id.* Another technique, called intracytoplasmic sperm injection (ICSI) can also be used. *Science: Assisted Reproduction, supra* note 15. This method is where a single sperm is injected directly into the egg. *Id.* Semen can be collected by masturbation the morning of retrieval, or retrieval can take place by using a special condom for collection. *ART: Step-by-Step Guide, supra* note 17; AMERICAN SOCIETY FOR REPRODUCTIVE MEDICINE, *supra* note 27, at 8. Furthermore, semen can be cryopreserved before oocyte retrieval. *ART: Step-by-Step Guide, supra* note 17.

³⁴ *ART: Step-by-Step Guide, supra* note 17.

³⁵ *Id.*

³⁶ *Id.*

³⁷ AMERICAN SOCIETY FOR REPRODUCTIVE MEDICINE, *supra* note 27, at 11.

³⁸ *ART: Step-by-Step Guide, supra* note 17.

ments, which will be taken until the day of the pregnancy test (step nine) and will continue until a few weeks after the test if the results are positive.³⁹ The progesterone supplements support the uterine lining to help with successful attachment of the embryos.⁴⁰ The ninth and final step is the administration of a pregnancy test, which takes place usually nine to twelve days after ET.⁴¹

B. *Cryopreservation of Human Embryos*

Often, after a successful or unsuccessful IVF cycle, there will be leftover embryos that were not used in the ET process.⁴² The current process of IVF in the United States allows for the transfer of as many embryos as agreed upon by the doctor and patient.⁴³ The number one factor considered when deciding how many embryos to transfer is the age of the woman.⁴⁴ The American Society for Reproductive Medicine (ASRM) issues guidelines for clinics and patients to follow when making this decision, but in the end, the patient and her doctor make the final call on how many embryos to transfer.⁴⁵ For women in the highest age bracket with two or more failed IVF attempts in their past, the highest number of embryos that the ASRM guidelines suggest to transfer is six.⁴⁶ Because eight to fifteen eggs are harvested and fertilized, six to eleven embryos are created on average.⁴⁷ If only one to six embryos are transferred, this leaves anywhere from zero to five fertilized embryos left after an ET.⁴⁸ Many couples currently choose to freeze these leftover embryos for future use.⁴⁹ The embryos are typically frozen one, three, or five days after fertilization has occurred.⁵⁰

³⁹ *Id.*

⁴⁰ *Id.*

⁴¹ *Id.*

⁴² AMERICAN SOCIETY FOR REPRODUCTIVE MEDICINE, *supra* note 27, at 12.

⁴³ *Id.*

⁴⁴ *Id.*

⁴⁵ *Id.*

⁴⁶ AMERICAN SOCIETY FOR REPRODUCTIVE MEDICINE, *Guidelines on number of embryos transferred*, 92 FERTILITY & STERILITY 1518, 1519 (Nov. 2009), available at http://www.asrm.org/uploadedFiles/ASRM_Content/News_and_Publications/Practice_Guidelines/Guidelines_and_Minimum_Standards/Guidelines_on_number_of_embryos%281%29.pdf.

⁴⁷ On average 70% of eggs fertilize. *ART: Step-by-Step Guide*, *supra* note 17. Taking 70% of 8 and 70% of 15, the range is 5.6–10.5, but these numbers have been rounded for ease of understanding.

⁴⁸ This figure was derived by taking the average number of embryos that are fertilized and the number of embryos transferred (1–6), and simply subtracting one from the other.

⁴⁹ Michael B. Doyle, *Basic Decisions: The Frozen Embryo Dilemma*, CT FERTILITY, <http://www.ctfertility.com/article-library/basic-decisions-frozen-embryo-dilemma> (last visited Feb. 3, 2013).

⁵⁰ *State-of-the-Art Lab: Freezing*, PACIFIC FERTILITY CENTER, http://www.pacificfertilitycenter.com/welcome/lab_freeze.php (last visited Feb. 3, 2013).

There are four steps to the cryopreservation of embryos.⁵¹ Step one involves the removal of water from the embryo.⁵² Since water expands when it freezes, it must be removed, or the embryo may literally burst or ice shards could pierce and destroy the embryo.⁵³ The water is replaced with antifreeze, which will not expand when frozen.⁵⁴ During the removal of the water and replenishment with antifreeze, the embryo is cooled to room temperature.⁵⁵ After the water is replaced with antifreeze, the embryo is inserted into a vial or small straw and placed in the cooling chamber of a controlled rate freezer.⁵⁶ The third step involves the slow cooling of the embryos to ensure that no ice shards form.⁵⁷ The fourth and final step is the placement of the cooled straws or vials into metal cans, which are lowered into tanks with other frozen embryos.⁵⁸ The entire process takes several hours.⁵⁹

It is unclear how long a frozen embryo can be stored and remain viable for reproductive purposes.⁶⁰ Some countries have refused to allow storage of embryos for longer than five years.⁶¹ The reasons given for not allowing storage for longer than certain legislatively prescribed periods have been numerous and include the following: (1) to prevent embryos from being held in storage after contact with the genetic parents is lost;⁶² (2) to prevent the endless and expensive storage of embryos;⁶³ and (3) to prevent the never-ending stockpiling of frozen embryos.⁶⁴ Currently, the United States federal government does not have any regulations concerning how long an embryo may be stored or what should be done with frozen embryos.⁶⁵ There are a few states with regulations concerning the disposition of cryo-

⁵¹ *Id.*

⁵² *Id.*

⁵³ *Id.*

⁵⁴ *Id.*

⁵⁵ *Id.*

⁵⁶ *State-of-the-Art Lab: Freezing*, *supra* note 50.

⁵⁷ *Id.*

⁵⁸ *Id.*

⁵⁹ *Id.*

⁶⁰ *Id.*

⁶¹ For example, Austria and Denmark only allow storage of cryopreserved human embryos for one year, while the United Kingdom and France allow storage of embryos for up to five years. Schenker, *supra* note 14, at 178.

⁶² Karin J. Dawson, *The storage of human embryos*, 12 HUMAN REPROD. 6, 6 (1997).

⁶³ Heidi Forster, *The Legal and Ethical Debate Surrounding the Storage and Destruction of Frozen Human Embryos: A Reaction to the Mass Disposal in Britain and the Lack of Law in the United States*, 76 WASH. U. L.Q. 759, 761 (1998).

⁶⁴ *See id.*

⁶⁵ Molly O'Brien, Comment, *An Intersection Of Ethics And Law: The Frozen Embryo Dilemma And The Chilling Choice Between Life And Death*, 32 WHITTIER L. REV. 171, 171 (2010).

preserved embryos, but none of them prevent cryopreservation or place time limits on storage.⁶⁶

Not all embryos survive the freezing and thawing processes.⁶⁷ For the cryopreserved embryos that do survive the freezing and thawing processes, cryopreserved embryo transfers involve three steps: (1) hormonal therapy and progesterone, (2) ET, and (3) administration of a pregnancy test.⁶⁸ The live pregnancy rates using frozen embryos are 6.1% lower than the success rates using fresh embryos.⁶⁹

C. *The Disposition of Frozen Embryos*

Roughly half of the couples who have utilized IVF have one frozen embryo in storage.⁷⁰ So what happens to the frozen embryos? There are several options that are available to those who possess frozen embryos.⁷¹ The options include future implantation, donation to research institutions, donation for adoption, freezing indefinitely, or thawing and discarding. All of these options are discussed in more depth below.

1. Future Implantation

Many couples choose to have any leftover embryos created in an IVF cycle cryopreserved for implantation later.⁷² As of April 11, 2002, couples in the United States had frozen over 396,526 embryos.⁷³ Of these embryos, 87% were being held for patient treatment.⁷⁴ But many of these embryos will never be used.⁷⁵ Couples who wish to use their cryopreserved embryos simply return to the clinic and have some of their embryos thawed (which is simply a reversal of the cryopreservation process) and transferred.⁷⁶ The

⁶⁶ For a list of bylaws by state, see *Embryonic and Fetal Research Laws*, NAT'L CONFERENCE OF STATE LEGISLATURES, <http://www.ncsl.org/IssuesResearch/Health/Embryonic-and-fetal-research-laws.aspx>.

⁶⁷ AM. SOC'Y FOR REPROD. MED., *supra* note 27, at 9.

⁶⁸ *Cryopreserved Embryo Transfer*, SOC'Y FOR ASSISTED REPROD. TECH., <http://www.sart.org/detail.aspx?id=1895> (last visited Feb. 3, 2013). The fourth step, a follow-up consultation, is not included in the steps for purposes of this paper.

⁶⁹ CTRS. FOR DISEASE CONTROL & PREVENTION, *supra* note 16, at 58.

⁷⁰ *LA Times Examines Issues Surrounding Leftover Embryos*, MEDICAL NEWS TODAY (Oct. 8, 2008, 8:00 AM), <http://www.medicalnewstoday.com/releases/124638.php>.

⁷¹ See Gorny, *supra* note 13, at 460; Redman & Redman, *supra* note 7, at 583.

⁷² Doyle, *supra* note 49.

⁷³ Hoffman et al., *supra* note 11, at 1066.

⁷⁴ *Id.*

⁷⁵ See Redman & Redman, *supra* note 7, at 583.

⁷⁶ *State-of-the-Art Lab: Freezing*, *supra* note 50.

ET of thawed embryos involves three steps.⁷⁷ First, an artificial cycle is created using hormonal therapy.⁷⁸ Next, after hormonal tests confirm that the uterus is ready to receive the embryos (usually eighteen days after hormonal therapy is begun), an embryo transfer is scheduled.⁷⁹ The transfer of thawed embryos is identical to the transfer of fresh embryos.⁸⁰ The number of embryos that are transferred is usually between two and four, but is largely left up to the discretion of the patient and doctor.⁸¹ Ten days after the embryo transfer, a pregnancy test is performed.⁸² If the pregnancy test is positive, then a follow-up consultation is usually the final step in the process.⁸³

2. Donation to Research Institutions

According to a study done by the Society for Assisted Reproductive Technology (SART) and RAND in 2002 (the SART-RAND study), the number of embryos in storage totaled 396,526, and of these embryos, less than 3% were designated for research purposes.⁸⁴ Many couples have concerns about donating their excess embryos to research institutions because they believe that life begins at fertilization.⁸⁵

In March 2009, President Obama issued an Executive Order entitled *Removing Barriers to Responsible Scientific Research Involving Human Stem Cells*.⁸⁶ Pursuant to this executive order, the National Institutes of Health (NIH) issued new Guidelines for Human Stem Cell Research.⁸⁷ Prior to the enactment of these new regulations, both the availability of funds and ability to research on human embryos were more restricted.⁸⁸ While President Obama's executive order increased the amount of funding for research using human embryos, it did so only for existing human embryo

⁷⁷ *Cryopreserved Embryo Transfer*, *supra* note 68.

⁷⁸ *Id.*

⁷⁹ *Id.*

⁸⁰ *Id.* ("A small plastic catheter is passed gently through the cervix into the uterus. The embryos are deposited into the cavity along with a small amount of fluid.")

⁸¹ *Id.*

⁸² *Id.*

⁸³ *Cryopreserved Embryo Transfer*, *supra* note 68.

⁸⁴ Hoffman et al., *supra* note 11, at 1066.

⁸⁵ Gorny, *supra* note 13, at 476; Matthew C. Nisbet, *The Polls Trend: Public Opinion About Stem Cell Research and Human Cloning*, 68 PUB. OPINION Q. 131, 143 (2004) (explaining that because embryos are often destroyed in the process of scientific research, couples that believe that life begins at fertilization have ethical issues with having their embryos destroyed by scientists).

⁸⁶ Exec. Order No. 13,505, 74 Fed. Reg. 10,667 (Mar. 11, 2009).

⁸⁷ NAT'L INSTS. OF HEALTH, NATIONAL INSTITUTES OF HEALTH GUIDELINES ON HUMAN STEM CELL RESEARCH (July 7, 2009), available at <http://stemcells.nih.gov/policy/pages/2009guidelines.aspx>.

⁸⁸ Exec. Order No. 13,435, 72 Fed. Reg. 34,591 (June 20, 2001).

stem cell lines.⁸⁹ In order to conduct research using human embryos, the embryos must be donated by individuals who created the embryos for reproductive purposes.⁹⁰ This policy gives researchers incentives to create excess embryos in the IVF process so that they may have available embryos in the future to use for research purposes if the couples choose not to use them.

A study conducted from 2002 to 2007 indicated that 59% of patients who no longer wanted to keep their embryos in storage desired to dispose of them by donating them to scientific research.⁹¹ However, another study conducted from 2006 to 2007 indicated that 21% of patients who had embryos in storage were likely to donate them to research.⁹² This later study also found that patients who ascribed high moral worth to embryos and high importance to concerns about embryos, fetuses, and future children were less likely to donate their embryos to research.⁹³ This is reflective of the ongoing debate about the moral and ethical implications of using human embryos for research purposes.⁹⁴ Many patients express a view that they are torn between donating their embryos to research and discarding them. They feel that it would be wrong to destroy an embryo, but they also feel that just discarding the embryo would be a waste.⁹⁵

3. Donation and Adoption

According to the SART-RAND study, of the 396,526 frozen embryos in storage, just over 2% were available and awaiting adoption by another couple.⁹⁶ For many reasons, the majority of couples with frozen embryos do not want to donate their embryos to other couples.⁹⁷ One of these reasons is that couples do not like the idea of having their genetic children or

⁸⁹ NAT'L INSTS. OF HEALTH, *supra* note 87.

⁹⁰ *Id.*

⁹¹ Susan Lanzendorf et al., *Disposition of cryopreserved embryos by infertility patients desiring to discontinue storage*, 93 FERTILITY & STERILITY 486, 486 (Jan. 15, 2010).

⁹² Anne Drapkin Lyerly et al., *Fertility patients' views about frozen embryo disposition: results of a multi-institutional U.S. survey*, 93 FERTILITY & STERILITY 499, 502 (Jan. 15, 2010).

⁹³ *Id.*

⁹⁴ Giuliana Fuscaldo, Sarah Russell & Lynn Gillam, *How to Facilitate Decisions About Surplus Embryos: Patients' Views*, 22 HUMAN REPROD. 3129, 3132 (2007); *see generally* Malosack Berjis, *Human Embryonic Stem Cell Research and Surplus Embryos: A Moral Argument*, 29 MISS. C. L. REV. 427 (2010) (arguing that a middle ground between research and moral opposition exists by using stem cells from surplus IVF created embryos destined to be destroyed).

⁹⁵ Fuscaldo et al., *supra* note 94, at 3132.

⁹⁶ Hoffman et al., *supra* note 11, at 1066.

⁹⁷ Kathryn D. Katz, *The Legal Status of the Ex Utero Embryo: Implications for Adoption Law*, 35 CAP. U. L. REV. 303, 336 (2006).

their children's genetic siblings "running around."⁹⁸ Furthermore, many couples do not want to adopt the frozen embryos of other couples.⁹⁹ A study done of IVF patients in Australia between 2002 and 2003 found that couples at the beginning of the IVF process tend to want to donate their unused embryos to other couples.¹⁰⁰ However, after they undergo treatment, whether successful or unsuccessful, and the embryos have actually been formed and are in storage, few patients desire to donate their embryos to another couple.¹⁰¹ Some of the reasons that couples give for choosing not to donate their embryos to other couples are the physical, emotional, and financial investment that they put into creating the embryos;¹⁰² an emotional connection to their embryos;¹⁰³ and concern about the environment in which their embryos may be raised in if they became someone else's children.¹⁰⁴

For couples that wish to give their embryos to another couple, there are two different options available. The first is to allow the clinic where the cryopreserved embryos are held to give them up for donation. The second is to contact an agency and allow the cryopreserved embryos to be adopted.¹⁰⁵ Although many patients decide not to give their embryos up for adoption, this option is available and is advocated for by many.¹⁰⁶ There are several programs in the United States that advocate for and facilitate frozen embryo adoption.¹⁰⁷ One such agency is the Snowflakes Frozen Embryo Adoption Program, operated by Nightlight Christian Adoptions in Califor-

⁹⁸ Mark P. Strasser, *You Take the Embryos but I Get the House (and the Business): Recent Trends in Awards Involving Embryos Upon Divorce*, 57 *BUFF. L. REV.* 1159, 1171 (2009); Susan L. Crockin, *The "Embryo" Wars: At the Epicenter of Science, Law, Religion, and Politics*, 39 *FAM. L.Q.* 599, 616–17 (2005).

⁹⁹ Katz, *supra* note 97, at 336.

¹⁰⁰ Sheryl de Lacey, *Parent Identity and 'Virtual' Children: Why Patients Discard Rather than Donate Unused Embryos*, 20 *HUMAN REPROD.* 1661, 1663 (2005).

¹⁰¹ *Id.*

¹⁰² *Id.* at 1664.

¹⁰³ *Id.* at 1665–66.

¹⁰⁴ *Id.* at 1666.

¹⁰⁵ *Frequently Asked Questions – FAQs*, NIGHTLIGHT CHRISTIAN ADOPTIONS (2013), <http://www.nightlight.org/faqs/#b6>. The difference between embryo donation and embryo adoption is that embryo donation is offered usually by clinics, and the donation is done anonymously—the couples donating their embryos do not have any say over who gets their embryos, they do not know who the couples are, and the donee couples do not know who the embryos belonged to. *Id.* Embryo adoption is more like the traditional process of adoption, where the donating couples may have some input in who adopts their embryos and may also be able to have an open adoption. *Id.*

¹⁰⁶ See Polina M. Dostalík, *Embryo "Adoption"? The Rhetoric, the Law, and the Legal Consequences*, 55 *N.Y.L. SCH. L. REV.* 867, 868 (2011); Molly Miller, *Embryo Adoption: The Solution to an Ambiguous Intent Standard*, 94 *MINN. L. REV.* 869, 872 (2010).

¹⁰⁷ See *Embryo Adoption Agencies*, EMBRYO ADOPTION AWARENESS CTR., http://www.embryoadooption.org/adoption_agencies/embryo_adoption_services_matrix.cfm (last visited Jan. 30, 2013) (listing some of these agencies).

nia.¹⁰⁸ Since 1997, when Nightlight began its embryo adoption program, it has facilitated 328 adoptions.¹⁰⁹ There are 242 snowflake children and nineteen adoptive families currently expecting snowflake children.¹¹⁰

4. Freeze Indefinitely

No one really knows how long an embryo can be frozen, stored, and remain viable for reproductive purposes.¹¹¹ Some couples choose to freeze their embryos indefinitely with no intention of ever using those embryos for reproductive purposes.¹¹² If a couple feels that it is morally wrong to donate their embryos for medical research, and also does not like the idea of having genetic children walking around, or if they do not want to have any more children themselves, the only option that they are often left with of freezing their embryos indefinitely.

5. Thawing and Discarding

According to the SART-RAND Study, there are 396,526 total embryos in storage, and of these embryos, just over 2% were awaiting destruction.¹¹³ According to ethical guidelines promulgated by ASRM, a clinic can thaw and discard frozen embryos if it has lost contact with the patient who owns the embryos for five years, so long as it cannot find the owners of those embryos and the owners have not stated how they desire their embryos to be disposed.¹¹⁴ Often, patients will just stop paying for the storage of their cryopreserved embryos or move away and forget about their extra embryos, completely ignoring their responsibility to use or dispose of those embryos.¹¹⁵ The very ability of cryopreservation allows patients to defer the decision of what to do with any surplus embryos indefinitely.¹¹⁶

¹⁰⁸ *Snowflakes Embryo Adoption*, SNOWFLAKES® FROZEN EMBRYO ADOPTION & DONATION PROGRAM, NIGHTLIGHT CHRISTIAN ADOPTION, <http://www.nightlight.org/snowflake-embryo-adoption/>.

¹⁰⁹ *Id.*

¹¹⁰ *Id.*; Dostalík, *supra* note 106, at 873.

¹¹¹ *State-of-the-Art Lab: Freezing*, *supra* note 50.

¹¹² *Id.*

¹¹³ Hoffman et al., *supra* note 11, at 1066.

¹¹⁴ AM. SOC'Y FOR REPROD. MED., *Disposition of Abandoned Embryos*, 82 FERTILITY & STERILITY S253, S253 (Sept. 2004), available at http://www.asrm.org/uploadedFiles/ASRM_Content/News_and_Publications/Ethics_Committee_Report_s_and_Statements/abandonedembryos.pdf.

¹¹⁵ O'Brien, *supra* note 65, at 172–73.

¹¹⁶ Lacey, *supra* note 100, at 1661.

II. THE REAL COST OF FROZEN EMBRYOS

A. *The Monetary Cost*

1. The Cost of the Initial Procedure

Table 1 shows a survey of ten IVF clinics in the United States. The survey reveals an average cost of one IVF cycle was \$8,328. This number is relatively close to the reported national average of IVF cost, which is \$10,000 per cycle.¹¹⁷

¹¹⁷ *IVF Treatment Costs*, ATTAIN IVF, <http://attainivf.com/ivf-costs> (last visited Feb. 3, 2013); Peter E. Malo, *Deciding Custody of Frozen Embryos: Many Eggs Are Frozen but Who Is Chosen?*, 3 DEPAUL J. HEALTH CARE L. 307, 309 (2000) (“The typical costs associated with IVF range between \$8,000 and \$10,000 per completed procedure (which includes medical consultations, laboratory tests, drugs and egg retrieval, culturing, and transfer).”).

Table 1. Cost of an IVF Cycle

AF ¹¹⁸	Bay IVF ¹¹⁹	TFC ¹²⁰	WFC ¹²¹	SDFC ¹²²	NHFC ¹²³	AFS ¹²⁴	ARCC ¹²⁵	RFC ¹²⁶	Nova ¹²⁷
\$10,000 ¹²⁸	\$6,570	\$6,058 ¹²⁹	\$7,990	\$10,200	\$11,800 ¹³⁰	\$8,000	\$6,500	\$6,000	\$9,980

Unfortunately, while clinics and the Centers for Disease Control (CDC) track success rates of IVF cycles, they do not track how many cycles each woman must go through before having a successful pregnancy.¹³¹ For example, one couple (later parties to an IVF divorce suit) spent \$35,000 and went through six cycles of IVF without ever achieving a pregnancy.¹³² The number of cycles that may be necessary before a successful live birth oc-

¹¹⁸ *In Vitro Fertilization (IVF) Pricing*, ADVANCED FERTILITY CARE, <http://www.azfertility.com/financial-fees/ivf-pricing.html> (last visited Feb. 3, 2013).

¹¹⁹ *Soft-IVF™ Fee*, BAY IN VITRO FERTILIZATION: CTR FOR REPROD. MED., http://bayivf.com/ivf_cost_softivf.htm (last visited Feb. 3, 2013).

¹²⁰ *Cost of IVF*, THE FERTILITY CTR., <http://www.fertilitycentermi.com/affording-treatments/> (last visited Feb. 3, 2013).

¹²¹ *Clear & Affordable Fees*, WASH. FERTILITY CTR., <http://www.washingtonfertility.com/fees.htm> (last visited Feb. 3, 2013).

¹²² *Global IVF Packages*, SAN DIEGO FERTILITY CTR., <http://www.sdfertility.com/ivfcashoption.htm> (last visited Feb. 3, 2013).

¹²³ *IVF Costs*, NEW HOPE FERTILITY CTR., http://www.newhopefertility.com/patient_resources/ivf_financial_information_low_cost_ivf/ (last visited Feb. 3, 2013).

¹²⁴ *IVF and Infertility Cost*, ADVANCED FERTILITY SERVS., <http://infertilityny.com/costs.html> (last visited Feb. 3, 2013).

¹²⁵ *Financial Matters*, ADVANCED FERTILITY CARE CTR., <http://www.ivfmd.net/financial-matters/ivf-cost/> (last visited Feb. 3, 2013).

¹²⁶ *IVF Treatment Packages*, REPROD. FERTILITY CTR., <http://reproductivefertility.com/packages.html> (last visited Feb. 3, 2013).

¹²⁷ *Treatment Fees, In Vitro Fertilization*, NOVA, <http://novaivf.com/cost-ivf.htm> (last visited Feb. 3, 2013).

¹²⁸ This price is for a woman aged 35 years or younger; prices increase with age. *In Vitro Fertilization (IVF) Pricing*, *supra* note 118.

¹²⁹ This cost does not reflect the medication costs, which are approximately \$2,500 – \$5,000 per IVF cycle. *IVF Costs*, *supra* note 123.

¹³⁰ This cost does not include the estimated medication fees, which range between \$2,500 and \$5,000. *Id.*

¹³¹ CTRS. FOR DISEASE CONTROL & PREVENTION, *supra* note 16, at 6 (“As required by law, this report presents ART success rates in terms of how many cycles were started each year, rather than in terms of how many women were treated Clinics do not report to CDC the number of women treated at each facility. Because clinics report information only on outcomes for each cycle started, it is not possible to compute the success rates on a ‘per woman’ basis, or the number of cycles that an average woman may undergo before achieving success.”).

¹³² *Davis v. Davis*, 842 S.W.2d 588, 591–92 (Tenn. 1992).

curs is unknown. However, the overall success rate of IVF cycles is known to be approximately 30%.¹³³

2. The Cost of Cryopreservation

A survey of five fertility clinics in the United States (shown below) gave an average cryopreservation cost of \$742 with a range in cost of \$400–\$1,200.

Table 2. Cost of Cryopreservation

AFC ¹³⁴	TFC ¹³⁵	NHFC ¹³⁶	AFS ¹³⁷	AFCC ¹³⁸
\$750	\$559	\$1,000	\$1,000	\$400

3. The Cost of Storage

A survey of six clinics in the United States revealed an average annual cost of storage of \$430 with a cost range between \$300–600. Many couples choose to store their extra embryos indefinitely.¹³⁹ If a couple chooses to do this, and continues to pay the annual storage fee, they could end up paying over \$19,000.¹⁴⁰

¹³³ CTRS. FOR DISEASE CONTROL & PREVENTION, *supra* note 16, at 22; *see supra* Part II.B (discussing the success rates of IVF procedures).

¹³⁴ *In Vitro Fertilization (IVF) Pricing*, *supra* note 118. The price for cryopreservation is for six or more embryos and includes one year of storage. *Id.*

¹³⁵ *Cost of IVF*, *supra* note 120. The price for cryopreservation includes the first quarter of storage. *Id.*

¹³⁶ *IVF Costs*, *supra* note 123.

¹³⁷ *IVF and Infertility Cost*, *supra* note 124. The price for cryopreservation includes one year of storage. *Id.*

¹³⁸ *Financial Matters*, *supra* note 125.

¹³⁹ Carl H. Coleman, *Procreative Liberty and Contemporaneous Choice: An Inalienable Rights Approach to Frozen Embryo Disputes*, 84 MINN. L. REV. 55, 65 (1999) (“The final disposition option— indefinite storage—can be either an affirmative choice or the result of an unwillingness or inability to decide.”).

¹⁴⁰ This number was derived by taking the average cost of storage for cryopreserved embryos (\$430) and multiplying that by the difference between a woman who seeks IVF at 36 and the average life expectancy for women in the United States (80.2). Roughly 21% of IVF is sought by women who are 35–37 years old. Therefore, for purposes of this illustration, 36 was chosen. CTRS. FOR DISEASE CONTROL & PREVENTION, *supra* note 16, at 17. The average life expectancy for women in the United States is 80.2 years. ELIZABETH ARIAS, NATIONAL VITAL STATISTICS REPORT: UNITED STATES LIFE TABLES, 2 (2006), available at http://www.cdc.gov/nchs/data/nvsr/nvsr58/nvsr58_21.pdf.

Table 3. Cost of Storage

NECC ¹⁴¹	CL ¹⁴²	FCC ¹⁴³	TFC ¹⁴⁴	AFS ¹⁴⁵	AFC ¹⁴⁶
\$425	\$480	\$375	\$400 ¹⁴⁷	\$600	\$300

4. The Cost of Frozen Embryo Transfers

The national average cost for embryo transfer using frozen embryos is \$3,500.¹⁴⁸ A simple survey of five clinics in the United States rendered an average of \$3,760, which is only slightly higher than the reported national average.

¹⁴¹ *Embryo Transportation/Storage Fees*, NECC, <http://www.necryogenic.com/shipping-storage-embryo.php> (last visited Feb. 3, 2013).

¹⁴² *Embryo Storage: More Than A Sperm Bank*, CRYOGENIC LABS., <http://www.cryolab.com/embryostorage.shtml> (last visited Feb. 3, 2013).

¹⁴³ *Embryo and Egg Banking*, SPERM BANK, INC., <http://www.spermbankcalifornia.com/embryo-egg-banking.html> (last visited Feb. 3, 2013).

¹⁴⁴ *Cost of IVF*, *supra* note 120.

¹⁴⁵ *IVF and Infertility Cost*, *supra* note 124.

¹⁴⁶ *Financial Matters*, *supra* note 125.

¹⁴⁷ *Cost of IVF*, *supra* note 120. The fees for storage are \$100 per quarter, for ease of viewing the figure is combined for an annual charge of \$400.

¹⁴⁸ *IVF Treatment Costs*, *supra* note 117.

Table 4. Cost of Frozen Embryo Transfer

TEFC ¹⁴⁹	AFC ¹⁵⁰	NHFC ¹⁵¹	AFS ¹⁵²	AFCC ¹⁵³
\$6,800 ¹⁵⁴	\$4,000 ¹⁵⁵	\$3,200	\$3,500	\$1,300

While it is true that the transfer of frozen embryos is cheaper on its face than the transfer of fresh embryos, this value is deceiving.¹⁵⁶ The true cost of a frozen embryo transfer should include the cost of the initial IVF cycle along with any fees accumulated to store those embryos. For example, if a couple undergoes an IVF cycle that costs \$10,000,¹⁵⁷ which produces fifteen embryos¹⁵⁸—three of which are implanted and twelve of which are cryopreserved¹⁵⁹—part of the \$10,000 cost should be allocated to the twelve embryos that were not implanted. The simplest formulation would be to divide the \$10,000 cost over all fifteen embryos produced (those implanted and those cryopreserved); this would give an initial per embryo cost of \$667.¹⁶⁰ Assuming that the twelve embryos are stored for a year before some of them are thawed and implanted, the cost per embryo will have gone up to \$703.¹⁶¹ If three of these embryos are thawed and transferred,

¹⁴⁹ *Frozen Embryo Transfer Pricing List*, DREAM A BABY, available at <http://www.dreamababy.com/downloads/Frozen%20Embryo%20Transfer%20Price%20List.pdf> (last visited Feb. 3, 2013).

¹⁵⁰ *In Vitro Fertilization (IVF) Pricing*, *supra* note 118.

¹⁵¹ *IVF Costs*, *supra* note 123.

¹⁵² *IVF and Infertility Cost*, *supra* note 124.

¹⁵³ *Financial Matters*, *supra* note 125.

¹⁵⁴ This number is the average between the range of \$6,571 and \$7,030, given by the clinic as the estimated cost for replacement cycle frozen embryo transfer. *Frozen Embryo Transfer Pricing List*, *supra* note 149.

¹⁵⁵ This price does not include the medications needed during the procedure. The cost for medication is between \$1,200 and \$1,500. *In Vitro Fertilization (IVF) Pricing*, *supra* note 118.

¹⁵⁶ *Contra* Donna M. Sheinbach, *Examining Disputes over Ownership Rights to Frozen Embryos: Will Prior Consent Documents Survive If Challenged by State Law and/or Constitutional Principles?*, 48 CATH. U. L. REV. 989, 991 (1999) (“This freezing technique lessens the pain and the cost of IVF in the event that the first attempt to conceive proves unsuccessful.”).

¹⁵⁷ *IVF Treatment Costs*, *supra* note 117.

¹⁵⁸ On average, eight to fifteen eggs are harvested. *ART: Step-by-Step Guide*, *supra* note 17.

¹⁵⁹ 74.6% of the time two to three embryos are transferred when using fresh embryos. CTRS. FOR DISEASE CONTROL & PREVENTION, *supra* note 16, at 47.

¹⁶⁰ This, of course, is assuming that all embryos survive the harvesting and fertilization process. If not, the cost should be reallocated, increasing the cost of the remaining embryos by the cost of the destroyed embryos.

¹⁶¹ This number was derived by adding the average storage fee of \$430 (*see supra* Part II.A) divided by the number of embryos in storage (in this hypothetical twelve), to the \$667 per embryo cost.

the cost per transferred embryo will be \$1,870.¹⁶² The total cost of the transfer for these three embryos will be \$5,609.¹⁶³ The number only continues to increase the longer the frozen embryos stay in storage before implantation.¹⁶⁴

B. *The Cost of Results*

1. The Lowered Rate of Successful Implantation

As discussed above, the per embryo cost of embryo transfers increases the longer an embryo is in storage.¹⁶⁵ Not only do frozen embryos cost more per capita, their success rates are lower.¹⁶⁶ The Centers for Disease Control and Prevention releases yearly data on the success rates of IVF. The table below compares the implantation rates of fresh versus frozen embryos based upon data from a 2008 CDC report.¹⁶⁷

¹⁶² This number was derived by taking the national average cost of frozen embryo transfer, which is \$3,500, *IVF Treatment Costs*, *supra* note 117, divided by the number of embryos transferred (which is three in this hypothetical), and then adding this cost to each per embryo cost of \$703.

¹⁶³ This number was derived by multiplying the number of embryos (three) times the per embryo cost of \$1,870. For how the per embryo cost was derived, *see supra* note 161.

¹⁶⁴ Assuming three more embryos are implanted every year until all the frozen embryos are used up, the per embryo cost in year 2 would be \$1,917. In year three the cost per embryo would be \$1,988, and in the final year (year 4), the cost per embryo would be \$2,131. These figures assume that the cost of the transfer of embryos will stay the same for the four years that some were thawed and transferred, and that three embryos are thawed every year for four consecutive years, which is unlikely to occur. Therefore, the per embryo cost is likely to be even higher by the time the final embryos are thawed and implanted.

¹⁶⁵ *See supra* Part II.A (discussing the per embryo cost of fresh versus frozen embryo transfers).

¹⁶⁶ CTRS. FOR DISEASE CONTROL & PREVENTION, *supra* note 16, at 58.

¹⁶⁷ *Id.*

Table 5. CDC 2008 Implantation Rates

	Percentage of Fresh Embryos Transferred that Resulted in Implantation ¹⁶⁸	Percentage of Frozen Embryos Transferred that Resulted in Implantation ¹⁶⁹	Difference in Success Rates
<35	34%	24.3%	9.7%
35-37	24.8%	20.5%	4.3%
38-40	16.8%	17.2%	(0.4%)
41-42	9.3%	12.9%	(3.6%)
43-44	4.5%	9.7%	(5.2%)

Because implantation does not always mean a viable and maintainable pregnancy, the true measure of a successful IVF cycle with fresh or frozen embryos should be measured by the percentage of live births that occur.

¹⁶⁸ *Id.* at 48.

¹⁶⁹ *Id.* at 57.

Table 6. CDC 2008 Live Pregnancy Rates

	Percentage of Transfers Using Fresh Embryos that Resulted in Live Births ¹⁷⁰	Percentage of Transfers using Frozen Embryos that Resulted in Live Births ¹⁷¹	Difference in Success Rates
<35	47.1%	35.5%	11.6%
35-37	37.4%	29.3%	8.1%
38-40	28.2%	26.1%	2.1%
41-42	16.5%	19.5%	(3%)
43-44	7.8%	14.6%	(6.8%)
Average ¹⁷²	36.7%	30.6%	6.1%

As the data demonstrates, the average success rate for frozen embryos is 6.1% less than the average success rate for fresh embryos. When categorized by age group, the success rates of fresh embryos are higher for all categories except when the patient is between the ages of forty-one to forty-two and forty-three to forty-four. In the age group of women forty-one to forty-two years old, the success rate of using frozen embryos is 3% higher. In the age group of women age forty-three to forty-four the success rate of using frozen embryos is 6.8% higher. The CDC report does not explain why the use of frozen embryos instead of fresh embryos has a higher rate of success in women aged forty-one to forty-four. Limited information is available on the relationship between increasing patient age and frozen embryo transfer success.¹⁷³ One potential factor that could help explain why frozen embryo transfers in older women are more successful is the increased number of embryos transferred during ET.¹⁷⁴

When looking at this data, it is important to note that they do not take into account how long the embryos have been stored before being implant-

¹⁷⁰ 2008 National Summary Report, CTRS. FOR DISEASE CONTROL & PREVENTION, available at <http://apps.nccd.cdc.gov/art/Apps/NationalSummaryReport.aspx>.

¹⁷¹ *Id.*

¹⁷² CTRS. FOR DISEASE CONTROL & PREVENTION, *supra* note 16, at 58.

¹⁷³ Tarek A. Gelbaya et al., *Cryopreserved-thawed Embryo Transfer in Natural or Down-regulated Hormonally Controlled Cycles: a Retrospective Study*, 85 FERTILITY & STERILITY 603, 608 (2006).

¹⁷⁴ *Id.* at 605 (“The pregnancy and clinical pregnancy rates per embryo transfer were significantly increased with double embryo transfer compared to single embryo transfer.”).

ed. The actual amount of time that an embryo can be stored and remain viable is currently unknown.¹⁷⁵

ART is sought after primarily by women forty and younger.¹⁷⁶ In fact, 79.6% of all ART cycles performed in the United States are on women forty years or younger.¹⁷⁷ Women between the ages of forty-one and forty-four make up only 15.6% of the population seeking ART.¹⁷⁸ Furthermore, fresh cycles are performed more often than frozen cycles for all age groups, except for women over forty-four.¹⁷⁹ 78.7% of ART conducted in the United States is accomplished using fresh embryos.¹⁸⁰

2. Money for Nothing Embryos—Discarded Embryos

For couples that do not return for their frozen embryos, the economic waste these embryos create is not simply the increased cost for lowered success rates. Rather, these couples are literally paying for absolutely nothing.¹⁸¹

One way to deal with the increased number of frozen embryos accumulating in storage facilities is by mandating that they be discarded after a certain period.¹⁸² For example, in 1991 the United Kingdom implemented a law that disallowed the storage of frozen embryos for more than five years.¹⁸³ Five years to the day of the passage of the law, thousands of embryos were destroyed and continue to be destroyed once they have been stored for five years.¹⁸⁴ A look at the embryo data from the United Kingdom shows that this demand for the destruction of embryos after five years has not significantly lowered the number of embryos created or discarded,

¹⁷⁵ See Elizabeth Ann Pitrolo, *The Birds, the Bees, and the Deep Freeze: Is There International Consensus in the Debate Over Assisted Reproductive Technologies?*, 19 HOUS. J. INT'L L. 147, 154 (1996).

¹⁷⁶ CTRS. FOR DISEASE CONTROL & PREVENTION, *supra* note 16, at 17.

¹⁷⁷ *Id.*

¹⁷⁸ *Id.*

¹⁷⁹ *Id.* at 18.

¹⁸⁰ This number is the combination of the use of Fresh Donor in 8.0% of ART procedures with the use of Fresh Non-donor, which is used in 70.7% of ART procedures. *Id.* at 16.

¹⁸¹ If a couple abandons or chooses to discard even one frozen embryo, the cost of doing so after three years of storage is \$753 (assuming fifteen embryos were originally created and the average IVF, cryopreservation fee, and storage fee applies). For a discussion of how these calculations were made, and what the average cost of creation, an IVF cycle, and storage fees are, see *supra* notes 160–64. The more embryos and the longer those embryos are stored before being discarded, the higher the amount of money wasted.

¹⁸² Countries that have established maximum storage times include Austria, Denmark, Netherlands, Russia, Switzerland, Ukraine, Norway, Sweden, France, Iceland, Finland, Israel, and Spain. Schenker, *supra* note 14, at 178.

¹⁸³ Forster, *supra* note 63, at 761.

¹⁸⁴ *Id.*

and therefore, has not greatly affected the amount of money spent and wasted by patients on cryopreserved embryos.¹⁸⁵ This type of regulation does not increase economic efficiency or decrease the waste created. In fact, it may promote such waste by mandating the discarding of the frozen embryos.¹⁸⁶ The following table shows data before and after the regulation in the United Kingdom took effect.

Table 7. Embryos Created, Stored, and Destroyed in the United Kingdom

Year	IV Cycles	% Increase	Embryos Created	% Increase	Embryos Stored for Patient	% Increase	Embryos Discarded	% Increase
1991	6,650		26,696		4,919		8,122	
1992	18,338	276%	76,068	285%	15,910	323%	23,030	284%
1993	21,867	119%	93,481	123%	19,726	124%	27,470	119%
1994	24,866	114%	106,670	114%	23,596	120%	32,165	117%
1995	29,325	118%	126,210	118%	32,452	138%	37,260	116%
1996	33,462	114%	148,895	118%	39,318	121%	47,768	128%
1997	33,997	102%	145,999	98%	37,095	94%	47,972	100%
1998	35,478	104%	162,784	111%	42,461	114%	57,003	119%
1999	34,544	97%	162,537	100%	42,509	100%	76,551	134%
2000	34,845	101%	167,404	103%	46,647	110%	84,244	110%

The law was implemented in 1991, and mandatory discarding began in 1996.¹⁸⁷ As the information above shows, after the law was implemented in 1991, the numbers of embryos created, stored, and discarded all increased. In fact, the number of embryos stored and the number of embryos discarded increased every year from the year the law was implemented through 2000. The number of embryos created increased in all years except 1997 and

¹⁸⁵ See HUMAN FERTILISATION & EMBRYOLOGY AUTH., A LONG TERM ANALYSIS OF THE HUMAN FERTILISATION AND EMBRYOLOGY AUTHORITY REGISTER DATA (1991–2006) (NOV. 11, 2007), available at http://www.hfea.gov.uk/docs/Latest_long_term_data_analysis_report_91-06.pdf (listing the IVF and birthrates of women in the United Kingdom).

¹⁸⁶ See Dena S. Davis, *The Puzzle of IVF*, 6 HOUS. J. HEALTH L. & POL'Y 275, 283 (2006) (“Time limits on embryo storage, such as those enacted in other countries, will reduce the number in storage at a specific time, but will not ultimately affect the number of embryos destroyed.”).

¹⁸⁷ Forster, *supra* note 63, at 762.

1999, and the number of IVF cycles increased in all years except 1999.¹⁸⁸ One thing this data shows is that the law did not incentivize people to stop cryopreserving and discarding embryos. The number of embryos cryopreserved and discarded each year increased, irrespective of whether the law was in effect or not—pre- or post- 1996.

Any regulations adopted by the United States should decrease the economic waste created by the discarding of frozen embryos. Therefore, regulations similar to those in effect in the United Kingdom, which place a maximum storage period on frozen embryos, are not appropriate for the United States because they do not incentive couples to not freeze their embryos and do not effectively eliminate the amount of money that is being wasted.

C. *The Costs to the Judicial System*

Courts have struggled in cases involving frozen embryos.¹⁸⁹ Some of the struggle has been simply because the disposition of frozen embryos involves inherently political undertones which courts are not competent to decide.¹⁹⁰ Currently, courts are left with little in the way of statutory guidelines concerning frozen embryos.¹⁹¹ For the last decade and a half, many have called for federal regulations to address issues related to IVF and frozen embryos in particular.¹⁹² As courts struggle over how to classify a frozen embryo for divorce and estate litigation, the need for regulation has become increasingly clear.¹⁹³

¹⁸⁸ The decrease in IVF cycles from 35,478 in 1998 to 34,544 in 1999 is likely the reason that the total number of embryos also decreased in 1999.

¹⁸⁹ See Maria R. Durant, Note, *Cryopreservation of Human Embryos: A Scientific Advance, A Judicial Dilemma*, 24 SUFFOLK U. L. REV. 707, 734–40 (1990).

¹⁹⁰ See, e.g., Kevin P. Quinn, *The Politics of Embryonic Discourse*, 36 CONN. L. REV. 1163 (2004); Crockin, *supra* note 98; Janet L. Dolgin, *Surrounding Embryos: Biology, Ideology, and Politics*, 16 HEALTH MATRIX 27 (2006) (discussing the political nature of the embryonic discourse).

¹⁹¹ Kellie LaGatta, Comment, *The Frozen Embryo Debate Heats Up: A Call For Federal Regulation and Legislation*, 4 FLA. COASTAL L.J. 99, 101 (2002).

¹⁹² *Id.* at 112 (“Federal uniform policy regarding disposition of frozen embryos and the participation in the IVF process is a must.”); see also Bill E. Davidoff, Comment, *Frozen Embryos: A Need for Thawing In The Legislative Process*, 47 SMU L. REV. 131, 158 (1993) (“The problem of legal uncertainty that currently plagues IVF participants in the United States, if ignored, will only grow worse.”); Kimberly E. Diamond, *Cryogenics, Frozen Embryos and the Need for New Means of Regulation: Why the U.S. is Frozen in its Current Approach*, 11 N.Y. INT’L L. REV. 77, 77 (1998) (“The United States, however, currently possess very limited amount of regulation in this area [cryopreservation of human embryos]. As a result, U.S. law is not in step with cryogenics law in other countries, where management of this technology is being confronted head-on. For these reasons, the United States needs to enact appropriate measure to proactively address the social consequences of this technology.”).

¹⁹³ Helen S. Shapo, *Assisted Reproduction and the Law: Disharmony on a Divisive Social Issue*, 100 NW. U. L. REV. 465, 466 (2006) (“American courts have struggled with the issues that arise with ART, often resolving them with a mixture of common law and statutory law developed in a pre-ART age.”).

1. Divorce Litigation

The divorce rate has been steadily increasing in the United States, and this increase has been one of the primary factors contributing to the overburdening of the judicial system.¹⁹⁴ Roughly half of marriages in the United States end in divorce.¹⁹⁵ Matrimonial actions constitute over half of all cases filed in United States courts.¹⁹⁶ Not only are divorce cases a burden on the limited resources of the judicial system, but they are costly to the litigants as well—on average, divorce litigation costs exceed \$15,000.¹⁹⁷

“Courts are not good places for resolving the issues that arise when families break down and restructure.”¹⁹⁸ This quotation is even more applicable when the divorce involves disposition of frozen embryos. Because the rate of divorce among couples is so high, the fact that some couples with frozen embryos in storage will get divorced is inevitable.¹⁹⁹ Most IVF clinics now require that couples who cryopreserve embryos sign a consent agreement or contract describing what to do with the frozen embryos under different circumstances, including divorce.²⁰⁰ However, these forms have done little to help resolve the disputes or to help courts in deciding how to dispose of the embryos in the event of divorce.²⁰¹

Some courts have upheld the disposition agreements made by couples at IVF centers.²⁰² Other courts have stated that the agreements are only enforceable so long as one parent has not had a change of heart since signing the agreement.²⁰³ Courts struggle with two main issues in divorce litigation with frozen embryos: the right of each parent to procreate and not to procreate; and the right of the embryo—or rather, how to classify the embryo as property, child, or something else.²⁰⁴

Several courts have held that embryos are not persons or property, but rather, some interim category that entitles them to “special respect.”²⁰⁵

¹⁹⁴ Dennis P. Saccuzzo, *Controversies in Divorce Mediation*, 79 N.D. L. REV. 425, 425 (2003).

¹⁹⁵ PAULINE H. TESLER, *COLLABORATIVE LAW: ACHIEVING EFFECTIVE RESOLUTION IN DIVORCE WITHOUT LITIGATION* 1 (2d ed. 2008).

¹⁹⁶ Saccuzzo, *supra* note 194, at 425.

¹⁹⁷ Rudolph J. Gerber, *Recommendation on Domestic Relations Reform*, 32 ARIZ. L. REV. 9, 11 (1990); Saccuzzo, *supra* note 194, at 425–26.

¹⁹⁸ TESLER, *supra* note 195, at 2.

¹⁹⁹ Deborah L. Forman, *Embryo Disposition and Divorce: Why Clinic Consent Forms Are Not The Answer*, 24 J. AM. ACAD. MATRIMONIAL L. 57, 58 (2011); Strasser, *supra* note 98, at 1159.

²⁰⁰ Forman, *supra* note 199, at 58–59.

²⁰¹ *Id.* at 59.

²⁰² Strasser, *supra* note 98, at 1160.

²⁰³ *Id.* at 1182.

²⁰⁴ Katherine Poste Gunnison, *Poaching the Eggs: Courts and the Custody Battles over Frozen Embryos*, 8 J.L. & FAM. STUD. 275, 282 (2006).

²⁰⁵ *Jeter v. Mayo Clinic Arizona*, 121 P.3d 1256, 1271 (Ariz. Ct. App. 2005) (“[E]mbryos are due varying degrees of special respect dependent on the issue involved.”); *Davis v. Davis*, 842 S.W.2d 588,

Courts struggle with how to classify embryos and what “special respect” towards them means.²⁰⁶ With decisions like *Roe v. Wade*,²⁰⁷ courts are limited to some extent in what they can judicially label an embryo.²⁰⁸ Accordingly, the courts need guidance from Congress.

2. Trusts and Estates Litigation

The development of a property right in reproductive material, like sperm, eggs, and embryos, has given rise to new legal issues;²⁰⁹ “From a trusts and estates perspective, the most critical of those issues may be the extent to which an estate fiduciary has authority to dispose of a decedent’s reproductive matter as property of the decedent’s estate.”²¹⁰ Under these types of situations, courts have tended to examine the decedents’ intent when deciding how the reproductive material should be handled.²¹¹

The ability to conceive posthumously has an enormous effect on trusts and estates, and may make it difficult for courts to identify a decedent’s heirs.²¹² The lack of legislation concerning this issue has left this time-consuming and expensive probate issue to the courts.²¹³ For example, litigation concerning social security benefits of posthumously conceived children has increasingly confronted the courts.²¹⁴ Courts have been begging legislatures for help and guidance on both the disposition of frozen embryos

597 (Tenn. 1992) (“We conclude that preembryos are not, strictly speaking, either ‘persons’ or ‘property,’ but occupy an interim category that entitles them to special respect because of their potential for human life.”); see Kate W. Lyon, Note, *Babies on Ice: The Legal Status of Frozen Embryos Involved in Custody Disputes During Divorce*, 21 WHITTIER L. REV. 695, 719 (2000) (“While embryos have been labeled in three different manners, most courts will likely take the view that embryos qualify as ‘potential life’ deserving of more protection than mere property, but not deserving of the full constitutional protections afforded to people.”).

²⁰⁶ Lisa Shaw Roy, *Roe and the New Frontier*, 27 HARV. J.L. & PUB. POL’Y 339, 364–65 (2003).

²⁰⁷ *Roe v. Wade*, 410 U.S. 113 (1973).

²⁰⁸ Roy, *supra* note 206, at 364–65.

²⁰⁹ Ilene S. Cooper & Robert M. Harper, *Life After Death: The Authority of Estate Fiduciaries to Dispose of Decedent’s Reproductive Matter*, 26 TOURO L. REV. 649, 657 (2010).

²¹⁰ *Id.*

²¹¹ Naomi R. Cahn, *Parenthood, Genes, and Gametes: The Family Law and Trusts and Estates Perspective*, 32 U. MEM. L. REV. 563, 580 (2002).

²¹² Browne Lewis, *Graveside Birthday Parties: The Legal Consequences of Forming Families Posthumously*, 60 CASE W. RES. L. REV. 1159, 1179 (2010).

²¹³ *Id.*

²¹⁴ See *Gillett-Netting v. Barnhart*, 371 F.3d 593 (9th Cir. 2004); *Stephen v. Comm’r Soc. Sec. Admin.*, 386 F. Supp. 2d 1257 (M.D. Fla. 2005); *Woodward v. Comm’r Soc. Sec.*, 760 N.E.2d 257 (Mass. 2002); *Khabbaz v. Comm’r Soc. Sec. Admin.*, 930 A.2d 1180 (N.H. 2007); *Estate of Kolacy*, 753 A.2d 1257 (N.J. 2000).

in these types of situations, and how to treat posthumously, or potential posthumously, conceived children.²¹⁵

Any regulation that the United States adopts should help eliminate the congestion and the complex litigation that arises from frozen embryo cases involving both divorce and administration of the estate. Congress should not shirk its responsibility as the legislative branch of the government and leave the judiciary without any guidance for how to deal with complex political issues that it is incompetent to decide.

III. LESSONS FROM GERMANY AND ITALY

A. *Germany*

Germany passed The Embryo Protection Act of 1990,²¹⁶ (the Act) which regulates the creation and disposition of human embryos.²¹⁷ The Act was passed in response to controversies arising over the status of embryos as IVF became more popular in the 1980s—specifically the fact that doctors were creating human embryos for research purposes.²¹⁸ The Act allows for the continuation of IVF for couples, but strongly regulates the creation and disposition of embryos.²¹⁹ Under the Act, only three human embryos may be created and implanted at a time, per cycle.²²⁰ Furthermore, the cryopreservation of human embryos is forbidden.²²¹ Under the Act, posthumous IVF is also prohibited.²²²

The Act was passed by a coalition of radical Greens, feminists, and conservatives.²²³ Several factors brought these politically opposed parties

²¹⁵ Kathryn Venturatos Lorio, *Conceiving the Inconceivable: Legal Recognition of the Posthumously Conceived Child*, 34 ACTEC J. 154, 163 (2008).

²¹⁶ Embryonenschutzgesetz [ESchG] [The Embryo Protection Act], Dec. 13, 1990, BUNDESGESETZBLATT, Teil I [BGBL I] at 2746, as amended (Ger.).

²¹⁷ John A. Robertson, *Reproductive Technology in Germany and the United States: An Essay in Comparative Law and Bioethics*, 43 COLUM. J. TRANSNAT'L L. 189, 203 (2004) (describing in detail how the U.S. law concerning reproductive technologies differs from that of Germany in five areas, one of which is assisted reproduction).

²¹⁸ *Id.*

²¹⁹ Embryonenschutzgesetz [ESchG] [The Embryo Protection Act], Dec. 13, 1990, BGBL I at 2746, as amended (Ger.); see also Herbert Gottweis, *Stem Cell Policies in the United States and in Germany: Between Bioethics and Regulation*, 30 POL'Y STUDIES J. 441 (2002); Robertson, *supra* note 217.

²²⁰ Act for Protection of Embryos (The Embryo Protection Act), Dec. 13, 1990, BT 11/69; Riggan, *supra* note 14; Brittney Sharp, *Regulation of Assisted Human Reproduction in Europe* 12 (unpublished report, Ctr. for Bioethics & Culture Network) (on file with the author).

²²¹ Act for Protection of Embryos (The Embryo Protection Act), Dec. 13, 1990, BT 11/69; Riggan, *supra* note 14; Sharp, *supra* note 220.

²²² Robertson, *supra* note 217, at 203.

²²³ *Id.* at 203.

together to pass the Act.²²⁴ One such factor was consideration for Germany's history with, and later revulsion to, the eugenic abuses of Nazism.²²⁵ Germans are particularly aware of a society's potential for inhumane outbursts and are, therefore, extremely sensitive to any issues dealing with eugenics.²²⁶ In a famous speech given by then President Johannes Rau, he stated:

Germans[s] have, due to our history of Nazi Germany, a high sensitivity and fear of making horrible mistakes again. Therefore, we have to be exceedingly suspicious and cautious with regard to developments that might have the potential for violating human dignity in our society. . . . Only strict legislation, such as the E[mbryo] P[rotection] A[ct], rooted in our Constitution, offers protection against violations of humanity.²²⁷

Deeply rooted Kantian principles of human dignity were also important to the passage of the Act.²²⁸ The Kantian philosophy is important to German Constitutional law, and the fact that bioethics appears to be deeply influenced by utilitarian thinking is viewed as a threat to humanity by many Germans.²²⁹

The likelihood of multiple gestations is reduced by the fact that the number of embryos that can be transferred to a woman's womb at one time is limited to three under the Act.²³⁰ Multiple gestations are risky to both the mother and children.²³¹ Some medical risks associated with multiple gestations include premature births, low birth weights, and even mortality.²³² Another problem associated with multiple ART infants is that women who are pregnant with twins have a 10.3% chance of developing preeclampsia.²³³ Women carrying multiple infants are also more likely than women carrying singletons to develop disorders such as hypertension and anemia.²³⁴ Women who have multiple gestations are also more likely to have delivery com-

²²⁴ See Tanja Krones, *The Scope of the Recent Bioethics Debate in Germany: Kant, Crisis, and No Confidence in Society*, 15 CAMBRIDGE Q. HEALTHCARE ETHICS 273, 274 (2006) (describing the three main features underlying bioethics debates in Germany).

²²⁵ See Robertson, *supra* note 217, at 194–95.

²²⁶ Krones, *supra* note 224, at 274.

²²⁷ *Id.* at 277.

²²⁸ *Id.* at 274.

²²⁹ *Id.* at 274–75.

²³⁰ Robertson, *supra* note 217, at 206–07. Currently in the United States, 25.7% of ART procedures result in multiple-infant births. CTRS. FOR DISEASE CONTROL & PREVENTION, *supra* note 16, at 24.

²³¹ T. Scholz et al., *Problems of multiple births after ART: medical, psychological, social and financial aspects*, 14 HUMAN REPROD. 2932, 2934 (1999).

²³² *Id.*

²³³ Urska Velikonja, Article, *The Costs of Multiple Gestation Pregnancies in Assisted Reproduction*, 32 HARV. J. L. & GENDER 463, 471 (2009). As compared to a chance of 4.4% for singleton pregnancies. *Id.*

²³⁴ *Id.*

plications, longer periods of bed rest, emergency cesarean sections, premature labor, and complications that require hysterectomies.²³⁵ There are also social, psychological, and financial costs associated with multiple gestations.²³⁶ Some of the social costs include lack of space and sleep for the parents and an increased strain on the parents' finances.²³⁷ Psychologically, children from multiple births live in suboptimal conditions more often than singleton birth children.²³⁸ Mothers who have multiple gestations face an increased risk of depression.²³⁹ Financially, multiple gestation pregnancies require more doctor visits and closer monitoring by doctors and health care facilities.²⁴⁰ The cost of delivery also increases with multiple gestations.²⁴¹ Furthermore, there is the significant financial burden of having two or three of everything at once—car seats, strollers, food, diapers, child care, etc.²⁴²

In the United States, the number of embryos that can be transferred is left largely to the discretion of the doctor and patient.²⁴³ This type of doctor-patient discretion leads to situations like Octomom.²⁴⁴ Similar situations like this would not occur under the Act.²⁴⁵ Another benefit of reducing the number of embryos that can be created and implanted is that German IVF procedures are likely to use smaller amounts of drugs in the process of hyper-stimulation of the ovaries.²⁴⁶

The cost of IVF procedures at one IVF clinic in Germany ranged between \$4,093-\$7,504.²⁴⁷ In a ten-year study done on final ART success

²³⁵ *Id.*

²³⁶ Scholz et al., *supra* note 231, at 2935.

²³⁷ *Id.*

²³⁸ *Id.*

²³⁹ *Id.*

²⁴⁰ Velikonja, *supra* note 233, at 480.

²⁴¹ *Id.* (stating that “twin delivery costs \$43,300 more than a singleton delivery, a triplet delivery \$120,000 more, and a quadruplet delivery \$174,000 more”).

²⁴² *Id.*

²⁴³ AM. SOC'Y FOR REPROD. MED., *supra* note 27, at 11.

²⁴⁴ See generally Shaya Tayefe Mohajer, *Octomom Doctor, Michael Kamrava, Accused of Negligence By State Board*, HUFF POST (Jan. 1, 2010), http://www.huffingtonpost.com/2010/01/04/octomom-doctor-michael-ka_n_411256.html?view=print&comm_ref=false (explaining that using IVF, Octomom had eight children at one time, which were born on January 26, 2009). Situations like Octomom raise ethical issues concerning how many embryos should be implanted during a cycle. However, the United States does not have any regulations pertaining to the number of embryos that can be implanted, and ASRM only has guidelines to take into consideration.

²⁴⁵ See Baroness Ruth Deech, *Playing God: Who Should Regulate Embryo Research?*, 32 BROOK. J. INT'L L. 321, 328 (2007) (“Freedom of state action has led to rule by market forces, a general free for all which in turn leads to doctor-patient-baby conflicts of interest, abuses, and dangerous genetic ‘cures.’”).

²⁴⁶ Robertson, *supra* note 217, at 205.

²⁴⁷ The cost for self-paying patients at a fertility clinic in Berlin was estimated to be between 3,000–5,500 Euros (including medication). *Costs: Self-paying Patients*, PRAXIS FUR FERTILITAT, <http://www.berlin-baby.co.uk/infertility/costs/private-patients> (last visited Feb. 3, 2013). These numbers were put into a currency converter to achieve the U.S. Dollar amount. The Currency Converter,

rates in Germany, the researchers concluded, “[e]ven with the restrictions in place as a result of the German Embryo Protection Law, CLBR [Cumulative Live Birth Rates] reach internationally comparable levels.”²⁴⁸ The mean number of embryos transferred was 2.06, the mean number of cycles undergone by patients was 2.7, and the mean pregnancy rate was 27.3%.²⁴⁹ The cumulative live birth rate after three cycles was 52% and 72% after six cycles.²⁵⁰ The cumulative pregnancy rate after six cycles was 79%.²⁵¹

B. *Italy*

In 2004, the Italian Parliament passed the Regulation of Medically Assisted Reproduction, Law 40/2004 (the Law).²⁵² The Law, like the German Act, prohibits cryopreservation of embryos and limits the number of embryos that can be fertilized and implanted in each cycle to three.²⁵³ It also prohibits posthumous treatment.²⁵⁴ Before this Law was passed, Italy had the most unregulated ART industry in Europe.²⁵⁵ Doctors were performing IVF treatments on women over sixty, attempting cloning, and experimenting with sex and race selection, as well as embryo splitting.²⁵⁶ As a result, Italy was known as the “Wild West” of fertility treatments.²⁵⁷ Many have speculated that the reason behind Italy’s adoption of such harsh restrictions—literally taking the country from a completely unregulated IVF regime to some of the harshest restrictions worldwide—is the influence of

http://coinmill.com/EUR_USD.html. This is significantly lower than the cost of IVF in the United States; see also *supra* Part II.A.

²⁴⁸ C. Gnoth et al., *Final ART success rates: a 10 years survey*, 10 HUMAN REPROD. 1, 1 (June 9, 2011), available at http://www.green-ivf.de/templates/media/pdf/Gnoth_Final_ART%20success_rates_HR_2011.pdf.

²⁴⁹ *Id.* at 3.

²⁵⁰ *Id.*

²⁵¹ *Id.* CTRS. FOR DISEASE CONTROL & PREVENTION, *supra* note 16, at 39–40. Unfortunately, the CDC does not track how many cycles, on average, women must undergo before having a successful IVF cycle. However, it is not uncommon for women to undergo multiple IVF cycles.

²⁵² V. Fineschi, M. Neri & E. Turillazzi, *The new Italian law on assisted reproduction technology (Law 40/2004)*, 31 J. MED. ETHICS 356 (2005); Italian Legislation, Embryo Research, EUROPEAN SOC’Y OF HUMAN REPROD. & EMBRYOLOGY (Feb. 19, 2004), available at <http://www.eshre.eu/01/default.aspx?pageid=167>; Mary Rodgers Bundren, *The Influence of Catholicism, Islam and Judaism on the Assisted Reproductive Technologies (“ART”) Bioethical and Legal Debate: A Comparative Survey of ART in Italy, Egypt and Israel*, 84 U. DET. MERCY L. REV. 715, 731 (2007).

²⁵³ Fineschi, *supra* note 252; Bundren, *supra* note 252, at 732.

²⁵⁴ Deech, *supra* note 245, at 327.

²⁵⁵ *Id.*

²⁵⁶ *Id.*

²⁵⁷ BioNews, *The fate of frozen embryos under the Italian fertility law*, 314 BIONEWS (June 21, 2005), http://www.bionews.org.uk/page_6063.asp.

the Vatican and Catholicism.²⁵⁸ No matter the reason, the forces behind the Law seemed to have been at work since the birth of the first test tube baby in Italy in 1983.²⁵⁹

One fertility clinic in Italy reported IVF success rates significantly higher than the average success rates of Europe.²⁶⁰ It reported a success rate of 38% for women younger than thirty-five, a success rate of 27% for women between thirty-five and thirty-nine, and a success rate of 23% for women over thirty-nine.²⁶¹ In a study conducted in Italy to track the success rates of IVF pre and post-Law, the results indicated that the fertilization failures, the number of embryos transferred, and the implantation rates were not significantly different.²⁶² In fact, the fertilization rate after the Law was enacted was 75.36%—a 9.24% increase.²⁶³ The implantation rate was slightly lower at 14.77% compared to 16.50% before the Law was enacted.²⁶⁴ The pregnancy rate per cycle was slightly lower at 23.11% compared to 24.34% before the Law.²⁶⁵ Notably, the percentage of people who cancelled cycles decreased significantly from 15.01% of patients to 9.89% of patients—a decrease of 5.12% after the Law was enacted.²⁶⁶

IV. PROPOSED REGULATIONS FOR THE UNITED STATES

The United States Congress should adopt regulations similar to those in Germany and Italy, which prohibit the cryopreservation of human embryos and posthumous conception.²⁶⁷ These regulations would not only help promote efficiency in the ART industry but would both lower the cost of IVF to individuals as well as help decrease the amount of litigation. Most importantly however, Congress would finally provide necessary guidance to doctors and the judiciary.

²⁵⁸ See Bundren, *supra* note 252; Erica DiMarco, *The Tides of Vatican Influence in Italian Reproductive Matters: From Abortion to Assisted Reproduction*, 10 RUTGERS J. L. & RELIGION 10, 15 (2009); Rachel Anne Fenton, *Catholic Doctrine Versus Women's Rights: The New Italian Law On Assisted Reproduction*, 14 MED. L. REV. 73, 86–87 (2006).

²⁵⁹ Patrick Hanafin, *Gender, Citizenship and Human Reproduction in Contemporary Italy*, 14 FEMINIST LEGAL STUD. 329, 335–36 (2006).

²⁶⁰ *Our Successes*, CENTRO FECONDAZIONE ASSISTITA, <http://www.centrofecondazioneassistita.com/en/our-successes/> (last visited Feb. 3, 2013).

²⁶¹ *Id.* The average success rates for Europe for the same age categories are 29%, 20%, and 15% respectively.

²⁶² Paolo Emanuele Levi Setti et al., *Results of In Vitro Fertilization in Italy After the Introduction of a New Law*, 90 FERTILITY & STERILITY 1081, 1083 (2008).

²⁶³ *Id.*

²⁶⁴ *Id.*

²⁶⁵ *Id.*

²⁶⁶ *Id.*

²⁶⁷ See *supra* Parts III.A, III.B (discussing the German and Italian laws that regulate the cryopreservation of human embryos).

The proposed regulations would ensure a type of consumer protection for IVF patients—ensuring that they are no longer wasting money on unused embryos or paying for diminished results. Couples pay the same fee to produce “fresh” embryos as “frozen” embryos, since the embryos are all created at the same time.²⁶⁸ In reality, however, cryopreserved embryos cost more than freshly produced and implanted embryos because of the accumulated fees of cryopreservation and storage. For example, at one clinic in Chicago, the annual fee for storage is \$600.²⁶⁹ In addition, the success rate of a live pregnancy decreases from a 36.7% chance when implanting a “fresh” embryo, to a 30% chance when implanting a frozen embryo.²⁷⁰ Furthermore, there are risks associated with cryopreserving and thawing human embryos, such as the fact that not all the embryos will remain alive.²⁷¹ Therefore, couples who choose to use their cryopreserved human embryos have actually paid an increased rate for a decreased rate of effectiveness. The proposed regulations would eliminate this phenomenon.

The proposed regulations should also help with innovation and provide more natural, holistic alternatives for patients. They would remove many of the incentives that the current system provides to patients and doctors to over-stimulate the ovaries and collect numerous eggs. Since the proposed regulations would make it illegal to cryopreserve any embryos, doctors and patients would use fewer stimulants in the process. For example, some IVF clinics are already offering what is known as “Natural Cycle IVF.”²⁷² Through Natural Cycle IVF, the patient produces one egg naturally that is then captured, fertilized, and implanted.²⁷³ This lowers the cost of the cycle, and makes the process healthier and more natural for the woman.²⁷⁴

It has long been discussed that the courts in the U.S. are overloaded.²⁷⁵ One type of case to eliminate from the courts’ dockets concerns the disposition of frozen embryos upon divorce and death.²⁷⁶ The current struggle the

²⁶⁸ See *supra* Part II.A.

²⁶⁹ *Single Cycle IVF Cost Details*, ADVANCED FERTILITY CENTER OF CHICAGO, available at <http://www.advancedfertility.com/ivfprice.htm>.

²⁷⁰ CTRS. FOR DISEASE CONTROL & PREVENTION, *supra* note 16, at 58.

²⁷¹ *Cryopreservation of Embryos*, SOCIETY FOR REPRODUCTIVE TECHNOLOGY, <http://www.asrm.org/detail.aspx?id=1896> (last visited Feb. 3, 2013).

²⁷² *Natural Cycle IVF*, NEW HOPE FERTILITY CTR., http://www.newhopefertility.com/in_vitro_fertilization/natural_cycle_ivf/ (last visited Feb. 3, 2013).

²⁷³ *Id.*

²⁷⁴ *Id.*

²⁷⁵ See generally Diarmuid F. O’Scannlain, *Striking A Devil’s Bargain: The Federal Courts And Expanding Caseloads In The Twenty-First Century*, 13 LEWIS & CLARK L. REV. 473 (2009) (discussing the overloaded dockets of federal courts).

²⁷⁶ See, e.g., *Litowitz*, 48 P.3d 261; *J.B.*, 783 A.2d 707 (discussing the disposition of frozen embryos). The disposition of cryopreserved embryos after a divorce is not the only struggle courts have had. The legal system has also struggled with posthumous births made available through the process of cryopreservation and how those cryopreserved embryos and/or posthumously born children should be

courts face with frozen embryo disposition would not be completely eliminated by the proposed regulations; however, eventually it would be phased out.²⁷⁷ By eliminating the ability of couples to cryopreserve human embryos and to posthumously conceive, the courts would not have to spend their limited resources on cases concerning cryopreserved embryos. Furthermore, the court would no longer be faced with the precarious position of having to decide what an embryo is—a political nightmare of a question.²⁷⁸

Some may argue that the proposed regulations would unduly stifle the ability of scientists to obtain human embryos for research purposes.²⁷⁹ This is not true. If individuals want to donate embryos to research, they can do it on a contractual basis.²⁸⁰ Donations will be made of only newly formed, non-cryopreserved human embryos. This is something that couples can do on a patient-by-patient basis. Many couples feel that donating embryos for research is unethical; therefore, these couples can refuse to create extra embryos. Other couples feel that scientific experiments on human embryos are something that they want to support. Couples can do this if they choose. The scientific community should be behind this type of choice, because in many instances those leftover frozen embryos that are donated to research are much less viable embryos.²⁸¹ For research purposes, it would be better if cryopreservation were eliminated, so that researchers could contract with patients for embryos that would be better for research purposes. If scientists and Congress are worried about the effects that a lack of cryopreserved embryos would have on the scientific community, they can change the current stem cell research laws to allow a contractual approach to providing embryos for research purposes.

treated for estate purposes. See, e.g., Katherleen R. Guzman, *Property, Progeny, Body Part: Assisted Reproduction and the Transfer of Wealth*, 31 U.C. DAVIS L. REV. 193 (1997).

²⁷⁷ Since there will still be frozen embryos in the United States after the proposed regulations are adopted, the court system may have to continue to deal with some of the cases concerning frozen embryos, specifically those concerning divorces. As soon as regulations are passed, courts will no longer be burdened with disposition cases concerning posthumously conceived children. Once the accumulation of embryos stops, the litigation concerning the embryos currently being stored, should slowly be phased out.

²⁷⁸ See Roy, *supra* note 206.

²⁷⁹ It appears that embryo stem cells have actually led to fewer scientific advances than adult stem cells have anyway. CHARLES DAVIS JAMES, *AN ETHICAL DEBATE ON EMBRYONIC STEM CELL RESEARCH: HUMAN DIGNITY OR RESEARCH FREEDOM* 3–4 (GRIN Verlag 2008). Therefore, the argument that scientific research would be stifled without the use of embryonic stem cells seems to ring hollow.

²⁸⁰ This is contrary to the current law which requires that the embryos be derived for fertility purposes in order to be usable for stem cell research purposes. See NAT'L INSTS. OF HEALTH, *supra* note 87.

²⁸¹ Berjis, *supra* note 94, at 437.

CONCLUSION

The current regulations (or lack thereof) concerning cryopreserved human embryos are creating and allowing economic waste. Furthermore, continuing to use court and academic resources to define the status of frozen embryos and what should be done with their disposition wastes even more resources. The simple solution is to prohibit the cryopreservation and posthumous use of human embryos in the United States. A regime that prohibits the cryopreservation and posthumous implantation of human embryos would prevent wasted resources in the form of paying more for lowered success rates, unused embryos, and drawn-out divorce and estate litigation.

ADOPTING THE RIGHT INCENTIVES: ENCOURAGING PEOPLE TO
ADOPT IN THE MEDICAL AGE

*Carolyn J. Head**

INTRODUCTION

There are over 1.5 million children in the world waiting to be adopted,¹ with over 100,000 in the United States alone.² Moreover, statistics show that approximately 6.1 million Americans struggle with infertility.³ Yet, only 15% of women treated for infertility ever attempt adoption,⁴ turning instead to infertility treatments.⁵ While the burden to adopt should not be placed entirely on the infertile, infertility is the primary reason adoptive parents cite for choosing adoption.⁶ Evidence shows that these couples turn to in vitro fertilization (IVF) treatments first before even considering adoption.⁷ However, given the choice between adoption and IVF, it is more beneficial to society for prospective parents to choose adoption.⁸ On average, foster care costs the government twice as much as the cost of adoption and the estimated public benefit derived from adoption reaches into the hundreds of thousands of dollars.⁹

Recent studies show that government policies promoting adoption of children from foster care significantly increase the demand for adopted children.¹⁰ One way the government provides an incentive for prospective

* J.D., George Mason University School of Law, 2013; B.S.B.A. Accounting, University of Nevada, Las Vegas, 2010. I would like to thank my loving family—Kevin, Beth Ann, Keirstin, and Keegan—for their support and encouragement throughout the years and for always believing in me. I would also like to thank Nate Harris, Morgan Shields, and Kim Britton without whom this paper would not have been possible.

¹ *Child Adoption Statistics Around the World*, THELABOROFLOVE.COM, <http://www.thelaboroflove.com/articles/child-adoption-statistics-around-the-world> (last visited Feb. 3, 2013).

² U.S. DEP'T OF HEALTH & HUMAN SERVS., CHILDREN'S BUREAU, THE AFCARS REPORT (2011), available at <http://www.acf.hhs.gov/sites/default/files/cb/afcarsreport18.pdf>.

³ Susan Frelich Appleton, *Adoption in the Age of Reproductive Technology*, 2004 U. CHI. LEGAL F. 393, 408 (2004).

⁴ *Id.* at 427.

⁵ *Id.* at 421 (“Despite the expense and the less than perfect success rates for IVF . . . infertility treatment continues to be big business.”).

⁶ Glenn Cohen & Daniel L. Chen, *Trading-off Reproductive Technology and Adoption: Does Subsidizing IVF Decrease Adoption Rates and Should it Matter?*, 95 MINN. L. REV. 485, 524–25 (2010).

⁷ Appleton, *supra* note 3, at 427.

⁸ *See infra* Part II.C.

⁹ Gulcin Gumus & Jungmin Lee, *Alternative Paths to Parenthood: IVF or Child Adoption?*, 50 ECON. INQUIRY 802, 806 (2012).

¹⁰ *Id.* at 805.

parents to adopt is through the adoption tax credit.¹¹ In 2010 and 2011, the adoption tax credit allowed adoptive parents to claim a refundable credit of up to \$13,360 in adoption expenses.¹² With this provision set to expire at the end of 2012, Congress passed the American Taxpayer Relief Act of 2012, which permanently extended the adoption tax credit.¹³ While the adoption tax credit is now a permanent feature of the tax code, rather than becoming available to more individuals, the credit reverted to a nonrefundable credit, subject to a phase-out limitation, and the credit ceiling was reduced to \$12,970.¹⁴

Studies also show a negative correlation between adoption and IVF.¹⁵ Either due to the legal complexity of the adoption process or due to the perception of adoption as a last resort, most couples turn to IVF, which reduces the overall adoption rate in the United States.¹⁶ In 2011, Congress proposed a bill to create a tax credit for IVF expenses.¹⁷ While the playing field between IVF and adoption is already unfair, with the introduction of another incentive to pursue IVF over adoption, the adoption rates will continue to decrease as the number of children available for adoption remains high.¹⁸

This Note will demonstrate the benefits of incentivizing adoption over IVF and offer solutions on how best to structure the incentive programs in the United States. Part I provides a brief introduction to adoption, IVF, and the tax treatment of the expenses associated with both processes in the United States. Part II discusses the perception of adoption as a last resort, the relationship between IVF and adoption, the social benefits of incentivizing adoption, and the problems with the current incentive structures. Part III offers some solutions on how to best structure these programs to incentivize couples to adopt.

¹¹ I.R.C. §23 (2012).

¹² Patient Protection and Affordable Care Act, Pub. L. No. 111-148, § 10909, 124 Stat. 119, 1021–24 (2010); *see also* JOINT COMM. ON TAXATION, 112TH CONG., Description of Revenue Provisions Contained in the President's Fiscal Year 2012 Budget Proposal 590 (Joint Comm. Print 2010) (summarizing the change the Affordable Care Act made to the adoption tax credit).

¹³ American Taxpayer Relief Act of 2012, Pub. L. No. 112-240, § 104, 126 Stat. 2313, 2313 (2012).

¹⁴ *Id.*; Kelly Phillips Erb, *IRS Announces 2013 Tax Rates, Standard Deduction Amounts and More*, FORBES (Jan. 15, 2013, 5:31 PM), <http://www.forbes.com/sites/kellyphillipserb/2013/01/15/irs-announces-2013-tax-rates-standard-deduction-amounts-and-more/>.

¹⁵ Gumus & Lee, *supra* note 9, at 818.

¹⁶ Appleton, *supra* note 3, at 410–33.

¹⁷ S. 965, 112th Cong. (2011).

¹⁸ *See* Gumus & Lee, *supra* note 9, at 818–19.

I. A BRIEF INTRODUCTION TO ADOPTION, ASSISTED REPRODUCTION AND THE TAX TREATMENT OF THESE EXPENSES IN THE UNITED STATES

A. *Adoption in the United States*

Adoption was first recognized in the United States in Massachusetts with the passage of the Adoption of Children Act of 1851.¹⁹ Since then, three types of adoption have formed as a means of placing children in permanent homes: domestic public adoptions, domestic private agency adoptions, and international adoptions. Domestic public adoption is a form of adoption where the child to be adopted is in the state's custody,²⁰ such as in the foster care system. The average domestic public adoption costs between \$0 and \$2,500, depending on the state.²¹ These fees consist mostly of document preparation and legal fees to terminate the birth parents' rights and establish the rights of the adoptive parents.²² Domestic private agency adoptions are generally coordinated by state-licensed, nonprofit organizations and occur when the adoptive child has been voluntarily given up for adoption by the child's birth parents.²³ On average, a domestic private agency adoption can cost a couple anywhere from \$5,000 to over \$40,000.²⁴ In addition to the legal fees that similar to those incurred with a domestic public adoption, domestic private adoptions include an agency fee paid to the nonprofit organization that arranges the process.²⁵ The final form of adoption in the United States is international adoption, where the child is not a United States citizen.²⁶ Because adoption policies vary from one country to another, international adoptions can cost prospective parents from \$15,000 to over \$30,000.²⁷

¹⁹ Cohen & Chen, *supra* note 6, at 494.

²⁰ Jack Darcher, *Market Forces in Domestic Adoptions: Advocating a Quantitative Limit on Private Agency Adoption Fees*, 7 SEATTLE J. FOR SOC. JUST. 729, 734 (2010); Appleton, *supra* note 3, at 400–05.

²¹ CHRISTINE SCOTT, CONG. RESEARCH SERV., RL33633, TAX BENEFITS FOR FAMILIES: ADOPTION 3 (2011) [hereinafter SCOTT].

²² Gumus & Lee, *supra* note 9, at 803.

²³ Darcher, *supra* note 20, at 735.

²⁴ SCOTT, *supra* note 21, at 3.

²⁵ Darcher, *supra* note 20, at 737.

²⁶ SCOTT, *supra* note 21, at 3.

²⁷ *Id.*

B. *In Vitro Fertilization in the United States*

IVF was first introduced in 1978 in England.²⁸ Since the 1980s, advances in technology and medicine have created an increasing trend in the use of assisted reproductive technologies²⁹ (ART) in the United States, most prominently the use of IVF.³⁰ From 1996 to 2006, the number of babies conceived per year using ART has more than doubled, increasing from 20,840 to 54,656.³¹ Although recent medical advances have slightly increased the success rate of IVF treatments, they still remain a risky, complicated, expensive, and largely unsuccessful process.³² The average cost per IVF cycle is \$12,400, but because of the low success rate of implantation, multiple cycles must be performed before achieving a successful pregnancy.³³ Thus, the estimated average cost of producing a live birth via IVF ranges between \$67,000 and \$115,000.³⁴ Because of this low success rate, multiple embryos are implanted at a time, leading to an increased chance of multiple gestations, which further increases the chance of adverse health effects for both the mother and children.³⁵

C. *The Adoption Tax Credit*

In 1981, prior to the introduction of the adoption tax credit, Congress voted to provide federal tax assistance for adoption through itemized deductions.³⁶ This provision was repealed just five years later in an effort to simplify taxes and was replaced with a state subsidy program, which required states to make direct payments to adoptive parents of special needs children to help offset the nonrecurring costs of adoption.³⁷

In 1996, Congress again changed the tax treatment of adoption expenses by introducing the adoption tax credit in the Small Business Job

²⁸ Cohen & Chen, *supra* note 6, at 489–93.

²⁹ Other forms of infertility treatments include fertility medication and artificial insemination. However, IVF is the only method this paper will discuss due to the fact that the proposed Family Act of 2011 sought to provide a tax credit for expenses paid for IVF. Furthermore, IVF is the most widely used form of ART in the United States. See Gumus & Lee, *supra* note 9, at 802.

³⁰ *Id.*

³¹ *Id.*

³² *Id.* at 803.

³³ Cohen & Chen, *supra* note 6, at 486.

³⁴ *Id.*

³⁵ Gumus & Lee, *supra* note 9, at 802.

³⁶ See SCOTT, *supra* note 21, at 9; Nathaniel S. Hibben, *The Inequitable Tax Benefits of Adoption*, 4 LIBERTY U. L. REV. 135, 141–43 (2009).

³⁷ SCOTT, *supra* note 21, at 9.

Protection Act (Small Business Act).³⁸ Under this Act, parents adopting special needs children could claim a nonrefundable tax credit of up to \$6,000, and all other adoptive parents—excluding parents adopting stepchildren—could claim a nonrefundable tax credit of up to \$5,000.³⁹ A child was considered to have special needs if the state determined that the child could not or should not be returned to the birth parents' home; a specific factor existed (such as age, ethnic background, membership in a sibling group, mental, emotional, or physical handicap, or other medical conditions); and the child was a United States citizen.⁴⁰ The Small Business Act also included a phase-out provision, reducing the allowable credit for individuals earning an adjusted gross income (AGI) of \$75,000 or more and completely eliminating the credit when AGI reached \$115,000.⁴¹ In addition, the Act also included a sunset provision that would cause the adoption tax credit to apply only to special needs adoptions after December 31, 2001.⁴²

In 2001, Congress passed the Economic Growth and Tax Relief Reconciliation Act (Economic Growth Act) with the hope that increasing the adoption tax credit would continue to encourage adoptions despite the increase in adoption expenses.⁴³ The Economic Growth Act increased the limit on qualified adoption expenses from \$5,000 and \$6,000 to \$10,000 for all children.⁴⁴ In addition, the phase-out limit was also increased from a starting AGI of \$75,000 to \$150,000.⁴⁵ The Act also provided an inflation adjustment for both limits based on the consumer price index.⁴⁶

With the Economic Growth Act provisions set to expire at the end of 2010,⁴⁷ Congress passed the Patient Protection and Affordable Care Act (Affordable Care Act), which, in addition to making changes to health care in the United States, provided changes to the adoption tax credit.⁴⁸ For the 2010 and 2011 tax years only, the Affordable Care Act increased the qualified adoption expenses to \$13,170 in 2010 and \$13,360 in 2011 and reclas-

³⁸ Small Business and Job Protection Act of 1996, Pub. L. No. 104-188, § 1807, 110 Stat. 1755, 1899–1903; *see also* SCOTT, *supra* note 21, at 11–13 (providing a summary of the legislative history of the adoption tax credit).

³⁹ SCOTT, *supra* note 21, at 12.

⁴⁰ *Id.* at 4.

⁴¹ *Id.* at 12.

⁴² *Id.*

⁴³ Economic Growth and Tax Relief Reconciliation Act of 2001, Pub. L. No. 107-16, § 202, 115 Stat. 38, 47–49; *see also* SCOTT, *supra* note 21, at 9.

⁴⁴ SCOTT, *supra* note 21, at 9.

⁴⁵ *Id.*

⁴⁶ *Id.*

⁴⁷ *Id.*

⁴⁸ Patient Protection and Affordable Care Act, Pub. L. No. 111-148, § 10909, 124 Stat. 119, 1021–24 (2010); *see also* JOINT COMM. ON TAXATION, 112TH CONG., Description of Revenue Provisions Contained in the President's Fiscal Year 2012 Budget Proposal 390 (Joint Comm. Print 2010) (summarizing the change the Affordable Care Act made to the adoption tax credit).

sified the credit as refundable.⁴⁹ Therefore, individuals who had previously not had enough income tax to offset the credit could receive a refund for the remaining amount of adoption expenses paid over their federal income tax. These provisions, however, only applied to the 2010 and 2011 tax years.⁵⁰ Later in 2010, Congress passed the Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act (Job Creation Act), extending the Economic Growth Act provisions of the adoption tax credit until 2012.⁵¹ The Job Creation Act, however, reduced the adoption tax credit from \$13,360 to \$12,540, and the credit became once again nonrefundable.⁵²

In 2013, Congress passed the American Taxpayer Relief Act (Taxpayer Relief Act), which, among other tax reforms, permanently extended the Economic Growth Act provisions of the adoption tax credit.⁵³ With this permanent extension, the adoption tax credit remains a nonrefundable credit, starting at \$10,000 and adjusted for inflation each year.⁵⁴ Similarly, the phase-out provision of the Economic Growth Act was extended, with the credit beginning to phase out for individuals earning over \$150,000 of AGI.⁵⁵

Currently, Section 23 of the Internal Revenue Code governs the adoption tax credit.⁵⁶ It is important to note the special rules pertaining to foreign adoptions⁵⁷ and special needs adoptions.⁵⁸ Under Section 23(e), when a couple adopts a child who is not a citizen of the United States, the adoption expenses incurred cannot be used to calculate the adoption tax credit until the adoption is finalized.⁵⁹ This provision was created in order to promote domestic adoption as a first choice over international adoptions for two reasons. First, there is less social gain for the United States from international adoptions since these children are not currently the financial or social responsibility of the United States.⁶⁰ Second, international adoptions

⁴⁹ JOINT COMM. ON TAXATION, 112TH CONG., Description of Revenue Provisions Contained in the President's Fiscal Year 2012 Budget Proposal 390 (Joint Comm. Print 2010).

⁵⁰ *Id.*

⁵¹ Tax Relief Unemployment Insurance Reauthorization and Job Creation Act of 2010, Pub. L. No. 111-312, §101, 124 Stat. 3296, 3298; *see also* JOINT COMM. ON TAXATION, 112TH CONG., Description of Revenue Provisions Contained in the President's Fiscal Year 2012 Budget Proposal 390 (Joint Comm. Print 2010) (explaining that the Job Creation Act extended Economic Growth Act provisions until the end of 2012).

⁵² JOINT COMM. ON TAXATION, 112TH CONG., Description of Revenue Provisions Contained in the President's Fiscal Year 2012 Budget Proposal 390 (Joint Comm. Print 2010).

⁵³ American Taxpayer Relief Act of 2012, Pub. L. No. 112-240, § 101, 126 Stat. 2313, 2313.

⁵⁴ Economic Growth and Tax Relief Reconciliation Act of 2001, Pub. L. No. 107-16, § 202, 115 Stat. 38, 47-49; *see also* SCOTT, *supra* note 21, at 9.

⁵⁵ I.R.C. § 23(b)(2)(a) (2012).

⁵⁶ *Id.* § 23.

⁵⁷ *Id.* § 23(e).

⁵⁸ *Id.* § 23(a)(3).

⁵⁹ *Id.* § 23(e).

⁶⁰ *See infra* Part II.C.

are often thought to be the product of child trafficking, as nearly 1.2 million children are trafficked each year, some of them through illegal international adoptions.⁶¹ In fact, the Hague Adoption Convention, an international convention that promulgates regulations dealing with adoptions and child trafficking, requires international adoption agencies to have a system of supervision in place to prevent adoptions that may be against the child's best interests or that may be the result of fraud or bribery.⁶² Therefore, in order to deter people from choosing international adoptions as the first option, the adoption tax credit is limited for international adoptive parents until the adoption is legal and finalized. Furthermore, Section 23(a)(3) allows adoptive parents of special needs children to claim the full amount of the credit, even if their actual expenses are less, to encourage the adoption of children with special needs.⁶³

D. *Tax Treatment of IVF Expenses*

Currently, couples pursuing IVF treatments can claim these expenses as a medical deduction on their tax return in the form of an itemized deduction.⁶⁴ Using Schedule A of IRS Form 1040, medical expenses in excess of 7.5% of AGI can be deducted, including infertility treatment medical expenses.⁶⁵ In May 2011, New York Senator Kirsten Gillibrand introduced a bill entitled the Family Act of 2011, which would provide a tax credit for the cost of infertility treatments.⁶⁶ Under the proposed law, 50% of the qualified infertility treatment expenses paid during the taxable year would be used to offset a couple's federal income tax.⁶⁷ The term "qualified infertility treatment expenses" included the expenses paid for IVF if the individual had previously been diagnosed with infertility and the treatment was provided by a licensed physician.⁶⁸ The Centers for Disease Control and Prevention (CDC) defines infertility as the inability to get pregnant after twelve consecutive months of trying, or six months if the woman is over 35 years of age.⁶⁹ The credit would have been limited to a maximum value of \$13,360 and would have included a phase-out provision, reducing the al-

⁶¹ Andrew C. Brown, *International Adoption Law: A Comparative Analysis*, 43 INT'L LAW. 1337, 1339 (2009).

⁶² *Id.*

⁶³ I.R.C. § 23(a)(3) (2012).

⁶⁴ INTERNAL REVENUE SERV., PUBL'N 502: MEDICAL AND DENTAL EXPENSES 8 (2012), available at <http://www.irs.gov/pub/irs-pdf/p502.pdf>.

⁶⁵ *Id.* at 2, 8.

⁶⁶ S. 965, 112th Cong. (2011).

⁶⁷ *Id.* § 3.

⁶⁸ *Id.*

⁶⁹ *Reproductive Health, Infertility FAQs*, CENTER FOR DISEASE CONTROL AND PREVENTION, <http://www.cdc.gov/reproductivehealth/infertility/#1> (last visited Feb. 3, 2013).

lowable amount of the credit beginning when an individual's AGI reaches \$150,000.⁷⁰ While the Family Act of 2011 died in committee, the bill proposed a tax incentive for couples to pursue IVF treatments before turning to adoption. Attempts to introduce a similar bill in the future seem highly likely given that most insurance plans do not cover IVF expenses, and the current tax model⁷¹ is not available to all couples who turn to IVF treatments.

II. IVF OR ADOPTION—LEVELING THE PLAYING FIELD

A. *Adoption—A “Last Resort”*

Infertility affects more than 6.1 million people in the United States, and yet only fifteen percent of women treated for infertility ever attempt adoption.⁷² Instead, most infertile couples pursue ART before adoption, reinforcing the view of adoption as a “last resort.”⁷³ In fact, some adoption agencies refuse to consider applicants for adoption who are also seeking medical treatment because that agency believes that the couple has not yet “come to terms” with their infertility.⁷⁴

This perception of adoption as the last resort for starting a family is one of the biggest barriers to adoption today.⁷⁵ Science tells us that having one's “own” child is a biological imperative, an irresistible impulse.⁷⁶ As Elizabeth Bartholet, a professor at Harvard Law School and ardent advocate for adoption reform, explains, “[o]urs is a society that glorifies reproduction, drives the infertile to pursue treatment at all costs, socializes them to think of adoption as a second-class form of parenting to be pursued only as a last resort, and regulates adoption in a way that makes it difficult, degrading, and expensive.”⁷⁷

In general, the existing legal structure in the United States lessens the attractiveness of adoption as an option for infertile individuals.⁷⁸ Adoption is a highly regulated activity.⁷⁹ The adoption process not only includes ter-

⁷⁰ S. 965, 112th Cong. § 3 (2011).

⁷¹ The current tax model for IVF expenses, as mentioned above, allows an individual to deduct IVF expenses in the form of a medical deduction as an itemized deduction. Any medical expenses, including IVF expenses, in excess of 7.5% of AGI may be deducted on an individual's Schedule A.

⁷² Appleton, *supra* note 3, at 408, 427.

⁷³ *Id.* at 432.

⁷⁴ *Id.*

⁷⁵ *Id.* at 408–10.

⁷⁶ *Id.* at 407.

⁷⁷ Elizabeth Bartholet, *Adoption Should be Encouraged*, in *ADOPTION: OPPOSING VIEWPOINTS* 17, 23 (2002).

⁷⁸ Appleton, *supra* note 3, at 421.

⁷⁹ *Id.* at 410.

minating the birth parents' rights, but also requires a very thorough screening process for the adoptive parents, including multiple home visits, background checks, and long waiting periods.⁸⁰ Even after making it through this phase of the process, couples run the risk of birth parents returning and claiming a legal right to the child.⁸¹ Unlike ART, adoption always requires judicial proceedings and a court decree.⁸² Adoption signals a termination of the rights of the birth parents and establishes the rights of the adoptive parents under the supervision of the state.⁸³ This process makes adoptive families, in essence, "second" families created by law.⁸⁴

In contrast, the law does not impose any restrictions on individuals who grow their families through ART such as IVF.⁸⁵ Under the Uniform Parentage Act,⁸⁶ a woman who gives birth to the child is considered that child's legal mother, regardless of the child's genetic makeup.⁸⁷ No judicial proceedings or state intervention is necessary. The reason for this differential treatment is due to the focus of the two processes. Adoption focuses on the best interests of the child, whereas IVF focuses on the interests of the parents.⁸⁸

Another reason IVF is more attractive for couples struggling with infertility is the ability to choose the genetic material of their children.⁸⁹ With advances in science, couples are now able to choose the sex of their child or create a child with certain desirable genetic traits.⁹⁰ In essence, parents can now buy the child they want. Adoption, on the other hand, requires prospective parents to choose among existing children, rather than creating children to their individual specifications.

⁸⁰ *Id.* at 410–11.

⁸¹ *Id.* at 411.

⁸² *Id.*

⁸³ Appleton, *supra* note 3, at 411–12.

⁸⁴ *Id.* at 412.

⁸⁵ *Id.* at 415.

⁸⁶ See HARRY L. TINDALL & ANGELA PENCE ENGLAND, THE FEDERALIZATION OF FAMILY LAW AND THE FUTURE 7 (2009), available at <http://www.tindallengland.com/family-law/docs/Federalization%20of%20Family%20Law.pdf> (noting that eight states have enacted the Uniform Parentage Act of 2002 and thirteen have adopted the earlier version from 1973).

⁸⁷ Appleton, *supra* note 3, at 418.

⁸⁸ See Richard F. Storrow, *Marginalizing Adoption Through the Regulation of Assisted Reproduction*, 35 CAP. U. L. REV. 479, 483 (2006).

⁸⁹ Appleton, *supra* note 3, at 423; Storrow, *supra* note 88, at 483 (“[A]doption and assisted reproduction are not equally valued, given the nearly overwhelming desire for and bias in favor of genetically-related children.”).

⁹⁰ Appleton, *supra* note 3, at 424.

B. *The Relationship Between ART Use and Adoption*

An estimated 81.5 million adults, or nearly 40% of American adults, have considered adoption.⁹¹ With more than 134,000 children in foster care waiting to be adopted, if less than 1% of these adults chose to pursue adoption, all of these children would be in permanent homes.⁹² Yet there are still thousands of children in the foster care system.⁹³ This is due in part to the increasing prevalence of IVF use.⁹⁴ Since 1992, the ratio of women who have delivered their own biological child through ART to the number of women who have adopted has increased dramatically. In 1992, this ratio was only 15%—for every three children created through ART, seventeen children were adopted.⁹⁵ Just ten years later, in 2002, this ratio was up to 60%—for every three children created through ART, only two children were adopted.⁹⁶

Two recent studies have tracked the relationship between ART use and adoption. In the first study, the authors attempted to determine the effect on adoption in states that require mandatory insurance coverage of IVF treatments.⁹⁷ Their findings showed that in states that mandated insurance companies to provide some level of insurance coverage for IVF treatments, IVF use was higher than in states that did not require insurance companies to cover IVF expenses.⁹⁸ The same study also found that states requiring insurance companies to cover all IVF expenses experienced an increased adoption rate as compared to states with only partial coverage.⁹⁹ However, this is not surprising given the low success rate of IVF treatments and the costs of adoption. If individuals are given the choice between exhausting their “free” chances of success with IVF treatments to obtain a genetically matched child and paying thousands of dollars for an adopted child, most individuals will choose the free option first.¹⁰⁰ Only after failed attempts at IVF will they turn to adoption. This study, however, does not reflect the entire picture. Prior to the introduction of these insurance mandates, adoption rates in these states were already steadily increasing.¹⁰¹ Thus, the introduction of the insurance mandates may not be indicative of an increase in

⁹¹ See DAVE THOMAS FOUND. FOR ADOPTION, NATIONAL ADOPTION ATTITUDES SURVEY 5 (2002) available at www.adoptioninstitute.org/survey/Adoption_Attitudes_Survey.pdf.

⁹² *Id.*

⁹³ *Id.*

⁹⁴ See Gumus & Lee, *supra* note 9, at 802.

⁹⁵ *Id.* at 803.

⁹⁶ *Id.*

⁹⁷ See Cohen & Chen, *supra* note 6, at 487 (defining the substitution theory as the idea that “making IVF more widely available will diminish adoptions”).

⁹⁸ *Id.* at 533.

⁹⁹ *Id.* at 553.

¹⁰⁰ *Id.* at 510.

¹⁰¹ *Id.* at 572.

adoption, but rather some other market force that was in effect prior to changes in insurance coverage.¹⁰² The study also explicitly focused on the effect of insurance mandates on adoption, not on other types of IVF incentives.¹⁰³

The second study focused on the effects of IVF use on adoption and determined that IVF and adoption are not substitutes for one another.¹⁰⁴ Rather, IVF use and adoption are negatively correlated.¹⁰⁵ This study suggests that by promoting adoption, some individuals would be encouraged to adopt rather than use IVF treatments.¹⁰⁶ Furthermore, this study concludes that, given the social effects of foster care, the regulations governing both the adoption and IVF processes should be “reviewed to level the playing field as adoptions are subject to tougher restrictions” than IVF.¹⁰⁷

One of the reasons IVF and adoption are not true substitutes is because through IVF a woman receives an infant; however, with adoption, the supply of domestic infants is less than the demand for total infants.¹⁰⁸ The low supply of domestic infants is due in large part to a prevalence of birth control use¹⁰⁹ and the legalization of abortion.¹¹⁰ Only 24% of all domestic adoptions in 2007 were infants.¹¹¹ Thus, in order to receive an infant through adoption, a couple must either look abroad, where the supply of infants is higher but the costs associated with adoption are much greater, or stay on domestic waiting lists for months or years. As a result, IVF is considered a superior route to parenthood.

Some scholars have offered possible solutions to the problem of limited supply and increased demand for domestic infants. Richard Posner and Elisabeth Landes, in their article *The Economics of the Baby Shortage*, suggest a free-market system in which birth mothers are compensated for placing their children up for adoption.¹¹² While in theory this solution would stimulate the supply of domestic infants, it has received sharp criticism as a

¹⁰² *Id.*

¹⁰³ Cohen & Chen, *supra* note 6, at 569 (“Other proposed solutions to increase IVF availability, such as tax deductions for IVF expenses, may have different effects on adoption.”).

¹⁰⁴ Gumus & Lee, *supra* note 9, at 817.

¹⁰⁵ *Id.* at 818.

¹⁰⁶ *Id.* at 819.

¹⁰⁷ *Id.*

¹⁰⁸ See Elisabeth M. Landes & Richard A. Posner, *The Economics of the Baby Shortage*, 7 J. LEGAL STUD. 323, 324–25 (1978).

¹⁰⁹ Anna Birenbaum, *Shielding the Masses: How Litigation Changed the Face of Birth Control*, 10 S. CAL. REV. L. & WOMEN’S STUD. 411, 414 (2001) (“By 1990, an estimated 50% of couples in the world and an estimated 80% of adults within the United States were using some form of birth control.”).

¹¹⁰ See *Roe v. Wade*, 410 U.S. 113 (1973).

¹¹¹ NAT’L COUNCIL ON ADOPTION, ADOPTION FACTBOOK V 4–5 (2011).

¹¹² See Landes & Posner, *supra* note 108, at 334–39.

legal form of “baby-selling.”¹¹³ Another author suggested targeting the increased prevalence of teen pregnancy as a potential source of domestic infants.¹¹⁴ Still others have advocated for a longer decision period for birth mothers to allow them the time to make a well-informed, less peer-pressured decision in the belief that they will choose adoption once they realize they cannot adequately provide for the child themselves.¹¹⁵ However, no matter how the increase to the supply of domestic infants occurs, increasing the number of infants domestically makes adoption a viable substitute for IVF. Once adoption and IVF are true substitutes, Congress can make adoption the preferred option rather than “second-best” by incentivizing adoption.

C. *Incentivizing Adoption Over IVF—Why Should the Government Care?*

In the 2006 fiscal year, the federal government spent over \$12 billion in child welfare programs, making up only about 48% of the money spent on statewide child welfare.¹¹⁶ States and localities contributed another \$13 billion.¹¹⁷ Included in these costs were foster care and adoption assistance payments, state grants for various child welfare services, and welfare payments.¹¹⁸ Currently, foster care alone costs the federal government almost \$4.5 billion a year, with another few million dollars added by individual states.¹¹⁹ In a 2006 study, the Center for Adoption Research found that for every dollar spent on adoption from foster care, the government yields about \$3 in benefits both from the money saved on foster care as well as the increased expectancy of the child’s future earnings.¹²⁰ Considering the billions of dollars the government spends on foster care, this could result in billions more in savings.

Because fiscal resources are scarce, it is important that the federal government allocate funds to the program that will produce the greatest societal benefit. By incentivizing adoption, the government will stimulate

¹¹³ See J. Robert S. Prichard, *A Market for Babies?*, 34 U. TORONTO L.J. 341 (1984); Ronald A. Cass, *Coping with Life, Law, and Markets: A Comment on Posner and the Law-and-Economics Debate*, 67 B.U. L. REV. 73, 90 (1987).

¹¹⁴ See Kyle Wier, *Promoting Adoption as a Solution to Teen Pregnancy: A Study and Model*, 5 J. L. & FAM. STUD. 319 (2003).

¹¹⁵ Elizabeth J. Samuels, *Time to Decide? The Laws Governing Mothers’ Consents to the Adoption of Their Newborn Infants*, 72 TENN. L. REV. 509, 509 (2005).

¹¹⁶ CHILDREN’S DEF. FUND, CHILD WELFARE IN THE UNITED STATES (2010), available at www.childrensdefense.org/child-research-data-publications/data/state-data-repository/cwf/2010/child-welfare-financing-united-states-2010.pdf.

¹¹⁷ *Id.*

¹¹⁸ *Id.*

¹¹⁹ *Id.*

¹²⁰ Gumus & Lee, *supra* note 9, at 806.

the number of adoptions in the United States, thereby reducing the costs associated with foster care.¹²¹ On the other hand, by incentivizing IVF, no balancing fiscal cuts need to be made. By creating a tax credit for IVF expenses, the government will have to allocate more money to the tax expenditure budget to provide for the decrease in tax revenue that will result from the new credit.¹²²

Additional tax expenditures resulting from an increased use of IVF include dependent exemptions for qualifying children¹²³ and all of the tax credits associated with children, such as the child tax credit¹²⁴ and the child and dependent care expenses credit.¹²⁵ Currently, children who are in foster care qualify as dependents on their foster parents' tax returns.¹²⁶ This means that the foster child may also be used to calculate the child tax credit.¹²⁷ However, when a new child is created through IVF, this increases the number of children who are treated as dependents, thereby increasing the amount of personal exemptions, child tax credits, and child and dependent care expenses that are used in reducing federal income taxes paid to the government. As a result, tax revenue is reduced while tax expenditures are increased.¹²⁸

In addition to the direct costs associated with using the tax system to incentivize adoption over IVF, encouraging adoption will save other indirect costs. When individuals choose IVF, if successful, the population of children grows. This is in addition to the children already born who are waiting to be adopted. The state must provide certain benefits for each child. For instance, states are required to make public education available to all children.¹²⁹ The average cost per child of public education for the

¹²¹ *See id.*

¹²² *See* Leah Carson Kanoy, *The Effectiveness of the Internal Revenue Code's Adoption Tax Credit: Fostering the Nation's Future?*, 21 U. FLA. J.L. & PUB. POL'Y 201, 208 (2010) (noting that the adoption tax credit cost the government around \$800 million in tax revenue). The proposed IVF tax credit was equivalent to the amount of the adoption tax credit; thus, it can be estimated that by providing a similar IVF tax credit, the government would lose an additional \$800 million or more in tax revenue per year.

¹²³ I.R.C. §§ 151–152 (2012).

¹²⁴ *Id.* § 24.

¹²⁵ *Id.* § 21.

¹²⁶ *Id.* § 152.

¹²⁷ *Id.* § 24.

¹²⁸ Note that the additional child tax credit is refundable and would require the government to reimburse the taxpayer if the child tax credit exceeds their federal income tax. *See* INTERNAL REVENUE SERV., SCHEDULE 8812 (2012), <http://www.irs.gov/pub/irs-pdf/fl040s8.pdf>.

¹²⁹ While states are required to make public education available to all children, it is not true that all children participate in the public education system. Some parents choose to homeschool their children and others send them to private institutions. Therefore, not every child who lives in a given state is costing the state in public education expenses. However, in 2007, only 14.3% of children grades K-12 were either enrolled in a private school or homeschooled. *Digest of Education Statistics*, NAT'L CTR.

2007-2008 school year was \$10,542.¹³⁰ Multiplying this average over a child's twelve years of schooling, public education costs a state on average over \$120,000 per child. If those same individuals chose adoption over IVF, this could potentially save the government millions of dollars a year in education costs alone. Other sources of expenditures include Medicaid, Medicare, and Social Security benefits. Furthermore, with IVF comes the increased chance of multiple gestations and greater complications with the pregnancy,¹³¹ which in turn increases medical costs and raises many other liability issues.

D. *Problems and Policy Implications of the Adoption Tax Credit*

The nonrefundable adoption tax credit fails to meet its potential for providing a financial incentive for prospective adoptive parents due to their inability to apply the full benefit of the credit on their tax returns. The tables below show statistics on the number of tax returns claiming the adoption tax credit when the credit was nonrefundable in 2009, and when the credit was refundable in 2010. The number of individuals claiming the adoption tax credit accounted for only 0.057% of all income tax returns for 2009, but when the credit became refundable in 2010, the adoption tax credit accounted for 0.098% of all income tax returns. Furthermore, when the credit was nonrefundable in 2009, the average tax credit was below the maximum allowable amount; however, the tax credit increased as the AGI increased, reflecting the increase in federal income tax liability with which to offset the credit.

FOR EDUC. STATISTICS, http://nces.ed.gov/programs/digest/d10/tables/dt10_041.asp (last visited Feb. 10, 2013).

¹³⁰ *The Condition of Education*, NAT'L CTR. FOR EDUC. STATISTICS, <http://nces.ed.gov/programs/coe/tables/table-tot-2.asp> (last visited Feb. 10, 2013).

¹³¹ Gumus & Lee, *supra* note 9, at 802.

Table 1. Tax Statistics—2009

Adjusted Gross Income Class ¹³²	Total Number of Tax Returns ¹³³	Tax Returns with the Adoption Tax Credit ¹³⁴	Share of Total Tax Returns ¹³⁵	Amount of the Credit ¹³⁶	Average Credit Amount per Return ¹³⁷
Under \$30,000	67,720,914	3,091	0.002%	\$2,838,000	\$918
\$30,000-50,000	25,168,059	21,044	0.015%	\$28,382,000	\$1,349
\$50,000-75,000	18,694,893	27,246	0.019%	\$79,590,000	\$2,921
\$75,000-100,000	11,463,725	12,068	0.009%	\$67,012,000	\$5,553
\$100,000-200,000	13,522,048	15,554	0.011%	\$90,897,000	\$5,844
\$200,000+	3,924,490	1,663	0.001%	\$9,723,000	\$5,847
Total	140,494,129	80,666	0.057%	\$278,442,000	\$3,452

When the credit was refundable in 2010, it became available to many more individuals. The percentage of tax returns that claimed the adoption tax credit increased by 72% from 2009 to 2010, with more families making below \$200,000 able to claim the credit due to its refundability. By making it refundable, both high- and low-income earners were able to take advantage of the credit, either by reducing their income tax liability or receiving a refund in the mail.

¹³² INTERNAL REVENUE SERV., SOI TAX STATS—INDIVIDUAL INCOME TAX RETURNS PUBLICATION 1304 (2009), <http://www.irs.gov/pub/irs-soi/09inalcr.pdf>.

¹³³ *Id.*

¹³⁴ *Id.*

¹³⁵ Share of total returns calculated by dividing the number of tax returns with the adoption tax credit by the total amount of tax returns for the year.

¹³⁶ INTERNAL REVENUE SERV., SOI TAX STATS—INDIVIDUAL INCOME TAX RETURNS PUBLICATION 1304 (2009), <http://www.irs.gov/pub/irs-soi/09inalcr.pdf>.

¹³⁷ Average credit amount per return calculated by dividing the total amount of adoption tax credit for that income class by the number of tax returns with the adoption tax credit for that income class.

Table 2. Tax Statistics—2010

Adjusted Gross Income Class ¹³⁸	Total Number of Tax Returns ¹³⁹	Tax Returns using the ATC to Offset Taxes ¹⁴⁰	Tax Returns using the Refundable Portion of the ATC	Share of Total Tax Returns ¹⁴¹	Amount of the Credit used to Offset Taxes ¹⁴²	Amount of the Credit Refunded ¹⁴³
Under \$30,000	68,460,223	2,651	18,334	0.031%	\$903,000	\$335,921,000
\$30,000-50,000	25,605,319	12,701	22,519	0.138%	\$27,127,000	\$249,999,000
\$50,000-75,000	18,727,169	15,355	16,695	0.171%	\$41,353,000	\$207,384,000
\$75,000-100,000	11,805,382	11,298	10,001	0.180%	\$34,838,000	\$94,303,000
\$100,000- 200,000	13,997,651	22,505	7,971	0.218%	\$131,105,000	\$82,765,000
\$200,000+	4,296,306	52	0	0.001%	\$532,000	\$0
Total	142,892,050	64,562	75,520	0.098%	\$236,403,000	\$970,372,000

Thus, with the average adoption costing tens of thousands of dollars, by reverting the adoption tax credit back to a nonrefundable \$10,000 credit and beginning the phase out range at \$150,000, the tax credit will not effectively encourage middle class families¹⁴⁴ to adopt since they no longer qualify for the credit.¹⁴⁵ Yet, these individuals—those earning over \$150,000 a year—are financially the most able to afford adoption. Furthermore, 30% of all domestic adoptions and almost 60% of all international adoptions are among couples making more than \$100,000.¹⁴⁶ But because of the phase-out, these individuals will not be able to claim the full amount of the credit for their adoption expenses. While it may seem like these individuals do not need the credit since they have the income to pay for the adoption, it is precisely these people who should adopt, as they may be able to provide

¹³⁸ INTERNAL REVENUE SERV., SOI TAX STATS—INDIVIDUAL INCOME TAX RETURNS PUBLICATION 1304 (2010), <http://www.irs.gov/pub/irs-soi/10inalcr.pdf>.

¹³⁹ *Id.*

¹⁴⁰ *Id.*

¹⁴¹ Share of total returns calculated by dividing the number of tax returns with the adoption tax credit by the total amount of tax returns for the year.

¹⁴² INTERNAL REVENUE SERV., SOI TAX STATS—INDIVIDUAL INCOME TAX RETURNS PUBLICATION 1304 (2009), <http://www.irs.gov/pub/irs-soi/09inalcr.pdf>.

¹⁴³ *Id.*

¹⁴⁴ In a speech in July 2012, President Obama defined the middle class as those families making less than \$250,000 a year. Hope Yen, *Spin Meter: 'Middle class' Turns Fuzzy in Politics*, ASSOCIATED PRESS (July 18, 2012), <http://bigstory.ap.org/article/spin-meter-middle-class-turns-fuzzy-politics-0>.

¹⁴⁵ SCOTT, *supra* note 21, at 9; JOINT COMM. ON TAXATION, 112TH CONG., Description of Revenue Provisions Contained in the President's Fiscal Year 2012 Budget Proposal 390 (Joint Comm. Print 2010).

¹⁴⁶ NAT'L COUNCIL ON ADOPTION, *supra* note 111, at 92.

better opportunities than the child could have had in foster care or with the child's birth parents. The government should provide the incentive to these individuals to encourage them to put their resources to a greater societal use.

Furthermore, even with the permanent extension of the credit, it remains nonrefundable. As a result, many lower income individuals are unable to take full advantage of the credit due to their lack of federal income tax against which to offset their adoption expenses.¹⁴⁷ For example, a couple earning \$50,000 a year has a federal income tax liability of \$3,139.¹⁴⁸ Given that the couple may also now claim the child tax credit for the child they just adopted, the maximum adoption tax credit they can receive is \$2,139.¹⁴⁹ This calculation is made without taking into consideration any potential childcare costs or whether the couple is able to itemize their return, each making the couple's taxable income, and thus income tax, even lower. Assuming the adoption tax credit is roughly \$13,000 in 2013, adjusting the 2012 rate for inflation, a couple would have to earn just over \$107,000 in order to take full advantage of the credit.¹⁵⁰

Statistics have shown that at least one provision of the adoption tax credit has been effective in promoting adoption.¹⁵¹ Section 23(a)(3) of the Internal Revenue Code provides that parents who adopt special needs children automatically qualify for the full amount of the credit, regardless of actual expenses.¹⁵² This section defines "special needs" to include any child who is a citizen of the United States, who the state has determined cannot return to their birth parents, and for whom one or more special factors exists that make it difficult for a family to adopt the child without financial assistance from the government.¹⁵³

While it may seem unfair to encourage the adoption of special needs children over those without special needs, the purpose of this differentiation was to promote the adoption of children who might otherwise never be

¹⁴⁷ See Hibben, *supra* note 36 (arguing that the adoption tax credit is inequitable because families with lower incomes are unable to take the credit since they have no income tax liability).

¹⁴⁸ \$50,000 AGI – 11,900 Standard Deduction – 11,400 Personal Exemptions for the taxpayer, spouse, and dependent (adopted child) = \$26,700 Taxable Income. Using the tax tables for 2012, there would be a federal income tax of \$3,139 in this instance.

¹⁴⁹ The child tax credit is \$1,000. Thus, when you deduct the child tax credit from the federal income tax the remaining amount, \$2,139, is the remaining income tax that can be used to offset the adoption tax credit.

¹⁵⁰ A couple earning \$107,300 would have roughly \$84,000 in taxable income (\$107,300 AGI – 11,900 Standard Deduction – 11,400 Personal Exemptions for the taxpayer, spouse, and dependent (adopted child) = \$84,000 Taxable Income). Using the tax tables for 2012 federal income tax here would be \$13,054. Taking away the \$1,000 for the child tax credit leaves you with \$12,954 of taxable income that can be used to offset the adoption tax credit.

¹⁵¹ NAT'L COUNCIL ON ADOPTION, *supra* note 111, at 4.

¹⁵² I.R.C. § 23(a)(3) (2012).

¹⁵³ *Id.* § 23(d)(3).

adopted before reaching eighteen.¹⁵⁴ Because of this, non-special needs children seem to have a greater chance of being adopted in the first place, and thus the extra incentive to adopt special needs children is actually fair. The second purpose of this differential treatment was to promote the adoption of children out of foster care.¹⁵⁵ Because of the way the term “special needs” is defined in the IRC, many of the children in the foster care system qualify as “special needs.”¹⁵⁶ This allows adoptive parents to claim the full amount of the adoption tax credit even though their actual expenses are typically, at most, \$2,500.¹⁵⁷ In fact, statistics show that between 1996, when this provision was first enacted, and 2002, the number of special needs adoptions in the United States almost doubled, jumping from 26,434 to 45,584.¹⁵⁸ Between 2002 and 2007, these adoptions declined to 32,402, but they were still up from the pre-Small Business Act era.¹⁵⁹ Furthermore, this decrease could be attributed to a number of external factors, including the aftermath of the 9/11 terrorist attacks and the beginning of the War on Terror leading to a decline in the economic and job markets, as well as advancing medical technology, and the popularity of IVF in the United States.¹⁶⁰

III. SOME SOLUTIONS—THE BEST WAY TO INCENTIVIZE ADOPTION

A. *Changes to the Adoption Tax Credit*

Studies show that tax incentives are more effective in influencing individual decision-making than direct subsidies.¹⁶¹ This is due to the negative perception of direct assistance.¹⁶² Furthermore, tax credits are generally preferred to tax deductions because of the theory that they are more equitable to all taxpayers.¹⁶³ However, two aspects of the current adoption tax credit negate this equitable argument: the nonrefundable nature of the credit and the phase-out limitation. Because of these two characteristics, a few

¹⁵⁴ SCOTT, *supra* note 21, at 8.

¹⁵⁵ Kanoy, *supra* note 122, at 205–09.

¹⁵⁶ SCOTT, *supra* note 21, at 3.

¹⁵⁷ *Id.* Whether or not the family may take advantage of the full amount of the credit depends upon their income. Thus, while the adoption tax credit is nonrefundable, low-income families who adopt special needs children from foster care will not be able to take advantage of the credit as they have no income tax liability with which to offset the credit.

¹⁵⁸ NAT’L COUNCIL ON ADOPTION, *supra* note 111, at 4.

¹⁵⁹ *Id.*

¹⁶⁰ Gumus & Lee, *supra* note 9, at 803.

¹⁶¹ Kanoy, *supra* note 122, at 217.

¹⁶² *Id.* at 218.

¹⁶³ See Brian H. Jenn, *The Case for Tax Credits*, 61 TAX LAW 549, 564 (2008).

changes should be made to make the adoption tax credit more equitable to taxpayers of all incomes.

First, Congress should amend the code to change the tax credit back to a refundable credit.¹⁶⁴ As a nonrefundable credit, this limits the number of individuals who can claim the credit since it can only be used to offset federal income taxes.¹⁶⁵ Thus, individuals with little to no income tax liability are unable to claim the credit.¹⁶⁶ For example, in 2012 a family with one child would have had to earn over \$107,000 to fully utilize the credit.¹⁶⁷ Yet, 35% of all domestic adoptions are among couples earning less than \$50,000.¹⁶⁸ By making the adoption tax credit once again refundable, it would allow these couples to claim the full benefit of the credit and provide an extra incentive for adoption to other couples that feel like they may not be able to afford adoption without assistance.

Second, the phase-out limitation should be removed. Because of this limitation, higher income families are unable to take advantage of the tax credit at all.¹⁶⁹ Statistics show that 30% of all domestic adoptions and almost 60% of all international adoptions are by couples in the higher income range.¹⁷⁰ Tax planning is especially important for these individuals, who have a higher federal income tax to pay. If they were able to take a \$10,000 or more tax credit by adopting a child, individuals who are torn between choosing adoption and pursuing IVF would be given an additional incentive to adopt, rather than spending their resources on largely unsuccessful infertility treatments.

If Congress changes the credit, making it both refundable and no longer subject to a phase-out, the tax credit will apply to low, middle, and high-income families alike. However, the likelihood that both of these changes will be made is low because in making the credit available to more income classes, it will also increase the loss of revenue derived from the adoption tax credit.

¹⁶⁴ A refundable credit is treated like a tax payment; if the total of all of your refundable credits, federal income tax withheld, and other payments is greater than your federal tax liability, you receive a refund for the excess. A nonrefundable credit reduces your tax liability, but if your tax liability is less than the amount of the credit the excess is not refunded to you. INTERNAL REVENUE SERV., PUBL'N 17: YOUR FED. INCOME TAX (FOR INDIVIDUALS) 248-49 (2012), available at <http://www.irs.gov/pub/irs-pdf/p17.pdf>.

¹⁶⁵ See Hibben, *supra* note 36, at 149 (demonstrating that the nonrefundable credit limits utilization of the maximum benefit of the adoption credit to households earning between \$101,250 and the current phase-out amount); Kanoy, *supra* note 122, at 205.

¹⁶⁶ See Hibben, *supra* note 36, at 147 (noting that “approximately 70% . . . of taxpayers [that] claimed the adoption credit had insufficient tax liability to fully offset current-year adoption expenditures”).

¹⁶⁷ See *supra* note 149 and accompanying text.

¹⁶⁸ NAT'L COUNCIL ON ADOPTION, *supra* note 111, at 92.

¹⁶⁹ I.R.C. § 23(b)(2) (2012).

¹⁷⁰ NAT'L COUNCIL ON ADOPTION, *supra* note 111, at 92.

Assuming that neither of the aforementioned changes are made, another way the adoption tax credit could be structured to be more equitable among all taxpayers is by making it an “above-the-line” deduction¹⁷¹ rather than a credit. Traditional “below-the-line” deductions¹⁷² are perceived to be worth more to a higher-income taxpayer than a lower-income taxpayer for two reasons.¹⁷³ First, these deductions are typically allowed in an itemized deduction, which taxpayers only use if they have enough aggregated deductions to exceed the standard deduction. Second, even if the taxpayer is able to itemize, the deduction results in a decreased tax liability that is equal to the tax rate.¹⁷⁴ Thus, for a taxpayer in a 50% tax bracket, a \$100 deduction is worth \$50. But, to a taxpayer in a 25% tax bracket, this same \$100 deduction is only worth \$25. However, if the deduction is classified as “above-the-line,” this inequity is reduced since the deduction can be taken regardless of whether the taxpayer qualifies for itemization.¹⁷⁵ At the same time, the policy behind the phase-out limitation implicit in the adoption tax credit¹⁷⁶ would remain intact with an “above-the-line” deduction because deductions create greater disparities among taxpayers as income increases.¹⁷⁷

B. *Cap on Agency Fees*

Twenty-six percent of all unrelated domestic adoptions are transacted through a private agency.¹⁷⁸ The agency fees for this type of adoption can reach up to \$52,000, with price premiums for Caucasian children or for faster placement.¹⁷⁹ Families must either borrow money or must make enough money to have the cash up front to afford such high costs. This eliminates many prospective families from pursuing adoption. Even with the current tax credit in place, high agency fees create a huge barrier to adoption.¹⁸⁰ Placing a nationwide cap on agency fees would reduce some of

¹⁷¹ An “above-the-line” deduction refers to a deduction used to calculate the adjusted gross income.

¹⁷² A “below-the-line” deduction refers to a deduction from the adjusted gross income but before the federal income tax liability is calculated.

¹⁷³ Jenn, *supra* note 163, at 557.

¹⁷⁴ *Id.*

¹⁷⁵ *Id.* at 560.

¹⁷⁶ The idea behind the phase-out limitation is to disallow an unfair advantage to higher-income tax individuals who would be more capable of paying for these expenses out of pocket without any help from the government to begin with.

¹⁷⁷ Jenn, *supra* note 163, at 564.

¹⁷⁸ NAT’L COUNCIL ON ADOPTION, *supra* note 111, at 28.

¹⁷⁹ See Darcher, *supra* note 20, at 737.

¹⁸⁰ ADOPTUSKIDS, BARRIERS & SUCCESS FACTORS IN ADOPTIONS FROM FOSTER CARE: PERSPECTIVES OF FAMILIES AND STAFF 37 (2007), available at www.adoptuskids.org/images/resourcecenter/barriersuccessfactors.pdf (citing the expense of private

the costs associated with domestic adoption.¹⁸¹ With lower costs and a more advantageous tax credit, families would be more likely to adopt children than pursue pricier IVF treatments.

A cap on agency fees would also have the effect of increasing the attractiveness of domestic adoptions over international adoptions whose agency fees are not capped.¹⁸² As previously discussed, domestic adoptions have a greater social impact than international adoptions as they reduce federal and state government expenditures on foster care (for children who are not adopted from the agency due to the high costs) and welfare (for birth parents who are unable to place their children through the agency because of its high costs).¹⁸³ Another important effect of a cap on domestic agency fees would be to reduce independent adoptions, or adoptions coordinated solely between the birth parents and prospective adoptive parents.¹⁸⁴ Independent adoptions—the type advocated by Richard Posner¹⁸⁵—lead to a perception of baby selling and often place the best interests of the child second to that of the parents.¹⁸⁶

Critics of a cap on agency fees argue that it interferes with the free market and could potentially drive agencies out of business or decrease the quality of their services.¹⁸⁷ Furthermore, an attempt at nationwide implementation would encounter constitutional arguments.¹⁸⁸ However, even if individual states implement price caps separately, any economic criticisms would be moot if the caps incentivize couples to pursue adoption over IVF. The caps would be even more beneficial if they caused couples to adopt domestically rather than internationally. The government, and taxpayers in turn, would save millions of dollars on child welfare services if children were adopted rather than placed in foster care or if they were to remain with their birth parents in poverty. Moreover, there is no evidence that placing a cap on what agencies can charge for their services would hamper their abilities to provide services to prospective adoptive parents. In fact, a leading adoption researcher observed that when “Congress enacted a \$5,000 tax credit for adoptions in 1997, a growing number of practitioners [raised] their charges about \$5,000.”¹⁸⁹ This increase in fees, correlating with an increase in adoption assistance, indicates that these services do not cost

[agency] adoptions and international adoptions as reasons for choosing to adopt children from foster care or not adopt at all).

¹⁸¹ Darcher, *supra* note 20, at 737, 765.

¹⁸² *Id.*

¹⁸³ See *supra* Part II.C.

¹⁸⁴ Darcher, *supra* note 20, at 765.

¹⁸⁵ See Landes & Posner, *supra* note 108, at 324.

¹⁸⁶ Darcher, *supra* note 20, at 765.

¹⁸⁷ Michele Goodwin, *The Free-Market Approach to Adoption, The Value of a Baby*, 26 B.C. THIRD WORLD L.J. 61, 76 (2006); Darcher, *supra* note 20, at 765.

¹⁸⁸ Darcher, *supra* note 20, at 765–66.

¹⁸⁹ Samuels, *supra* note 115, at 524.

nearly as much as the amount charged and suggests that agencies can afford to charge less for their services without being driven out of business.

C. *Disincentivizing IVF*

The government can further incentivize adoption by creating disincentives for IVF. This could be accomplished in one of three ways: limiting medical deductions for IVF treatments, refusing to create a tax credit for IVF expenses, or simplifying the adoption process.

First, the federal government should begin by limiting the availability of deductions for medical expenses related to IVF. With the average IVF cycle costing approximately \$12,400,¹⁹⁰ a couple that makes \$50,000 could deduct almost \$8,650 in medical expenses.¹⁹¹ This same couple, however, could only deduct just over \$3,000 in adoption expenses.¹⁹² To encourage couples to choose adoption over IVF, the government should limit the amount of medical expenses that couples can deduct for IVF treatments at an amount that is equal to or less than the maximum deduction allowed for adoption expenses. This would result in a smaller deduction for IVF treatments than adoption expenses, since only the portion of medical expenses in excess of 7.5% of AGI is allowed, and it would provide a financial incentive for couples to choose adoption.

Second, Congress should not enact a tax credit for IVF expenses, such as the proposed Family Act of 2011. Creating a new credit for IVF expenses would not only cost the government hundreds of thousands of dollars in tax expenditures, it would simultaneously increase the cost of many social programs, including the foster care program, education, and, eventually, Social Security.¹⁹³ Furthermore, under the current status quo, public perception already places adoption at a disadvantage to IVF.¹⁹⁴ Providing a tax credit would create an additional incentive for IVF over adoption. Even if the IVF tax credit is capped at a maximum amount, the remainder of these expenses could also be used as a deduction when itemizing expenses.¹⁹⁵ Thus, the full amount of IVF expenses could be deductible in some way, whereas only a set amount of adoption expenses may be used in calculating the adoption tax credit.

Finally, the adoption process must be simplified to counter the relatively simple process of pursuing IVF. Reforming the adoption process is

¹⁹⁰ Cohen & Chen, *supra* note 6, at 486.

¹⁹¹ 7.5% of \$50,000 is \$3,750, so the excess of \$12,400 in infertility treatments that can be deducted is \$8,650.

¹⁹² See *supra* Part III.A.1.c.

¹⁹³ See *supra* Part II.C.

¹⁹⁴ See *supra* Part II.A.

¹⁹⁵ INTERNAL REVENUE SERV., 2010 INSTRUCTIONS FOR SCHEDULE A (2012), available at <http://www.irs.gov/pub/irs-pdf/i1040sca.pdf>.

becoming increasingly necessary as studies continue to show that adoption is perceived to be more risky than IVF.¹⁹⁶ This is due to fears of disruption or intrusion by the adoptive child's birth parents.¹⁹⁷ High-profile stories like Baby Jessica and Baby Richard leave prospective adoptive parents worried that birth parents will change their mind about giving their child up for adoption and will take their child back.¹⁹⁸ The law has begun to recognize open adoptions, helping to break through the stigma that an adoptive child will be taken away from his or her adoptive parents in coming years.¹⁹⁹ In an open adoption, the birth parent(s) select the adoptive parents from a pool of applicants and reach an agreement that allows the birth parent(s) a certain level of involvement in the child's life after birth.²⁰⁰

Further reformation must occur, however, before the negative perception of adoption can be eliminated. While some states have enacted laws that do not allow birth parents to revoke their consent after a certain amount of time has passed,²⁰¹ every state is different. Complicated issues may arise when parents adopt a child in one state and move to another state whose laws are less stringent on birth parents.²⁰² Questions concerning this situation and many others cause uncertainties in adoption that push people toward IVF, where rules are much clearer and in the parents' interest. The federal government needs to create a uniform rule that disallows birth parents the right to the child after a significant amount of time has passed. This would create more certainty and regularity within the adoption process and remove another incentive to favor IVF over adoption.²⁰³

¹⁹⁶ Appleton, *supra* note 3, at 429.

¹⁹⁷ *Id.* at 428.

¹⁹⁸ Marvin Olasky, *Adoption is an Alternative to Abortion and Single Parenting*, in ADOPTION: OPPOSING VIEWPOINTS 32, 33 (2002) ("In the mid-1990s, children known as 'Jessica' and 'Richard,' raised in adoptive homes since their births, were controversially returned to their birthparents by the courts."). In Baby Jessica's case, her birth mother had not informed the birth father that she was giving the child up for adoption. In *Interest of B.G.C.*, 496 N.W.2d 239, 241 (Iowa 1992). Her father later filed a claim against the adoptive parents, invoking his legal rights as her father. *Id.* The Supreme Court of Iowa upheld the father's claim and ordered the child, then almost two and a half years old, to be returned to her father in Iowa. *Id.* at 246. Baby Richard's case is similar in that his father contested his adoption, and after three years of living with his adoptive parents, the Supreme Court of Illinois granted the birth father custody of the child and ordered that the adoptive parents relinquish the child to him immediately. See *Petition of Doe*, 638 N.E.2d 181, 182 (Ill. 1994).

¹⁹⁹ Appleton, *supra* note 3, at 397.

²⁰⁰ Darcher, *supra* note 20, at 739.

²⁰¹ MINN. STAT. § 259.24 (2007) (giving the birth parents ten working days to withdraw consent); VA. CODE ANN. § 63.2-1223 (2007) (giving birth parents until the child reaches ten days old and up to seven days after the consent agreement was signed to withdraw consent).

²⁰² For an interesting discussion of this issue, see generally Herma Hill Kay, *Adoption in the Conflict of Laws: The UAA, Not the UCCJA, is the Answer*, 84 CAL. L. REV. 703 (1996).

²⁰³ A Uniform Adoption Act was proposed by the National Conference of Commissioners on Uniform State Laws in 1994. Many states have modeled their adoption laws after this act in that the legal processes are similar; however, the timeframes for withdrawing consent vary among the states.

CONCLUSION

The benefits of adoption for society are immeasurable. Studies show that teenagers adopted at birth are more likely to be raised in two-parent, middle-class families and perform better in school than children raised by their own birth families.²⁰⁴ Children adopted out of foster care, the average age is six years old,²⁰⁵ are less likely than children in the general population to live in families with incomes below the poverty level and more likely to have a parent with a high school education.²⁰⁶ Furthermore, these children are less likely to rely on the government for assistance and more likely to lead successful, happy lives.²⁰⁷ Meanwhile, children left to age out of the foster care system often do not obtain a high school diploma and are six times more likely to be arrested.²⁰⁸

One way the government has attempted to promote adoption is by helping to remove some of the financial barriers to adoption through the adoption tax credit.²⁰⁹ Despite this, the rate of adoption continues to decrease.²¹⁰ As a nonrefundable credit that begins phasing out as a family's income reaches \$150,000, the adoption tax credit cannot be utilized by many families and is thus not doing its job. The nature of the credit combined with ever increasing agency fees and the social perception of adoption makes adoption a second choice for many families. Instead, they turn to IVF, whose legal framework makes it easier to grow one's family.

The government can do something about this. By revising the adoption tax credit to remove the phase-outs and making it once again a refundable credit, or by making adoption expenses an "above-the-line" deduction, it would give more families financial support to help them with the cost of adoption. Another way the government could remove the financial barrier to adoption is to place a nationwide cap on agency fees. With fees reaching upwards of \$50,000, this pushes families away from considering adoption, turning instead to potentially dangerous and highly unsuccessful infertility treatments. IVF is often more appealing not only because of the ability to take greater deductions as medical expenses, but also because of the ease of the process. By limiting the deduction for IVF treatments and reforming

See MINN. STAT. § 259.24 (2007) (giving the birth parents ten working days to withdraw consent); VA. CODE ANN. § 63.2-1223 (2007) (giving birth parents until the child reaches ten days old and up to seven days after the consent agreement was signed to withdraw consent).

²⁰⁴ ROMAN ESPEJO, ADOPTION: OPPOSING VIEWPOINTS 12 (2002).

²⁰⁵ U.S. DEP'T OF HEALTH & HUMAN SERVS., CHILDREN'S BUREAU, THE AFCARS REPORT (2011), available at <http://www.acf.hhs.gov/sites/default/files/cb/afcarsreport18.pdf>.

²⁰⁶ NAT'L COUNCIL ON ADOPTION, *supra* note 111, at 117.

²⁰⁷ *See id.* at 243–52.

²⁰⁸ *Id.* at 250–51.

²⁰⁹ I.R.C. §23 (2012).

²¹⁰ Appleton, *supra* note 3, at 426.

the adoption process to make it faster and less uncertain, the government can incentivize couples deliberating between adoption and IVF to choose adoption.

While IVF provides individuals with the ability to have genetically biological children, these procedures are both physically and psychologically tolling and largely unsuccessful, despite medical advances. Given the social benefits of adoption, the government should do what it can to level the playing field between adoption and IVF by promoting adoption and disincentivizing IVF.













