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**The Certification Paradox**

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# The Certification Paradox

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## Abstract

It is commonly observed that certification intermediaries mitigate informational asymmetries by “lending” reputational capital to support transacting parties’ quality commitments. However, this proposition is challenged by cases in which well-established intermediaries have failed to detect fraud, misrepresentation and other misbehavior. The “certification paradox” provides a more nuanced account that anticipates both the general success, and periodic failure, of certification intermediaries. Transacting parties minimize search and evaluation costs by using a small number of certification intermediaries with large stocks of reputational capital. Incumbent certifiers are substantially protected by entrants’ high costs of accumulating sufficient reputational capital and users’ high costs of switching to new certifiers. Incumbent certifiers have incentives to preserve reputational capital by generally maintaining investments in informational accuracy but, given the limited threats of competitive entry and user defection, to periodically save on costs by reducing certification effort. At least historically, certifiers have sought to commit against opportunistic reductions in informational accuracy by adopting non-profit, partnership and other “constrained” organizational forms that cap the gains from shirking on certification effort. This organizational prophylactic against certification failure may outperform direct regulatory interventions, which are liable to overestimate the demand for informational accuracy or erode the market rents that support certifiers’ incentives generally to maintain informational accuracy.

## The Certification Paradox

Jonathan M. Barnett<sup>1</sup>

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Private certification intermediaries reduce the costs of trade by assessing the quality of firms' products or processes and, in many cases, establishing a standard for making those quality assessments.<sup>2</sup> That cost reduction occurs whenever certification intermediaries mitigate information asymmetries that would otherwise distort trade or block trade entirely. The result is a clear efficiency gain: a repeat-play intermediary supplies its reputational capital and evaluation expertise to sellers who cannot make credible commitments to, or buyers who cannot make independent evaluations of, product quality at a comparable cost (Gilson and Kraakman 1984). In the capital markets, a "Big Four" accounting firm certifies the accuracy of a public firm's financial statements by reference to "generally accepted accounting principles" (GAAP). That service lowers the evaluation costs that potential purchasers of the firm's securities would otherwise have to incur, which in turn reduces the firm's cost of capital. In consumer goods markets, Underwriters Laboratories (UL) has developed over 1500 safety standards (UL Standards 2017) and provides a recognized "stamp of approval" to firms that meet those standards. This service reduces the costs that an uninformed consumer would otherwise have to incur in order to assess the quality of an unfamiliar product, which in turn expands markets and supports accurate pricing of competing goods and services.

This account both explains the ubiquity of certification intermediaries and has a normative implication: namely, if markets already widely use certification intermediaries to relieve information asymmetries, then government regulation for that same purpose may be redundant or counterproductive. This point is emphasized in law-and-economics scholarship that expresses skepticism concerning government intervention to address information deficiencies in the securities and financial services markets (Mahoney 2005: 110-11, 118-20; Easterbrook & Fischel 1996: 276-314; Goldberg 1988: 312).<sup>3</sup> However, this account does not satisfactorily explain apparent certification "failures"—that is, either fraud by a certifier or, more commonly, failure by a certifier to detect fraud, misrepresentation or other material deficiencies by a certified firm. These failures are not infrequent and sometimes result in injury or dramatic economic losses, raising doubts concerning the reliability of even well-established certification intermediaries. These concerns, which became especially salient in connection with the Enron scandal in 2002 (Coffee 2004, 2002; Macey 2004) and the financial crisis of

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<sup>1</sup> Professor, University of Southern California, Gould School of Law. I am grateful to Jorge Contreras for helpful comments. This chapter draws and elaborates on my earlier discussion of these topics in Barnett (2012).

<sup>2</sup> This chapter is confined to private certification intermediaries. For a brief discussion of certification by public tax-funded certification entities, see note 18.

<sup>3</sup> Some of these scholars ultimately support limited retention of some disclosure requirements and other forms of legal intervention in the financial services markets.

2007-08 (Macey 2010), raise important questions concerning the appropriate scope of legal intervention to address information asymmetries in markets that are already serviced by certification intermediaries. In connection with those concerns, some law-and-economics scholars have expressed doubts concerning the informational value of routinely used certification instruments in the financial services markets, including legal opinions (Barnett 2006), fairness opinions (Bebchuk & Kahan 1989), audit reports (Eisenberg and Macey 2004), credit ratings (Partnoy 2002) and stock exchange listings (Macey 2010).

In this chapter, I argue that certification intermediaries—both in the financial services sector and beyond—are prone to periodic failure but that such failure is inherent to reasonably well-functioning markets for certification services. The rationale behind this paradox is as follows. Mature certification markets are characterized by dominant providers occupying secure market shares. This is the cause of both the general success, and periodic failure, of well-developed certification markets. A small number of certifiers is necessary in order to maximize transacting parties' savings in evaluation costs as compared to independent quality assessment. High concentration levels are also necessary to generate the rents that induce certifiers to make efforts to safeguard reputational capital through robust evaluation and monitoring efforts. But dominant certifiers' market shares are protected by competitors' high entry costs and users' high switching costs, which induce certifiers to shirk through limited reductions in certification effort. Given users' switching costs, dominant certifiers can periodically reduce investment in information-gathering and verification activities without inducing user migration. Historically, certifiers have sought to commit against shirking and other forms of opportunism by adopting "constrained" organizational forms that limit a certifier's profit-taking opportunities, which reduces the gains from relaxing certification effort. This suggests that certifier performance may be indirectly enhanced through regulatory action that influences certifiers' organizational choices, rather than legal penalties, which are prone to induce both over- and undercertification, or lowering entry barriers, which reduces the rents that support incentives to maintain robust certification efforts.

Discussion proceeds as follows. In Part I, I present the conventional account of certification intermediaries and its implications concerning legal intervention to correct information asymmetries. In Part II, I present an alternative view that accounts for both the general success, and periodic failure, of certification intermediaries. In Part III, I analyze conventional regulatory options to improve certifier performance. In Part IV, I describe organizational mechanisms by which certification intermediaries commit against opportunism. I briefly conclude.

#### **I. Certification Intermediaries: The Conventional View**

It is widely recognized that certain markets exhibit information asymmetries that advantage better-informed transacting parties. Information asymmetries are most severe in markets for experience goods, whose quality can only be ascertained during consumption, and credence goods, whose quality

can never be fully ascertained.<sup>4</sup> To a lesser but still substantial extent, these asymmetries are present in markets for search goods, whose quality can be assessed prior to consumption but at a positive cost. As Akerlof (1970) showed in his famous “lemons” problem, information asymmetries inefficiently pool high-quality and low-quality sellers, which ultimately results in a market in which all but the lowest-quality sellers are compelled to exit.<sup>5</sup> As Akerlof also observed (and as Spence (1973) elaborated in the labor market context), this outcome can be avoided or mitigated so long as higher-quality sellers have incentives and capacities to alleviate information asymmetries by sending costly “signals” that lower-quality sellers cannot mimic.<sup>6</sup> Some of these signaling devices include contractual guarantees of quality provided by creditworthy sellers or reliable evaluations of product quality provided by external entities. Third-party certification lowers transaction costs whenever the certifier can provide buyers with a credible signal of product quality at a lower cost than any individual seller can do so independently. When that condition is satisfied, certification induces an efficient separating equilibrium at the lowest feasible cost, thereby maximizing the net social value generated by the underlying transaction.

The literature on certification entities distinguishes between first-party certification, in which a transacting party “self-certifies” the quality of its own products or services, and third-party certification, in which an independent entity undertakes that function on behalf of a transacting party (Tanner 2000: 415). In theory, there are several reasons to believe that third-party certification outperforms self-certification. First, a repeat-play third-party certifier has limited incentives to misrepresent quality to favor any individual firm or product. The third-party certifier seeks to maximize revenues from a pool of products sold by multiple firms, including existing and future clients over an indefinite time period. Knowing this, any potential buyer concludes that the profit-maximizing, repeat-play certifier would be unlikely to risk future expected revenues from its client portfolio in order to save evaluation costs on, or fabricate the evaluation for, a single client. Second, certification may exhibit scale economies insofar as the development of quality standards, and processes for testing conformity with those standards, requires fixed-cost investments that can be amortized across a pool of products sold by multiple firms. Relatedly, as product characteristics or other relevant factors change, a repeat-play certification intermediary can draw on its accumulated stock of intellectual capital and efficiently make adjustments to its testing technology. Third, in the case of a new seller, only an established third-party certifier holds a stock of reputational capital that can be “pledged” to counterparties in order to send a credible quality signal. A new or unfamiliar seller lacks any comparable stock of reputational capital, which means that buyers cannot determine whether the seller is a one-off or repeat-play transacting party and must apply

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<sup>4</sup> On information asymmetries, experience goods and credence goods, see Jahn, Schramm and Spiller (2005).

<sup>5</sup> More specifically, Akerlof (1970) showed that, in a market in which buyers cannot distinguish between high-quality and low-quality sellers (or, equivalently, sellers cannot make credible commitments to product quality), buyers are compelled to assess a discount against all sellers. Assuming that high-quality sellers incur higher production costs than low-quality sellers, the former rationally exit the market (or, equivalently, cease to make investments in quality), resulting in an inefficiently narrow market that consists entirely of products located at the lowest point on the product-quality distribution (hence, the analogy to “lemons” in the used-car market).

<sup>6</sup> Spence (1973) also identified circumstances in which parties overinvest in signaling, with adverse net welfare consequences. This qualification has some relevance in my subsequent discussion of legal interventions that may induce overcertification (see Part III.A.1).

a quality discount that discourages entry (or encourages exit) by higher-quality sellers. This inefficient pooling equilibrium—the “lemons” problem described by Akerlof (1970)—converts to an efficient separating equilibrium when new or unfamiliar sellers can “rent” the reputational collateral held by an established certifier who has known incentives to maximize total expected revenue from its accumulated goodwill.

This understanding of certification intermediaries, which has predominated in a body of law-and-economics scholarship pioneered by Gilson and Kraakman (1984: 613-21)<sup>7</sup>, implies that information asymmetries are not likely to be a regular source of market failure and therefore do not provide a strong basis for regulatory intervention. To the extent that information asymmetries exist, competitive forces induce certification intermediaries to supply transacting parties with efficient inspection and monitoring technologies to reduce the costs of trade. In the most stylized market setting, this self-correction mechanism is expected to result in a perfectly separating equilibrium in which prices accurately reflect product quality and fully informed transactions implement efficient resource allocation. Given technological constraints that limit the accuracy of a certifier’s testing technology, a more realistic setting anticipates that markets would converge on a partially separating equilibrium in which certifiers sometimes fail to detect quality deficiencies.<sup>8</sup> Absent willful misrepresentation by the seller, however, any such certification “failure” is not necessarily inefficient. Certifiers rationally identify, verify and supply product quality information subject to a marginal cost-benefit constraint, which is a function of both the certifier’s information-gathering costs and the value that transacting parties place on incremental information. This implies that some positive level of certification “failure” can be consistent with market efficiency. Absent collusion or other market distortions, any regulatory intervention to reduce information asymmetries would then be redundant and, with respect to undetected quality deficiencies, would demand investment in inefficiently high levels of certification accuracy.

This conventional understanding implies that certification failure should be a limited occurrence and confined to circumstances in which supplying additional certification effort would fail a marginal cost-benefit test. While cogent in theory, this optimistic account of certification markets does not clearly account for historical cases of at least ostensibly dramatic certification failures even in well-developed markets, each of which resulted in billions of dollars in losses for investors and other market participants. (Again, to be precise, even these apparently dramatic failures may not necessarily be inefficient given the cost-benefit considerations described above.) Headline examples abound in the history of the financial services industry, some of which are shown below.

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<sup>7</sup> In later work, Gilson and Kraakman (2003) recognize limitations to the view that reputational intermediaries typically successfully ameliorate information asymmetries.

<sup>8</sup> Choi (1998) identifies multiple circumstances where certifiers may fail to fully correct for information asymmetries due to limits on screening accuracy (as mentioned above), certifiers’ incentives to provide false information and other relevant factors. In more stylized settings, the theoretical economics literature has identified other circumstances in which certification induces a partially pooling equilibrium. For example, Albano and Lizzeri (1997) show that a monopolist certifier will extract rents from more efficient sellers, which then induces those firms to underinvest in quality, and Lizzeri (1999) shows that a monopolist certifier will strategically underinvest in certification effort, so that buyers only know whether sellers exceed a minimum quality threshold.

**Table I: Selected Certification “Failures”**

<u>Year</u>	<u>Certified Firm(s)</u>	<u>Certifier</u>	<u>Certifier Type</u>
1991	Bank of Credit and Commerce Intl.	PricewaterhouseCoopers	Auditor
1991	Bank of Credit and Commerce Intl.	Ernst & Young	Auditor
2002	Worldcom	Arthur Andersen	Auditor
2002	Enron	Arthur Andersen	Auditor
2002	Enron	Vinson & Elkins	Law firm
2007-08	Issuers of subprime mortgage-backed securities	Moody’s	Credit rating agency
2007-08	Issuers of subprime mortgage-backed securities	Standard & Poor’s	Credit rating agency
2009 <sup>9</sup>	Taylor Bean & Whitaker; Colonial Bank	PricewaterhouseCoopers	Auditor

In each of these cases, the apparent failure by a certification intermediary to detect fraud or other deficiencies at the certified firm resulted in substantial losses to investors and other market participants following the certified firm’s collapse, and, in the case of Arthur Andersen (which was initially found guilty on criminal obstruction of justice charges<sup>10</sup>), precipitated the collapse of the certifier itself. Additionally, doubts concerning the conventional account are raised by empirical studies that reach mixed results when assessing the added information value of widely-used certification instruments in the financial services markets (for a review, see Barnett 2006: 102-06). Outside the financial services industry, empirical studies have identified deficiencies at leading accreditation services in agricultural production (Albersmeier et al. 2009) and e-commerce privacy assurance services (Edelman 2010) and limited information value attributable to accreditation services in the childcare market (Xiao 2005). The press has reported similar concerns about allegedly lax practices at well-established accreditors in the hospital services (Armour 2017), legal education (Kelderman 2011), and general business (Segal 2011) sectors.

## II. Certification Intermediaries: An Alternative View

The periodic occurrence of apparent certification failure challenges the conventional account of certification intermediaries (although, given that the conventional account anticipates some positive level of certification failure even under the most feasibly efficient conditions, it does not necessarily dismiss that account). In fact, certification markets exhibit certain structural characteristics that may cause certifiers to persistently fall short in correcting informational asymmetries in the certified product market.

<sup>9</sup> This entry refers to two related lawsuits against PricewaterhouseCoopers in connection with the auditor’s alleged failure to detect fraud at Taylor Bean, a mortgage lender that went bankrupt in 2009, and Colonial Bank, which also went bankrupt in 2009, in one of the country’s largest bank failures. The suit concerning Taylor Bean was settled (Fitzgerald 2016); a second suit by the Federal Deposit Insurance Corporation, which had insured Colonial, resulted in a finding of liability against the auditor (Frankel 2018).

<sup>10</sup> The conviction was later overturned by the U.S. Supreme Court (*Arthur Andersen LLP v. U.S.*, 544 U.S. 696 (2005)). The decision was practically moot, however, since the firm had largely disbanded by that time.

The difficulty arises from the fact that Akerlof's lemons problem, and the underlying information asymmetries between transacting parties, applies not only at the level of the product market, but *again* at the level of the certification market. Just as buyers have doubts concerning the quality of any particular product, so too buyers have doubts concerning the quality of any particular certifier, which is akin to a credence good that cannot be easily evaluated even after consumption. In theory, this *n*-order information asymmetry requires an iterated stack of certification entities, each of which inspects and, using its accumulated reputational capital, vouches for the quality of the certifier located "below" it. Consistent with this intuition, certification markets often exhibit a stacked organizational structure, in which local and regional certifiers are certified by a national entity, which is then certified by an umbrella international entity. For example, the Forest Stewardship Council (US) ("FCS-US") accredits multiple entities to verify compliance by certified firms with FSC-US standards; FSC-US is in turn accredited by FSC (International); and FSC (International) operates subject to the standards set forth by the International Standardisation Organization and the International Social and Environment Accreditation and Labeling Alliance (Barnett 2012: 517-18). However, without some limit on this iterative process, certification intermediaries would ultimately not offer any appreciable cost advantage relative to direct inspection of quality by buyers, contractual guarantees of quality by sellers, or other signaling mechanisms.

Second-order information asymmetries at the level of the certification market are typically resolved by converging on a concentrated market populated by a handful of leading intermediaries and, in some cases, only one. The Table below depicts selected certification markets and the dominant providers in each market. As indicated by these entities' founding dates (in parentheses), they have serviced each relevant market for considerable periods of time and, presumably, have therefore accrued deep stocks of reputational capital. As discussed in detail below, this reputational asset is the source for the "certification paradox" that underlies the general success and periodic failure of mature certification markets. While established certifiers' stock of reputational capital generates rents that preserve incentives to generally maintain high levels of investment in information collection and verification, it implies entry costs for competitors and switching costs for users that periodically induce incumbents to reduce investment in those same activities.

**Table II: Selected Certification Markets<sup>11</sup>**

<u>Certification Market</u>	<u>Dominant Provider(s); Year(s) Founded</u>
Bond ratings	Moody's (1909), Standard & Poor's (1860), Fitch (1913)
Business credit reports	Dun & Bradstreet (1841)
Consumer credit reporting	Experian (1970), Equifax (1899), TransUnion (1841)
Financial audits (large public corporations)	Ernst & Young (1903), Deloitte (1880), PWC (1865), KPMG (1870)
Electrical appliances	Underwriters Laboratories (1894), Intertek (1885)
Gas appliances	AGA Laboratories (1918)
Ship vessels	DNV GL (1864) <sup>12</sup> , Lloyd's Register (1876), American Bureau of Shipping (1862), Nippon Kahi Kyokai ("ClassNK") (1899)
Agricultural seeds	Association of Official Seed Certifying Agencies (1919)
Higher education institutions	Council for Higher Education Accreditation (1996)
Law schools	American Bar Association (1900)
Hospitals	The Joint Commission (1951)

#### A. The Virtues of Certifier Oligopolies.

This oligopolistic or monopolistic market structure, combined with the long lives of dominant intermediaries, that characterizes most mature certification markets has several efficiency virtues.

1. *Incentives to Maintain Certification Efforts.* A secure expectation of market rents induces a certifier to rationally invest in the costly inspection efforts that preserve the value of its reputational capital, without which it cannot supply a credible quality signal. Following Klein and Leffler (1981) and Shapiro (1983), marginal-cost pricing cannot support investments in product quality since a firm must expect a future stream of market rents in order to rationally forfeit immediate gains from underperformance. The same logic applies at the level of the certification market: a perfectly competitive market would convert a certification intermediary into a short-term market player with little incentive to accumulate and preserve a stock of reputational capital through robust inspection efforts. Rather, the certifier would act as a one-shot player and rationally engage in various forms of short-term profit-taking, such as shirking, taking bribes for fabricated evaluations, or otherwise colluding with certified firms. Concentrated market structures generate rents that preserve the dominant certifier's incentives to maintain a strong track record of quality inspection and monitoring, which in turn maintains the value of the certifier's stock of reputational capital.

<sup>11</sup> Year indicated reflects the year of founding of the oldest progenitor entity active in approximately the same area of business activity. Leading firms in each certification market identified based on review of relevant trade and scholarly literature. For detailed sources on all entities except the American Bar Association, see Barnett (2012: App.). On the American Bar Association, see Katcher (2006: 364).

<sup>12</sup> This the year of the founding of Det Norske Veritas, which merged in 2013 with Germanischer Lloyd, to form DNV GL.

## 2. *Maximize Search-Cost Savings.*

The cost savings generated by a well-established certifier, which enables a buyer to avoid incurring search and investigation costs through direct evaluation of the relevant product or service, would be substantially eroded in a certification market populated by multiple providers. In that case, a buyer would partially replace search and investigation costs at the level of the product market with search and investigation costs at the level of the certification market. Consistent with this proposition, nascent certification markets exhibit concerns about excessive numbers of standards or certifiers and consumer confusion over certification accuracy (Barnett 2012: 491). Contreras, Lewis and Roth (2011) describe this state of affairs in the “sustainable building” industry, in which there are multiple, inconsistent and sometimes imprecise standards and accompanying certifications. As those reports illustrate, low levels of concentration detract from the cost-savings that consumers can enjoy by relying on a certifier’s recognized stamp of approval in lieu of independent quality evaluation.

## 3. *Economies of Scale.*

Certification markets exhibit economies of scale insofar as certifiers must invest fixed costs in establishing product quality standards and developing the technology for measuring conformity to those standards by any particular product. If the marginal costs of evaluating a particular product are substantially lower than the fixed costs to develop the standard and testing methodology, then the market naturally converges on a handful of certification entities or even a single certification entity. Relatedly, a repeat-play certifier that services a large pool of certified firms is likely to accumulate a deep stock of intellectual capital on which it can draw to readily adjust standards and testing methodologies in response to changes in market conditions, regulations and other relevant factors.

## **B. Entry Barriers in Certification Markets.**

The long life of most dominant certification entities suggests that those entities’ high market shares are protected to some extent by entry barriers. There are two barriers. On the supply side of the market, any potential entrant faces a considerable time lag in accumulating a comparable stock of reputational capital (often conveyed in the marketplace through the certifier’s trademark) that it can offer to transacting parties. That inherent time lag means that any potential entrant into a certification market must contemplate a sustained period of negative returns before it has acquired a sufficient stock of reputational capital that it can pledge to clients at an above-market premium. On the demand side of the market, buyers and sellers face switching costs when migrating to a new and unfamiliar certification provider. For buyers and sellers, switching to a new certifier imposes costs insofar as neither party has substantial information concerning the quality of the new provider as compared to the incumbent. For a seller, switching to a new certifier imposes learning costs to adapt its data-collection and reporting infrastructure to the new provider. For a buyer, switching to a new certifier implies learning costs in understanding how to interpret the information delivered by the new provider. In some markets (especially, the financial services markets), buyers incur inflated switching costs (and new certifiers incur inflated entry costs) due to regulations that mandate use of designated incumbent certifiers in order to

show compliance with certain legal requirements.<sup>13</sup> The combination of high entry costs and high switching costs may explain why even major certification failures, such as the Enron accounting scandal in 2002 and concerns over performance of the credit ratings agencies in the event preceding the financial crisis of 2007-08, have not induced substantial entry into those certification markets (public-firm auditing and credit ratings, respectively).<sup>14</sup> Similarly, those factors may explain why, with the exception of Arthur Andersen (which was targeted by a criminal prosecution<sup>15</sup>), none of the certification intermediaries associated with recent headline scandals in the financial services industry (see Table I) appear to have suffered any long-lasting loss in market share.

### C. Rational Certifier Shirking

The time-lag obstacle to successful entry by a new certifier, combined with the switching costs borne by users when moving to a new certifier, have countervailing effects on dominant certifiers' incentives to invest in certification effort. Assume that a certifier can elect to invest greater or lesser resources in information collection and verification, which results in more or less accurate evaluations of product quality. Following the standard account, large market shares combined with entry protections generate a large expected stream of rents, which encourages certifiers to preserve reputational capital and forego short-term cost savings by opportunistically cutting back on certification effort. However, this line of argument implicitly assumes that, whenever a certifier is perceived to have reduced its certification efforts, buyers and sellers will punish the certifier by immediately switching to a competitor (or reverting to self-certification). But this is not clearly users' dominant response to certifier failure if users bear high switching costs in moving to another certifier. If switching costs are sufficiently large, a one-time observed failure by an incumbent certifier will not induce customer departures. Rather, users will rationally tolerate certifier shirking so long as the costs incurred as a result do not exceed the costs expected to be incurred by moving to a new provider.<sup>16</sup>

This observation has a key implication. Contrary to the standard account, an incumbent certifier may rationally maximize profits (equal to (i) the sum of short-term gains and the discounted present value of all long-term gains, *less* (ii) certification costs) by relaxing its certification efforts to a certain

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<sup>13</sup> The best known example is the "nationally recognized securities rating organization" designation for incumbent credit rating agencies in connection with certain securities law requirements. Similar practices are followed by the U.S. Department of Education, the U.S. Department of Health and Human Services, the U.S. Occupational Safety and Health Administration, and the U.S. Department of Agriculture. For additional details, see Barnett (2012: 488 n.44).

<sup>14</sup> Fitch has acquired significant additional market share in the credit-ratings market since the mid-2000s (Becker and Milbourn 2010: 2-3, Fig. 2). However, this predates the 2007-08 financial crisis, in connection with which the two leading credit rating agencies' performance was widely viewed as having been deficient. At least as of 2016, S&P, Moody's, and, to a lesser extent, Fitch continue to dominate the ratings market (Ramakrishnan and Scipio 2016).

<sup>15</sup> See note 10.

<sup>16</sup> I am aware of two related contributions on this point. Biglaiser and Friedman (1994) posit that an intermediary's incentives to terminate its relationship with a producer is sensitive to the cost of locating a substitute for the producer's good. More generally, Horner (2002) observes that, in the case of a producer with a reputation for high quality, whether delivery of a low-quality product induces customers to terminate depends on customers' patience.

extent on particular occasions. User tolerance of certifier shirking will be enhanced further to the extent that a single case of certification failure is observationally ambiguous and can be reasonably attributed to inadvertent error, in which case the certifier will suffer little loss of goodwill or can rapidly restore goodwill through a follow-on period of strong performance. Certifier shirking may be especially difficult to detect in environments where, as Contreras, Lewis and Roth (2011) emphasize, market participants cannot easily assess the accuracy of a particular standard or a certifier's methodology in evaluating compliance with a given standard. Paradoxically, as the costs of ascertaining quality in the first-order product market increase, demand for reliable third-party certification services increases; at the same time, this implies that any quality-assessment methodology is not likely to be amenable to evaluation for accuracy in the second-order certification market.

This revised understanding of certification entities yields an account that more closely matches observed performance in real-world markets. Largely consistent with the conventional account, this revised understanding anticipates that well-established certification intermediaries will *generally* invest substantially in quality inspection efforts, thereby delivering a steady flow of information that mitigates information asymmetries and reduces the costs of trade. To do otherwise would place at risk the certifier's valuable stock of reputational capital and the associated stream of future rents. However, the revised understanding observes that an established certifier's typically strong track record relies on a market structure that induces it to periodically make limited reductions in certification effort. So long as switching costs and entry costs are sufficiently high, and especially if certification failures give rise to ambiguous interpretations, dominant certifiers will necessarily engage in limited and periodic reductions in certification effort.<sup>17</sup> Given these countervailing tendencies, the revised understanding anticipates that even well-established certification markets will periodically result in failures to detect product deficiencies, reflecting a dominant certifier's election to make limited reductions in certification effort.

### III. Regulatory Intervention in Certification Markets

The revised understanding of certification markets conforms more closely to market outcomes in which certification failure arises periodically and, as evidenced most clearly by the 2007-08 financial crisis, sometimes with dramatic effect. This naturally invites re-consideration of the normative implications of the conventional account, which casts doubt on the necessity for legal intervention to correct information asymmetries given that certification intermediaries pursue the same objective. Below I consider two forms of governmental intervention (excluding direct provision of certification services by the government<sup>18</sup>) that can potentially enhance certifier performance. In both cases, I assess

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<sup>17</sup> It may be objected that far-sighted users would anticipate this behavior and demand an appropriate discount on certification fees to reflect this risk. Subsequently I show that certifiers seek to reduce this discount by adopting organizational forms that limit their incentives to engage in future opportunism (see Part III.B).

<sup>18</sup> Under the public option (for example, the Food & Drug Administration), the state would enjoy a *de jure* or *de facto* monopoly over certification services for the relevant market. As a result, it would not be subject to competitive discipline, which would exacerbate the risk of both over- and under-certification, as discussed in this Part with respect to private certification entities.

the “error costs” associated with each mechanism, specifically taking into account the informational constraints faced by regulators in assessing the socially efficient level of certifier effort.

#### A. Increased Certifier Liability

The state can institute a regulatory framework that identifies and penalizes certifiers who fail to identify fraud or other deficiencies at a certified firm. Legal penalties can be understood to encompass all monetary or other penalties to which certifying entities could be subject as a result of litigation or enforcement actions brought by government agencies or private plaintiffs under applicable statutes, regulations or common-law tort causes of action. Legal penalties complement existing reputational penalties that are administered in the market through customer defections (or adjustments to fees or other terms that are required to retain customers) in response to perceived certification failures. Certifier obligations and accompanying liability exposure have been regularly expanded in the wake of major scandals in the U.S. financial markets. The 1929 stock market crash led to passage of the Securities Act of 1933<sup>19</sup>, which imposed liability on underwriters and other advisors in connection with public offerings of securities; the Enron collapse led to passage of the Sarbanes-Oxley Act of 2002<sup>20</sup>, which empowered the SEC to further regulate auditors of public companies; and the financial crisis of 2007-08 led to passage of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010<sup>21</sup>, which expanded credit rating agencies’ exposure to legal liability under certain circumstances.

These politically popular policy actions, which impose monetary and other penalties on top of the reputational penalties to which certifiers are already subject as a result of market discipline, inherently carry the risk that regulators or courts will impose a total level of liability exposure that induces certifiers to invest excessively, from a social welfare perspective, in information gathering and verification. As noted previously, some positive level of certification “failure” is efficient so long as certification is a positive-cost activity subject to technological constraints, which implies that some incremental level of certification effort will no longer yield net positive marginal welfare gains. In response to legal obligations and penalties that demand increased investment in information gathering and verification efforts, certifiers will seek to pass on the increased costs to users. This raises the possibility of two inefficient outcomes. If some users do not sufficiently value the additional information being delivered by the certifier (which suggests that the legal requirement is inducing overcertification), then consumption of the certifier’s services will decline. If not enough users sufficiently value the “improved” but more costly certifier service, then the certifier will be forced to exit since it is legally foreclosed from offering any less costly certification service. In both cases, increasing certifier liability results in *less* information being provided to the market.

The possibility that increased certifier liability can lead to certifier exit, whether partial or complete, is far from theoretical. A few examples can illustrate. In 1972, the SEC targeted certain prominent law firms that had allegedly issued opinion letters in connection with a “sham” transaction. Subsequently, corporate law firms apparently shifted toward issuing opinion letters that were heavily qualified

<sup>19</sup> 48 Stat. 74 (1933), codified at 15 U.S.C. §§77a et seq.

<sup>20</sup> 116 Stat. 745 (2002), codified in Sections 11, 15, 18, 28 and 29 U.S.C.

<sup>21</sup> 124 Stat. 1376, 1871 (2010), codified at 15 U.S.C. § 78o.

and conveyed little incremental information (Barnett 2012: 498-99)—effectively, a form of partial market exit. In 2002, the Sarbanes-Oxley Act required that accounting firms register with the Public Company Accounting Oversight Board in order to audit public companies and increased such firms' liability exposure to claims relating to alleged accounting misstatements. In response, smaller auditing firms elected to exit the public accounting market (Reynolds 2005: 30). In 2010, Congress enacted the Dodd-Frank Act, which eliminated the exemption under the securities laws that had previously shielded rating agencies from liability as an "expert" in connection with a securities offering by a public company. Thereafter, the SEC attenuated or effectively suspended regulations that required the inclusion of credit ratings in public offering documents (and would have exposed the rating agencies to liability under the securities laws), in response to indications by the rating agencies that they would exit certain market segments (Barnett 2012: 499-500; Securities and Exchange Commission 2010).

#### **B. Reduced Entry Barriers**

The state can intervene to lower entry barriers into certification markets and thereby impose increased competitive discipline on incumbent certifiers that are otherwise protected by entry time-lag and user switching costs. This approach was undertaken by the Occupational Safety & Health Administration in 1988, when it sought to accredit multiple nationally recognized testing laboratories in order to facilitate entry into markets dominated by the incumbent certifier, Underwriters Laboratories (Barron 2007: 422-23). A similar approach was implemented in the Credit Rating Agency Reform Act of 2006 and the Dodd-Frank Act of 2010, which sought to reduce the exclusive use of Moody's and Standard & Poor's ratings for a wide range of regulatory purposes in securities and financial services regulations. This approach, which commentators have widely advocated in the credit ratings market (Macey 2010: 434-35; Hill 2004: 45), suffers from an important weakness that could lead to counterproductive outcomes. As argued above, a dominant certifier's incentives to invest efforts in inspection and monitoring activities rely on the certifier's expectation that doing so will preserve its stock of reputational capital and the stream of market rents that it enjoys as a result. If that is the case, then endangering a dominant certifier's market position could reduce its incentives to undertake those efforts by limiting the rents that it can expect to accrue as a result. Contrary to standard intuitions, relieving market concentration may increase entry but reduce the total volume of certification effort, potentially resulting in a net social loss due to reduced information flow, increased information asymmetries, and increased costs of trade. Consistent with these arguments, researchers have found that decreasing concentration in certain segments of the credit ratings markets correlates with declines in ratings' predictive accuracy, as measured by the correlation between the ratings supplied by incumbent rating agencies and the market-implied yields of the rated securities (Becker and Milbourn 2010). Similarly inverse relationships between increased entry and decreased certification rigor have been demonstrated in the market for auto emissions testing services (Bennett et al. 2013).

#### **IV. Organization as Commitment: Self-Imposed Limitations on Certifier Shirking**

Both types of traditional regulatory responses to certification failure—legal penalties and reduced entry barriers—are unattractive options that carry high risks of regulatory error and counterproductive market outcomes. Absent other regulatory options, it may then follow that the normative implications

of the conventional account in the law-and-economics literature are correct, even if it is imprecise as a positive matter. That is: shirking by dominant certifiers, and periodic certification “failures”, are inherent to the most feasibly efficient market mechanism for inducing third-party certification. In fact, this “do nothing” position is largely consistent with the common law’s treatment of certification intermediaries, which has generally declined to impose liability through tort law and has resisted overriding contractual disclaimers of certifier liability. In 1995, the English House of Lords rejected a claim against a “classification society” (a certifier of a ship’s seaworthiness), stating: “In England no classification society, engaged by owners to perform a survey, has ever been held liable to cargo-owners on the ground of a careless conduct of any survey” (*Marc Rich & Co. AG v. Bishop Rock Marine Co.* (The Nicholas H) [1995] 3 All E.R. 307). The Court justified its ruling by specific reference to concerns over potential overdeterrence and certifier exit, stating that, if a “duty of care” were imposed on the certifier, “there is a risk that classification societies might be unwilling from time to time to survey the very vessels which more urgently require independent examination” (*see id.*). Consistent with this “do nothing” approach, U.S. courts have similarly generally declined to impose liability on certification entities (Goldberg 2002: 245-76), standards development organizations (Verbruggen 2019)<sup>22</sup>, accreditation entities (Schuck 1994: 187) and, with respect to credit rating agencies in particular, have mostly shielded them under the protective umbrella of the First Amendment (see, e.g., *Compuware Corp. v. Moody’s Investors Services*, 499 F.3d 520, 526 (6<sup>th</sup> Cir. 2007)).<sup>23</sup>

Notwithstanding the absence of any significant exposure to legal liability as a general matter, it would be incomplete to conclude that certification markets rely entirely on reputational effects in order to discipline certifier opportunism. A somewhat surprising legal tool appears to mitigate shirking behavior in certification markets. Specifically, certification markets regularly use organizational forms to limit dominant certifiers’ opportunities and incentives to shirk. Certifiers typically operate (or, in some markets, have historically operated) under “constrained” organizational forms, such as non-profits and general partnerships, that limit managers’ ability to extract gains earned through shirking and other forms of opportunism, as compared to “unconstrained” entities such as the traditional stock corporation. This organizational preference is consistent with rational self-interest: certifiers that can most credibly commit against shirking minimize the discount assessed by buyers and sellers on their “stamp of approval” and, in the case of new certifiers, are more likely to induce transacting parties to make the learning and other investments required to use the certifier’s services. Put differently: organizational form provides a mechanism by which to induce at least a partially separating equilibrium in the second-order certification market, which can then induce separation effects among transacting parties in the associated first-order products and services markets.

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<sup>22</sup> In this volume, Verbruggen (2019) describes decisions by U.S. courts that have imposed liability on standard development organizations in connection with consumer injury. However, he notes that the most aggressive decisions (under theories of strict product liability) are no longer “good law” and ultimately concludes that these organizations’ liability risk under U.S. law is “relatively low”.

<sup>23</sup> Rating agencies’ liability exposure is probably greater since the 2007-08 financial crisis. In 2015, Standard & Poor’s agreed to pay approximately \$1.5 billion in fines in connection with lawsuits brought by various states in connection with the 2007-08 financial crisis (Martin and Grossman 2015).

## 1. Nonprofit Entities

Nonprofit forms have historically been used by leading private certification entities in various markets, including (among others) electrical appliances, gas appliances, water treatment, shipping, seed certification, lumber, automotive parts, higher education, hospitals and healthcare facilities, “sustainable” wood and paper products, kosher food, and “green” construction (Barnett 2012: App.).<sup>24</sup> Nonprofit entities typically operate under two key constraints: (i) the inability to make cash distributions to managers, members or any other controlling entity, and (ii) a reasonableness standard that places some limit on the size of managerial compensation (Barnett 2012). Additionally, a nonprofit entity cannot raise equity capital, which therefore limits the cash resources available to its managers. These limitations make it difficult for a non-profit certifier’s managers (as compared to the managers of a for-profit corporation) to extract profits earned through cutbacks on certification effort or other forms of opportunism. As Hansmann (1996: 229-30, 1980: 841-45) observed, these self-imposed constraints limit the gains from opportunistic behavior and can therefore operate as commitment devices against such conduct in circumstances above and beyond contractual or reputational devices. Consistent with these arguments, multiple studies have found that banking entities organized as mutuals<sup>25</sup>, as compared to entities organized as stock corporations, experienced lower failure rates during the 1980s’ savings and loan crisis (Hansmann 1996: 256-58; O’Hara 1981: 327-28).

## 2. General Partnerships (Financial Services Markets)

In the financial services market, certifiers have mostly tended toward the general partnership, a less aggressively, but still moderately, constrained organizational form as compared to the stock corporation. (The exceptions to this tendency are the stock exchanges, which historically used other constrained forms, the mutual and nonprofit entities, and the credit rating agencies, which used, and continue to use, the unconstrained corporate form.) Until the early 1990s, national accounting firms, corporate law firms and investment banks typically operated as general partnerships. While a general partnership can distribute cash to its members (unlike a nonprofit), it still operates under substantial impediments that do not exist in the stock corporation (or in more recent types of partnership entities that have certain “corporate” characteristics): (i) partners are exposed to unlimited personal liability on a joint and several basis, and (ii) partnership interests are illiquid since they are generally not transferable without the other partners’ consent. Like a nonprofit, these constraints limit a partnership’s ability to raise capital from outside investors and preclude partners from easily liquidating their ownership interests. These widely-noted “deficiencies” in the traditional partnership may operate to the partners’ long-term economic interests by sending a credible signal of certifier trustworthiness. Partners’ liability exposure and “lock-in” support incentives to deliver high performance and forego opportunistic action—as well as to monitor other partners’ conduct—that could place partnership

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<sup>24</sup> Consistent with this historical pattern, leading entities in these markets mostly continue to use nonprofit organizational forms. One important exception is Underwriters Laboratories, the dominant certifier for electrical appliances and other consumer products, which converted in 2012 to the corporate form.

<sup>25</sup> While a mutual can distribute cash to its members (unlike a nonprofit), it cannot raise equity capital and members cannot freely transfer their interests. Additionally, a mutual typically commits to deliver its services at cost. None of these constraints typically exist in a public corporation.

capital at risk. Given these observable limits on the risk of opportunism, the market reduces the discount that would otherwise be assessed on the certifier's services and transacting parties are more readily induced to make costly investments in entering into relationships with the certifier.<sup>26</sup>

Remarkably, in the years leading up to the 2007-08 financial crisis (which, as noted, might be deemed a certification "failure"), virtually every key type of "Wall Street" certification intermediary abandoned these constrained forms of organization (Barnett 2012: 510; Macey 2010: 24; Ribstein 2010: 207), as shown in the Table below.

**Table III: Organizational Choices of Certification Entities in Financial Services Markets<sup>27</sup>**

<u>Entity Type</u>	<u>Dominant Organizational Form (Historical)</u>	<u>Dominant Organizational Form (Current)</u>	<u>Approximate Time of Change in Organizational Form</u>
Credit reporting agencies	Corporation	Corporation	n/a
Accounting firms	General partnership	Limited liability partnership	1990s
Leading investment banks	General partnership	Corporation	1990s
Stock exchanges	Mutual; nonprofit	Corporation	2000s
Law firms	General partnership	Limited liability partnership	2000s

Law firms and accounting firms largely abandoned the general partnership form, which had exposed partners to unlimited personal liability, for limited liability partnerships, which removed such liability. Investment banks (which act as certification intermediaries in IPOs and other financing transactions) mostly abandoned the partnership form for the corporation, which substantially expanded their ability to raise capital from outside investors. While I am not aware of evidence demonstrating a causal connection between this shift in organizational form and the subsequent surge in certification failure, the close sequencing of these two events at least preliminarily suggests considering regulatory interventions that influence certifiers' choice of organizational form, which may then provide dominant certifiers with fewer opportunities to extract rents from users through shirking.<sup>28</sup> This approach has some precedents. In the United Kingdom, trademark authorities had historically limited registrations of

<sup>26</sup> This is not to say that certifiers' interest in credibly committing against future opportunism entirely or even primarily motivated these entities' selection of "constrained" organizational forms such as the general partnership. A richer analysis would identify tax-related and other considerations that may have historically driven certifier entities toward these organizational forms.

<sup>27</sup> All supporting sources listed in Barnett (2012): Tbl. II.

<sup>28</sup> It could be objected that this override of market choice lacks justification so long as the market will assess a discount against certifiers that adopt organizational forms that provide greater shirking opportunities. Market signals would then elicit an efficient mix of organizational choices. Even excluding any limitations on market capacities to accurately price organizational choices, these regulatory interventions to reduce certifier shirking may still be justified on two efficiency grounds: (i) a certifier may underinvest in certification quality given that it is at least a partially excludable good; and (ii) a certifier may mistakenly "overshirk" and excessively deplete its goodwill stock, thereby imposing unexpected (and therefore unpriced) losses on both users and itself.

a certification mark (a trademark that certifies the quality of a third party's product or service) to non-profit entities (Belson 2002: 33). In the United States, banking regulations had once mandated or favored the use of nonprofit or mutual forms (Barnett 2012: 519; Hansmann 1996: 257-58). These interventions are not free from a substantial risk of regulatory error: for example, the banking regime's constraints on organizational forms limited intermediaries' access to outside capital, potentially resulting in limited investment in scale and innovation.<sup>29</sup> As a more modest variant of this approach, it may be possible to improve certifier performance, while still preserving market choice over organizational forms, by supplying certifiers with the broadest feasible set of legally recognized organizational forms, which certifiers can then customize to commit against future opportunism in response to competitive pressures. In the more general context of business organizations law, Delaware and other states have adopted this menu-expanding approach and substantially increased the organizational options from which businesses can select in the entity formation process.<sup>30</sup>

### Conclusion

Private certification intermediaries play a critical role in alleviating information asymmetries in various markets. Conventional accounts of certification intermediaries make the valuable observation that competitive forces drive intermediaries to make substantial investments in certification effort, resulting in a regular flow of information that efficiently reduces the costs of trade. Nonetheless these accounts cannot readily explain periodic and occasionally dramatic cases in which established certifiers have apparently neglected to identify fraud and other deficiencies at certified firms. The "certification paradox" explains why certification markets mostly succeed but periodically fail. The future expected stream of market rents both induces robust certification effort but, given switching costs and entry costs, induces certifiers to expend reputational capital through limited cutbacks on certification effort. It may be difficult to improve upon this state of affairs simply by expanding certifiers' exposure to fines and other legal penalties in the event of a perceived failure to detect malfeasance by certified firms. While politically popular, these conventional forms of regulatory intervention to deter certifier shirking carry a high risk of error by inducing both over- and underinvestment (including market exit) by certification intermediaries. Certifiers' choice of organizational form may offer a more attractive mechanism for mitigating shirking and enhancing the information-collection and verification functions played by certification markets. While further empirical inquiry is merited, both theory and evidence suggest that the constrained organizational forms that are (or once were) common in certification markets may limit dominant certifiers' capacities and incentives to reduce investments in certification effort. Legal interventions that target certifiers' choice of organizational form, rather than certifiers'

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<sup>29</sup> For this reason, some commentators have opposed arguments in favor of reinstating regulations that mandate non-corporate forms of organization in the banking sector. For discussion, see Barnett (2012: 519-21).

<sup>30</sup> Whereas businesses were once confined to the choice between the corporation and the general partnership, U.S. states now typically offer several intermediate options, such as the limited liability corporation, the limited partnership, the limited liability partnership, and various combinations of those forms. Consistent with historical tendencies, Delaware has been among the states that have granted business organizers the greatest latitude in selecting among, and customizing, these options. For the leading account, see Ribstein (2010).

level of diligence, may offer an indirect mechanism for improving certifier performance at a reduced risk of regulatory error.

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