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**Incomplete Law - A Conceptual and Analytical Framework
- And its Application to the Evolution of
Financial Market Regulation -**

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This Draft: April 2002

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Incomplete Law - A Conceptual and Analytical Framework¹

- And its Application to the Evolution of Financial Market Regulation -

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Abstract

This paper develops a conceptual framework for the analysis of legal institutions. It argues that law is inherently incomplete and that the incompleteness of law has a profound impact on the design of lawmaking and law enforcement institutions. When law is incomplete, residual lawmaking powers must be allocated; and enforcement agents have to be vested with law enforcement powers. The optimal allocation of lawmaking and law enforcement powers under incomplete law is analyzed with a focus on the legislature, regulators and courts as possible lawmakers, and courts as well as regulators as possible law enforcers. The timing and process of lawmaking and law enforcement differs across these agents. Legislatures are ex ante, courts are ex post lawmakers, regulators have combine ex ante and ex post lawmaking functions. Courts are reactive law enforcers, while regulators are proactive law enforcers in that – unlike courts - they can initiate enforcement procedures. We argue that the optimal allocation of residual lawmaking and law enforcement powers is determined by the degree and nature of incompleteness of law, the ability to standardize actions that may result in harm, and the magnitude of harm and externalities expected from such actions. Under highly incomplete law, regulators are superior to courts when actions can be standardized and, if allowed to proceed, may create substantial externalities. Otherwise courts are optimal holders of lawmaking and law enforcement powers. We apply this analytical framework to the development of financial market regulation in England since the mid 19th century, with comparative reference to developments in the United States and Germany. The comparative evidence suggests that financial market regulators with both residual lawmaking and proactive law enforcement powers emerged in all three jurisdictions in response to ineffective judicial law enforcement of highly incomplete law.

JLE Classification: G3, K2, K4, N2

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I. Introduction

This paper develops the theory of the incompleteness of law and explains the implications of incomplete law for the allocation of lawmaking and law enforcement powers.² In doing so, it establishes a framework for analyzing the emergence and functioning of a variety of legal institutions both within and across countries. The paper starts with the simple observation that in today's complex legal systems a number of different agents exercise lawmaking and law enforcement powers. Frequently one and the same agent exercises lawmaking and law enforcement powers, the commitment to the division of powers among legislature, executive, and judiciary notwithstanding. As we will show below, the theory of the incompleteness of law helps explain why lawmaking and law enforcement has proliferated beyond legislatures and courts, and in particular, why regulators play such an important role as lawmakers and law enforcers in most economies today. At the same time the theory also explains why in certain areas regulators are absent. In short, we develop a theory of the optimal allocation of lawmaking and law enforcement powers given that law is inherently incomplete.

The incompleteness of law theory is inspired by the incompleteness of contract theory, which was spearheaded by Oliver Hart and others in the economics literature.³ A reception of this theory into legal analysis is only beginning, but as suggested by others,⁴ bears a lot of promise. The

² The term "incomplete law" has frequently been mentioned in the literature without, however, developing this into a broader framework to explain the processes and institutions of lawmaking and law enforcement. Closest to our use of the word "incomplete law" is probably William M. Landes & Richard A. Posner, *The Independent Judiciary in an Interest-Group Perspective*, 18 *J.L. & Econ.* 875 (1975). In this paper, which addresses the puzzle of judicial independence, the authors note that "...the limits of human foresight, the ambiguities of language, and the high cost of legislative deliberation combine to assure that most legislation will be enacted in a seriously *incomplete* form, with many areas of uncertainty left to be resolved by the courts." (at p. 879; emphasis added). The theory presented in this paper goes a step further and suggests that not only courts, but other agents, such as regulators, may be charged with lawmaking and law enforcement, and attempts to identify the optimal allocation of lawmaking and law enforcement rights.

³ See Part I, section 3 below for references.

⁴ See Karen Eggleston, Eric A. Posner et al., *Simplicity and Complexity in Contracts*, John M. Olin Law & Economics Working Paper (2000) for an excellent introduction to this newly developing field. The terminology of "incomplete contracts" has been used in the legal literature for quite a while. See only Ian Ayres & Robert Gertner, *Filling Gaps in Incomplete Contracts: An Economic Theory of Default Rules*,

starting point of our theory is that not only contracts, but that law is inherently incomplete – indeed that the incompleteness problem is more profound for law and implicates strategies for dealing with the problem of incomplete contracts. We regard a law as complete, if all potential harmful actions can be unambiguously specified in the law. Otherwise, a law is incomplete – either because of gaps (the law fails to address certain actions) in the law or because of the open-ended nature of legal provisions (the boundaries of the law are not clearly circumscribed). Some areas of the law may be more incomplete than others. Environmental factors influence the relative incompleteness of law. Areas that are affected by the pace of socioeconomic and/or technological change, for example, tend to be more incomplete than areas unaffected by exogenous change. The reason is that change constantly challenges legal solutions designed to solve “old” problems and thus requires frequent adaptations of the law, if it is to remain effective.

Law may also be incomplete by design. Lawmakers may decide to design laws more or less incomplete and will often do so in view of existing law enforcement institutions and their effectiveness. Knowing that courts will step in and fill the gaps left by laws may lead lawmakers to draft broad open-ended provisions rather than detailed ones. Conversely, if lawmaking powers are withheld from courts, or if courts are perceived to be incapable of exercising these powers in a meaningful fashion, lawmakers may want to write down their intentions in a more precise manner. Yet, as we will further explain below, highly specific laws are also incomplete, because they are bound to leave out issues that may be relevant for deciding future cases.

When law is incomplete it cannot be applied to cases without clarifying the meaning of the law. We call the power to interpret existing law, to adapt it to changing circumstances and to extend its application to new cases ‘residual lawmaking power’.⁵ Residual lawmaking powers

Yale L.J. 87 (1989). They treat incompleteness of problems primarily as a design issue. Contracts are incomplete because it is too costly to write complete contracts, or they have strategic reasons to believe that they might benefit from relatively incomplete contracts. This argument implies that in theory it is possible to write fully complete contracts.

⁵ As we will further discuss in Section 3 below, these terms are borrowed from the incompleteness of contracts literature, which has inspired our theory of the incompleteness of law.

may be reserved by the legislature. They may also be vested with courts, or with regulators. The paper explores the conditions under which the allocating residual lawmaking powers to legislatures, courts, or regulators will be optimal.

Allocating lawmaking powers alone is, however, not sufficient. In addition, law enforcement powers need to be allocated. Even the best-designed law is useless unless it is complied with either voluntarily, or coercively. A substantial literature has developed that explores the conditions for effective law enforcement. At the core of this literature is the deterrence function of punishment as stipulated by Becker⁶ and further developed by Stigler.⁷ A recent survey of this literature is given by Polinsky and Shavell.⁸ This literature explores the optimal design of laws and punishment to achieve effective deterrence, but does not address the problem of incompleteness of the law. In fact, this literature assume implicitly that law is complete, i.e. that it possible to design law in such a way that it will achieve optimal deterrence. Consistent with this assumption, enforcement by courts is at the center of the analysis.

If, however, law is incomplete as we argue in this paper, it is evident that the challenge for law enforcement is more complex than the design of law and of optimal punishment. It requires the design of appropriate institutional mechanisms to address the problem of ineffective enforcement under incomplete law. Under some further conditions (such as the level of expected harm), courts alone may not be sufficient to ensure optimal law enforcement. The reason lies in the nature of law enforcement by courts. Courts are designed to be reactive law enforcers. They become active only, once another party – be it state or private - has initiated legal proceedings. The reason why courts do not initiate proceedings themselves is that this would undermine their neutrality and impartiality. At least in countries that are committed to the rule of law, these are

⁶ Gary S. Becker, *Crime and Punishment: An Economic Approach*, 76 *J. Pol. Econ.* 169 (1968)

⁷ George J. Stigler, *The Optimal Enforcement of Laws*, 78 *J. Pol. Econ.* 56 (1970)

⁸ Mitchell Polinsky & Steven Shavell, *The Economic Theory of Public Enforcement of Law*, 38 *Journal of Economic Literature* 45 (2000).

core values that have shaped the design and the success of courts as dispute resolvers.⁹ By contrast, regulators enforce law proactively. They monitor behavior, launch investigations, and enjoin or sanction actions on their own initiative. We suggest that proactive law enforcement by regulators has emerged largely in response to the problem of incompleteness of the law in areas, where substantial negative externalities rendered reactive law enforcement ineffective.

For the purpose of this paper we assume that legislatures, courts, and regulators all seek to optimize social welfare. We ignore incentive problems, problems of regulatory capture, or corruption, which may affect these three agents of lawmaking and law enforcement in different ways. We recognize that these issues are of great importance, but suggest that they are of secondary importance to the problem of incompleteness of the law. Solving the problem of regulatory capture by, for example, abolishing regulators will not address the problem of under-enforcement of the law that – as we argue - gave rise to the establishment of regulators in the first place. Conversely, arguing that regulators can be more effective law enforcers than courts when law enforcement requires costly efforts in collecting evidence,¹⁰ does not explain why we do not see regulators in all areas of the law where the collection of information is costly.

The paper is organized as follows. In Part II we develop the theory of the incompleteness of Law. Section 1 explains the key ingredients of the theory and discusses the optimal allocation of residual lawmaking powers. Section 2 analyzes law enforcement under incomplete law and

⁹ As Milgrom, North and Weingast show, the emergence of neutral dispute resolvers has played a crucial role in the economic development of Europe since the late Middle Ages Paul R. Milgrom, Douglas C. North et al., *The Role of Institutions in the Revival of Trade: The Law Merchant, Private Judges, and the Champagne Fairs*, 2 *Econ. & Pol.* 1 (1990). Using a game theoretical model they show the positive impact of courts when they act as neutral arbiters. Relaxing this assumption and assuming that courts may take bribes, which violates their impartiality, as negative implications for solving the information problem that traders face when they transact with parties with whom they do not maintain a long term relation. Comparative analysis suggests that actual or perceived lack of impartiality of judges undermines the effectiveness of law enforcement. See, for example, Katharina Pistor, *Supply and Demand for Contract Enforcement in Russia: Courts, Arbitration, and Private Enforcement*, 22 *Rev. Cent. E. Eur. L.* 55 (1996) for Russia. ADD FROM VALUE OF LAW. See also Edward L. Glaeser & Andrei Shleifer, *Legal Origins*, *Q. J. Econ.* (2001) CHECK on differences in the evolution of the court system in England and France since the eleventh century.

¹⁰ See Edward Glaeser, Simon Johnson et al., *Coase vs. Coasians*, 116 *Quarterly Journal of Economics* 853 (2001). While the paper focuses on transition economies, it potentially has much wider applicability.

explains the notion of regulators as proactive law enforcers as opposed to courts as reactive law enforcers. Section 3 asks how lawmaking and law enforcement powers should be combined to achieve optimal law enforcement within a set of constraints (rule of law, cost). Part II of the paper places our theory within existing literatures in law and economics, including the literature on the indeterminacy of law, the incompleteness of contracts literature and the literatures on law enforcement and regulation. It also summarizes the analysis of leading contemporaries on the reasons for the emergence of regulators. Part III applies this theoretical framework to the development of financial market regulation in England since the mid nineteenth century. Part IV places our analysis in comparative context by summarizing major developments in the regulation of financial markets in the U.S. and Germany. Part V draws conclusions from our analysis for the need for and the optimal level of regulation and sketches out areas of future research.

Part II: Incompleteness of Law

1. Incompleteness of Law and the Allocation of Residual Lawmaking Powers

We regard a law as complete, if all relevant applications of the law are unambiguously stipulated in the law and the law can be enforced literally provided that evidence is established. This requires that the law is self-explanatory, i.e. that every addressee agrees to the meaning of the law, and by implication, that there is no need for interpreting the law. Otherwise, a law is incomplete, that is, some of the relevant issues are not stipulated in the law or they remain ambiguous. An incomplete law cannot be enforced literally even when evidence is established.

Our basic premise is that law is intrinsically incomplete by way of extrapolating from the insight that contracts are inherently incomplete.¹¹ In fact, laws are bound to be more incomplete than contracts, because laws serve a much larger number of addressees, are designed to cover a

much greater variance of cases, and typically have much longer duration. The generality, durability and predictability of the law and its equal application to individuals is not a universal property of law. There is abundant historical and contemporary evidence of law being used arbitrarily by those in power, changed at whim and applied discriminatorily.¹² The benefits of these properties for socioeconomic development have been stressed by Max Weber, who stated that a rational and predictable legal system was one of the preconditions for the emergence of capitalism.¹³ This at least follows from core elements of the rule of law, in particular the generality of law. Generality of law means that law is designed to stay, to apply to large numbers of addressees and for longer periods of time. Given these constraints, it is impossible to design complete law, which could clearly determine the outcome for the variance of cases that may arise in the future.

Absent such constraints, law could be designed to be more – even though not fully – complete. A law could be designed to apply to a specific case and to last only for a short period of time. Such a law would closely resemble a specific contract between the state and a private party rather than a social contract with multiple addressees. We call this “single-case-law”. Each single-case-law can be more complete for the particular issue it addresses than a general law. Still, this approach has important limitations. Only the parties to the law would benefit. Others might bargain for similar arrangements, but without certainty as to the outcome of their

¹¹ For an summary of the incompleteness of contracts theory see below under section 3.

¹² The old socialist doctrine regarded the Western notion that law ought to be predictable and adhere to the principles of equality and impartiality as *bourgeois fetish* and of no relevance for the socialist legal system. See William E. Butler, *Soviet Law*, ed. 2 (1988) pp. 30 (32) for a summary of the Soviet theory of state and law. More general, autocratic rulers find it hardly in their interest to abide by such principles, as this constraints their powers to rule as they wish. There is mounting evidence, however, that the lack of rule of law has deleterious impact on the prosperity of countries. See Stephen Knack & Philip Keefer, *Institutions and Economic Performance: Cross-Country Tests Using Alternative Institutional Measures.*, 7 *Econ. & Pol.* 207 (1994) and Paolo Mauro, *Corruption and Growth*, CX *The Quarterly Journal of Economics* 681 (1995).

¹³ See Max Weber, *General Economic History*, *Social Science Classics Series* (1924/1981), Chapter IV at p. []. Predictability does not mean that the outcome of a case could be clearly predicted, but that the legal system is sufficiently stable to allow entrepreneurs to plan their activities within this framework. For an interpretation of Weber’s notion of legality, see Randall Collins, *Weber’s Last Theory of Capitalism*, 45

negotiations. Single-case-laws regulate specific affairs, but do not establish positive externalities in the form of general rules that might help others to structure their relation and serve as guidance for future disputes. In other words, they create private, but not social benefits.¹⁴ They are also more susceptible to interest group pressure. Finally, because a special law must be passed for each particular case and for every future change, single-case-law suffers from high transaction costs.

Examples for single-case-law in recent Western legal history include the incorporation of companies in the nineteenth century by special approval (concession) granted by the state bureaucracy, or by special bill passed by parliament. The increasing number of incorporation bills parliaments in the US, for example, had to enact during the period of industrialization, as well as mounting corruption allegations surrounding the adoption of these bills, resulted in the adoption of general incorporation acts in many states since the 1830s, in Delaware in 1883. As the number of party-specific laws did not subside, precisely because they gave companies advantages they could not obtain under the general law, Delaware amended its constitution in 1897 to prohibit incorporation other than under the general law.¹⁵ Since then, changes in the law affect all companies incorporated in Delaware and it is not in the discretion of the legislature to alter the law only for a specific company.

The generality of law may be disputed with regard to case law. In common law countries where courts have extensive original and residual lawmaking authority, they develop the law on the basis of specific cases brought before them. Only those parts of the decision that are supported by the facts are binding on other courts. Other parts of the decision are considered dicta.¹⁶ Still, the binding parts of the ruling have legal force beyond the case at hand, and until

American Sociological Review 925 (1980) and David M. Trubek, *Toward a Social Theory of Law: An Essay on the Study of Law and Development*, 82 *The Yale Law Journal* 1 (1972).

¹⁴ Shavell in *The Fundamental Divergence of Social and Private Benefits of Litigation*, *J. Legal Stud.* 575 (1997) developed this argument for the case of litigation.

¹⁵ Russel Carpenter Larcom, *The Delaware Corporation*, (1937) at p. []..

¹⁶ Jane C. Ginsburg, *Legal Methods - Cases and Materials*, (1996) at p. [].

overruled, are binding on all cases that are alike. Thus, case law also exhibits the key features of generality of law and equality before the law.

Each legal system faces the challenge of optimizing the relative completeness of different laws and of allocating residual lawmaking powers. The two major legal systems in the world, the common law and the civil law system, allocate residual lawmaking powers quite differently.¹⁷ In the common law system, judges not only hold extensive residual lawmaking powers, but they are also vested with original lawmaking powers, i.e. with the power to develop new principles of the law.¹⁸ In civil law systems judges are said to interpret, not to make, law. This certainly limits the courts' original lawmaking powers. But it could be taken to mean that civil law judges do not have residual lawmaking powers. The line between lawmaking and law interpretation is, however, often difficult to draw. Moreover, interpretation even if narrowly construed involves an element of residual lawmaking. It implies that the application of a law to a particular set of facts does not follow immediately from the wording of the statute or case law. Thus, we suggest that even in civil law countries judges exercise residual lawmaking rights, but concede that judges usually are constrained in exercising these rights as a result of legal doctrine, the legislature's prerogative in lawmaking as reflected in legal design, and as a result of self-restraint that follows from the notion that lawmaking is not a primary function of civil law courts.

The allocation of lawmaking rights in civil vs. common law countries may have important implications for the ability of these systems to adapt to socio-economic and technological change. When legal change can be brought about only by the legislature, a full-fledged revision of existing law is required to achieve such change, which typically takes years to accomplish.

¹⁷ Scholars of comparative law typically distinguish several subfamilies within the civil law family, namely the French civil law family, the German civil law family, and the Scandinavian one. See Konrad Zweigert & Hein Kötz, *Introduction to Comparative Law*, (1998); Rene David & John E. Brierly, *Major Legal Systems in the World Today*, (1985); Mary Ann Glendon, Michael W. Gordon et al., *Comparative Legal Traditions: Text, Material and Cases on the Civil and Common Law Traditions, with Special References to French, German, and English*, (1994).

¹⁸ There is a substantial debate, whether common law judges actually "make" law, or whether they "find" the law based on legal principles. For our purposes this distinction is not crucial. The key point is in

Legislatures will need to collect the relevant information to determine the necessity for change and then follow established procedures for enacting a new law. Statutory change may accomplish a change more far reaching than case law. Yet, any such change will again suffer from incompleteness of law problems as lawmakers will be unable to foresee all future contingencies and therefore cannot possibly write complete laws.

Courts receive signals about the need for legal change by way of case law brought before them. These signals are not perfect, as there a serious selection biases in which cases will make it to courts and through appeal process.¹⁹ In fact, comparative analysis of the evolution of corporate law in the late nineteenth and early twentieth century reveals that in common law jurisdictions (England and Delaware) legislative change was more frequent than in civil law jurisdictions (France and Germany).²⁰ Moreover, courts can respond to these problems by adjusting existing case law to new circumstances. As we will show in the second part of this paper, courts have constantly adapted the rules governing disclosure and liability for misinformation in an attempt to keep up with the realities of market developments. Not all decisions were of high quality, but nor were they simply bad decisions that required legislative intervention. More importantly, the evolution of case law reveals the strengths of the gradual learning process case law allows for, but also its ultimate limits when faced with an area that is as quickly developing as financial markets.

Law can be incomplete for different reasons. It may be incomplete, because it broadly circumscribes outcomes without identifying particular actions, or enumerating only few actions

common law countries it is widely recognized that judges exercise substantial lawmaking powers and that this is one of their key functions.

¹⁹ See Martin J. Bailey & Paul H. Rubin, *A Positive Theory of Legal Change*, 14 International Review of Law and Economics 467 (1994). This argument has refuted earlier theories that held that common law was efficient. See Paul H. Rubin, *Why Is the Common Law Efficient*, J. Legal Stud. 51 (1977), George L. Priest, *The Common Law Process and the Selection of Efficient Rules*, J. Legal Stud. 65 (1977). For a critique, see Robert C. Clark, *The Interdisciplinary Study of Legal Evolution*, 90 Yale L.J. 1238 (1981).

²⁰ Katharina Pistor, Yoram Keinan et al., *The Evolution of Corporate Law*, Background paper for the World Development Report 2002 (2000).

(Type I incomplete law). Alternatively, law is incomplete, because it specifies the actions that shall be prevented, but fails to capture all relevant actions (Type II incomplete law).²¹

A good example for Type II incomplete law is criminal statutes. They usually contain a number of provisions all aimed at protecting property rights, but each being designed to cover a particular action, such as theft, embezzlement, damage to property, and the like. Closer inspection of these provisions reveals that not all possible actions that could violate property rights have been captured by the law. This suggests that a conscious choice was made to write law that is highly specific, even if this meant that inevitably actions that result in similar harm would be left out. We conjecture that this choice is influenced by the commitment to the *nulla poena sine lege* (no punishment without law) principle.

Most legal systems prohibit theft. Theft is usually defined as the appropriation of an asset that is owned by another person by breaching his or her possession.²² When electricity was invented and some people simply hooked their households up to the electricity lines instead of connecting officially and paying their bills, the question arose, whether this constituted a theft. For the German Supreme Court (*Reichsgericht*), which had to decide this issue in the late nineteenth century, the key question was whether electricity was an “asset” (*eine Sache*) as defined by law. It acquitted, because it denied the asset quality of electricity and argued that the extension of the existing theft provision would amount to lawmaking by analogy, which would be in violation of

²¹ In the legal literature, incomplete laws of the first type are often called norms, incomplete laws of the second type “rules”. For an analysis of the tradeoffs of norms and rules, see Louis Kaplow, *Rules versus Standards: An Economic Analysis*, 42 *Duke L.J.*, 557 (1992); Louis Kaplow, *General Characteristics of Rules*, <http://encyclo.findlaw.com/lit/9000art.html> (1997). Building on this literature some authors have proposed to use primarily “bright line rules” when legislating in emerging markets and developing countries. See Jonathan R. Hay, Andrei Shleifer et al., *Toward a Theory of Legal Reform*, 40 *European Economic Review* 559 (1996), arguing that because courts in these countries tend to be weak, there should be fairly little discretion left for law enforcers. The underlying assumption is that the lawmaker has a choice to write more or less complete law. While this is true to some extent, our point is that no law can be written in a way to eliminate discretion completely, because laws are inherently incomplete. Our theory builds on the rules vs. standards literature. Its novelty is to suggest that the incompleteness of law necessitates an allocation of residual lawmaking and law enforcement powers to different agents. We attempt to determine the optimal allocation of lawmaking and law enforcement powers from our theory.

²² Compare Section 242 of the German Criminal Code.

the *nulla poena sine lege* principle.²³ The legislative response was to insert a new provision in the code that dealt specifically with appropriating energy.²⁴ When confronted with similar cases, English and U.S. courts argued that the key issue was not the asset quality of whatever is appropriated, but the fact that something can be appropriated. But the matter remained sufficiently incomplete to bring a case to the NY Supreme Court as late as 1978.²⁵ By that time, New York had adopted a provision that made “theft of services” a punishable offense, which covers actions from using public transport without pay to appropriation of energy or other sources. This is a case where a lawmaker decided to shift from Type II to Type I incompleteness in an attempt to capture a range of activities that had not been explicitly included in the law.²⁶ More recently, English courts were confronted with the question, whether the case law on abstracting electricity could be extended to convict persons who had fraudulently used telephone lines without paying. This was denied on the grounds that the use of analogy was inappropriate.²⁷

The theft problematic demonstrates that technological change may render previously fairly complete law incomplete. Prior to the invention of electricity or telecommunications the concept of theft had been well defined and was fairly complete. But electricity or telephone lines were not assets in the traditional sense. Lawmakers and law enforcers had to decide whether the unauthorized use of electricity or telephone lines deserved the same level of punishment. The cases reveal that courts exercise only limited residual lawmaking powers in the area of criminal law. The result has frequently been acquittal, even though the identified actions were widely regarded as wrongful. This is a clear example of under-enforcement of the law. To some extent,

²³ See RGStr 29, 111 and RGStr 32, 165.

²⁴ Compare Sec. 248c StGB, which was inserted in April 1900.

²⁵ For a summary of U.S. and English case law in this matter, see 402 N.Y.S. 2d 137. In the words of the Supreme Court of Illinois dealing with this matter in 1937, “The true test of what is a proper subject of larceny seems to be not whether the subject is corporeal or incorporeal, but whether it is capable of appropriation by another than the owner”. Cited *ibid* at p. 140.

²⁶ A concern with such a provision is whether it is in conflict with the principle of “*nulla poena sine lege*”, i.e. whether actions are sufficiently specified *ex ante* to warrant criminal sanctions. The task of judges will have to exclude some actions from the scope of the law. I am grateful to Lance Liebman for pointing out these developments in the law of New York State.

this result is the price that legal systems pay for adhering to rule of law principles, which constrain the power of the state to sanction individuals retroactively.

An example for Type I incomplete law, is tort law. General tort principles typically stipulate that damages to property, life, and liberty gives rise to liability against the person(s) that caused those damages. Note that no single action is defined, only the broad outcome of damages to property. The scope of liability can be further circumscribed by requiring intent or negligence, or imposing strict liability, but this still leaves open the form actions might take. Even when courts can exercise extensive lawmaking rights, as in the case of tort law, courts are constrained by the fact that they can make law only on the basis of cases that are brought before them, and for the most part, after harm has been done.²⁸ That is, they do not have the power to intervene and make new rules that might prevent harm, even when events unfold under their eyes that might make such an intervention desirable.²⁹ When the expected harm of actions is sufficiently high, it may therefore be superior to allocate residual lawmaking powers to an agent that may adapt rules on a continuous basis and initiate enforcement procedures (see below). Regulators are such agents. In contrast to legislatures, regulators do not have original lawmaking powers, but the legislature can delegate to the regulator substantial residual lawmaking powers. Unlike courts, regulators become active not only when an action is brought by others. Within the scope of their regulatory mandate, they monitor activities, launch investigations, and change rules on the basis of such investigations. This allows them to respond to changes in the market and to keep abreast of market developments.

The lawmaking function of regulators has been recognized in the literature before. In fact, regulation is often equated with rulemaking rather than with enforcement, which in our theory is a

²⁷ R. v. Shrinaeh Kalesusuwar (1993) 14 Cr. App. R. (S. 49). The appellate court held that it was inappropriate to rely on the analogy of cases of fraudulently abstracting electricity in this particular case.

²⁸ Provided that an action is brought, courts can, of course, act also *before* harm is done, as in preliminary injunction proceedings.

crucial element of regulators (see below under 2.). Shavell examines the difference between liability and safety regulation rules for accidents.³⁰ Liability is invoked after harms has been done, which is consistent with our notion that courts are ex post lawmakers. As long as the harm done is less than the total assets of the violator, liability rules enhance the level of care. By contrast, regulation determines a certain level of care the regulator finds desirable, which is imposed on economic actors ex ante. Shavell argues that since the regulator cannot observe the level of risk, ex ante rule making will not be optimal. Our approach is somewhat different in that we define regulators as agents that monitor the market and adapt rules on a continuous basis rather than strictly ex ante. This enhances their ability to respond to events that might reveal the risk of certain transactions. Moreover, as we will further elaborate below, regulators in our theory are not confined to lawmaking, but play a crucial role as lawmakers.

To illustrate the limits of lawmaking by legislatures and courts, and thus the need for an alternative, consider the gradual shift of lawmaking rights from courts to regulators in stock fraud cases. Until the mid 19th century, tort law had been developed for cases of wrongful actions or deeds, including actions against life, property and personal integrity.³¹ Existing tort principles required those who had taken actions that resulted in harm to compensate those who suffered damages. Courts in England and elsewhere soon had to confront the question, whether the same principles should be applied to misrepresentation of information, the most common means used to cheat investors. They did so in principle, but even when faced with a rising number of cases that revealed careless use of information, were reluctant to lower the threshold for liability from gross negligence to simple negligence. They saw a fundamental difference between actions and words,

²⁹ Note that Jeremy Bentham argued already in the nineteenth century that there was a need for “devising a course of legislative acts adapted to prevent offenses”. Bentham, *Theory of Legislation*, 2nd edition 1871 at p. 358.

³⁰ Steven Shavell, *A Model of the Optimal Use of Liability and Safety Regulation*, 15 *Rand Journal of Economics* 271 (1984) and Steven Shavell, *Liability for Harm versus Regulation of Safety*, 13 *J. Legal Stud.* 357 (1984).

³¹ Note that civil law countries have not been able to define tort principles more concisely than common law countries. Para 823 of the German Civil Code, for example reads, “ Wer vorsätzlich oder fahrlässig das Leben, den Körper, die Gesundheit, die Freiheit, das Eigentum oder ein sonstiges Recht eines anderen widerrechtlich verletzt, ist dem anderen zum Ersatze des daraus entstehenden Schadens verpflichtet” [Whoever, intentionally or negligently, damages life, body, health, freedom, or property or any other right of a person without justification, must compensate that person for the resulting damage.”]

and hesitated to fundamentally alter the legal principles on which tort law rested. It took an intervention by the legislature to establish that directors could be held liable for (simple) negligent misrepresentation.³² Still, neither courts nor the legislature were able to keep up with the rapidly evolving financial markets and the ever new opportunities for cheating they brought with them. This affected not only those who had been cheated and who found it difficult to get adequate remedies. A sequence of financial scandals challenged investors' confidence in the market more broadly. In response, stock exchanges began to establish disclosure requirements and to monitoring companies wishing to list on the market for compliance. In other words, stock exchanges assumed regulatory power. While the London Stock Exchange was more reluctant than, for example, the New York Stock Exchange,³³ to invest in this type of activities, it did so nevertheless (see Part V for details).

Contrast this with cases where damages are much more controlled, i.e. where only few externalities arise. An example is directors' breaching their fiduciary duty vis-à-vis shareholders. This broadly defined legal principle (Type I incomplete law) has been used to hold directors liable for actions that certainly with hindsight have damaged shareholder rights. It has proved to be impossible to capture the scope of fiduciary duty in statutory law. State legislatures in the U.S. have tried to carve out typical problem areas, such as conflict of interests as a violation of the duty of loyalty.³⁴ By and large, however, they have left it to courts to define the scope of fiduciary

³² This was accomplished with the enactment of the Directors' Liability Act in 1890. On the genesis of this act see below in Part III.

³³ For a comparative treatment of the two exchanges, see R.C. Michie, *The London and New York Stock Exchanges*, (1987). See also John C. Jr. Coffee, *The Rise of Dispersed Ownership: The Roles of Law and the State in the Separation of Ownership and Control*, 111 *Yale L.J.* 1 (2001) at pp. 34. He calls the New York Stock Exchange a "Guardian of the Public Investor" and attributes its much more active role as compared with the London Stock Exchange to the structure of the exchange (membership was limited) and the resulting incentive structure for members to regulate the market; the relative small size, which mandated selection of companies for listing; the fact that NYSE, but not London adopted a fixed brokerage commission, which drove away lower-volume and lower-priced stock from the exchange; and past experience that demonstrated the immediate impact of company failure on stock exchange members and – because of its close, cartel-like structure, ultimately the exchange itself.

³⁴ See, for example, See Delaware General Corporate Law § 144. Note, however, that the Delaware law precludes the voidance or voidability of transactions concluded by interested directors, if their interest was disclosed and the transaction was overall "fair" – introducing another broad concept that requires fine-

duties.³⁵ Legislatures recognized that they could not possibly capture all relevant situations without excessively constraining business activities.³⁶ There was also never an attempt to allocate residual lawmaking powers in this area to regulators.

Three factors can help explain this. First, the complexity of managerial activities that may amount to a violation of fiduciary duties defies any attempt of standardization. This implies that it is impossible for the legislature or for regulators to write Type II incomplete law that would capture a substantial number of actions without overtly constraining managerial decision making. Writing a Type I incomplete law instead leaves residual lawmaking powers with the courts. Second, monitoring managerial action by an agent such as a regulator will be extremely costly. Standardization of actions allows regulators to operate on economies of scale. Given that standardization is impossible, regulators would need to monitor each company continuously to decide, which actions may or may not amount to a breach of fiduciary duty. Apart from being costly, this type of close monitoring may not be desirable as it would seriously intervene with the private autonomy of corporations and their agents. Even courts have abstained from scrutinizing managerial decision-making by developing the business judgment rule, which gives management substantial discretion in decision making and allows for court revision only in exceptional cases.³⁷ Finally, violations of fiduciary duty do not typically result in substantial externalities, i.e. in the harm of others than the shareholders of a particular company. Obviously, systemic violations of fiduciary duty principles by management of different companies may generate externalities, and

tuning by case law. For a much more detailed elaboration on conditions that lead to a conflict of interest, see § 8.60-8.63 of the Revised Model Business Corporation Act.

³⁵ On the peculiar evolution of corporate law in the United States, where statutory law has evolved into an enabling law, but courts have been the guardian of fiduciary duty principles, see John C. Coffee, Jr., *The Mandatory/Enabling Balance in Corporate Law: An Essay on the Judicial Role*, 89 *Colum. L. Rev.* 1618 (1989).

³⁶ For a more detailed analysis of the optimal allocation of residual lawmaking powers to address problems of fiduciary duty, see Katharina Pistor & Chenggang Xu, *Fiduciary Duties in (Transitional) Civil Law Jurisdictions - Lessons from the Incompleteness of Law Theory*, forthcoming (2002).

³⁷ For a comprehensive discussion of the business judgment rule compare Robert Charles Clark, *Corporate Law*, (1986) pp. []; Melvin Aron Eisenberg, *Corporations and Other Business Organizations*, ed. 8 (2000) pp. [].

so may violations that are confined to a particular company when because of its size and influence that company has substantial influence on the market.³⁸

To summarize, the incompleteness of law gives rise to the need to allocate residual lawmaking powers. Legislatures, courts, and regulators can be vested with these rights. The optimal allocation of residual lawmaking powers is determined by the possibility to standardize actions that may result in harm, by the pace of socioeconomic and technological change, and the cost of regulation. Residual lawmaking powers are best allocated with legislatures when standardization is feasible and ex post rulemaking not desirable, i.e. because this would violate fundamental principles of the rule of law. Courts should hold residual lawmaking powers when standardization is not possible, ex post lawmaking is not constrained by rule of law concerns, and socioeconomic change does not constantly outpace the development of case law. Regulators should hold residual lawmaking powers when the pace of change renders legislative lawmaking too costly and ex post lawmaking by courts too late. It is important to realize that all of these solutions are solutions in world of second bests, where full completeness of the law and thus full deterrence cannot be achieved.

2. Allocating Law Enforcement Powers under Incomplete Law

Incompleteness of law requires not only that residual lawmaking powers are allocated so that optimal lawmaking is assured, but also that law enforcement powers are vested with agents that can best assure that the law will be effectuated. In the literature on law enforcement, courts have always been at the center of analysis. The classic law and economics literature conjectures that law can achieve optimal deterrence, if the level of sanction and the probability of getting caught

³⁸ An example for the latter is the downfall of Enron and the impact this had on financial markets. See [ADD].

is sufficiently high.³⁹ In fact, under these conditions, law should be largely self-enforcing, i.e. violations should not occur. Yet, courts play an important role in reminding potential violators that the probability of being caught remains high and that liability will result.

When law is incomplete, law enforcement by courts alone may not be sufficient. Incompleteness of the law means that it is unclear, whether a particular action falls within the scope of a law and thus will result in punishment or liability. Note that incompleteness is different from the probability of being caught. The latter refers to the question, whether evidence can be established. The question, whether an action falls within the scope of the law precedes the question of evidence. Incompleteness of law is also different from the issue that there might be uncertainties as to the level of punishment. Given uncertainty as to the reach of the law, parties may not bring action even after harm has been done, much less before in an attempt to stop actions that might result in harmful outcomes. The result is under-enforcement of the law even when law enforcers control sufficient resources to ensure effective enforcement should a law call for liability. The problem of under-enforcement is exacerbated by the fact that courts are designed to enforce law reactively. They are passive and do not take action until somebody has brought an action (including an action for a preliminary injunction, which allows enjoining actions before harm has been done). When actions can generate substantial harm, including externalities, reactive law enforcement typically comes too late.

The limits of reactive law enforcement are best exemplified when we assume that courts have no residual lawmaking powers. Under this condition, courts will have to dismiss a case whenever the law is not unambiguously specified, i.e. for which it does not offer a clear-cut solution. It is then up to the lawmaker to correct the situation and enact a new law. This happened in Germany in the case of electricity theft, discussed above. In areas that are highly susceptible to

³⁹ Gary S. Becker, *Crime and Punishment: An Economic Approach*, 76 *J. Pol. Econ.* 169 (1968); George J. Stigler, *The Optimal Enforcement of Laws*, 78 *J. Pol. Econ.* 56 (1970). See also the recent summary by Mitchell Polinsky & Steven Shavell, *The Economic Theory of Public Enforcement of Law*, 38 *Journal of Economic Literature* 45 (2000).

socioeconomic or technological change, purely reactive law enforcement cannot ensure effective deterrence. In a changing environment new opportunities for taking actions and exploiting opportunities evolve constantly. Many of these actions may be productive, some may be harmful. If the law cannot distinguish between them ex ante, substantial harm may have been done by the time the legislature intervenes and amends the law to take account of the changes.

When courts have at least some residual lawmaking powers, they may modify existing law when applying it to new cases. This is exactly what English courts did when they developed the principle of “abstracting electricity” and punished offenders accordingly, or when US courts ruled that the key question for the application of theft provisions is not the asset quality, but the ability to appropriate. There will be fewer acquittals or dismissals with the effect that actors may be more cautious when designing strategies aimed at circumventing the law. Thus, when courts hold residual lawmaking powers, the deterrence effect of the law may be higher than when they don’t. Still, the ex post lawmaking on the basis of new cases cannot undo the harm that has been done.

The constraints of ex post lawmaking and reactive law enforcement may be tolerable when harm is controlled, i.e. when it does not create substantial negative externalities. An example is the violation of obligations that directors owe to shareholders of the firm they manage (fiduciary duties). In this case, harm is limited to shareholders of that particular company only, and they have a fair chance that some of the damages to them or the corporation will be effectively remedied ex post. In comparison, when actions create substantial externalities, i.e. when a large number of new investors are affected by harmful actions, ex post lawmaking and reactive law enforcement comes too late and is unlikely to remedy the harm that has been done. In this case it will be optimal to shift from reactive law enforcement to proactive law enforcement, or to vest regulators rather than courts with law enforcement powers.

We define a regulator as an institution that enforces law proactively, rather than reactively. A regulator frequently is, but need not be, a state agent. A self-regulatory body, such as a stock

exchange, can exercise similar functions as a state-regulator.⁴⁰ Proactive law enforcement includes various functions, including controlling entry, monitoring activities, initiating investigations, enjoining actions, and administering or initiating the administration of sanctions against violators. None of these functions can be carried out by courts, because courts are designed to be impartial and therefore have to remain passive until actions are brought by others.

A simple example for proactive law enforcers is the police. It monitors behavior and seeks to prevent damages by enjoining actions that are likely to cause harm. The police can stop a car even if it is not speeding or violating other rules, for example, when the manner of driving suggests that there could be something wrong (sometimes exact observance of the rules can raise suspicions). This is a classic example of proactive law enforcement. The police cannot convict the driver. This remains the task of the courts. But it can stop him, administer an alcohol test, prevent him from continuing his way should the test be positive, and even fine him. To do this, the police is explicitly vested with the power to investigate, collect information and enjoin actions.

The advantage regulators have over courts in enforcing the law is that they monitor behavior on a regular basis and adjust rules accordingly. In addition, they can stop actions that appear not to comply with existing rules. Once it is established that the action may generate harm or has already resulted in harm, they can initiate enforcement procedures. In contrast to courts, regulators do not have to wait for others to take action. They are the ‘initiators’, even when the final legal settlement is left with the courts as the ‘resolvers’.

This definition of a regulator is different from the conventional one. The economics and law and economics literature describes regulation as state intervention,⁴¹ and thus as an alternative to

⁴⁰ Self-regulatory bodies typically are more constrained in their jurisdiction than state regulators are. For example, they may punish effectively only members of their organization and cannot reach beyond them. However, to keep matters simple we will treat state and non-state regulators alike for the purpose of this paper. There is a growing literature on the trade-offs between regulation and self-regulation. [ADD]. This literature assumes a need for regulation, which our theory seeks to explain. We intend to address the tradeoff between state regulation and self-regulation under incomplete law in future research.

⁴¹ Richard Posner, *Theories of Economic Regulation*, 5 Bell Journal of Economic Management 335 (1974) at p. 335 calls regulation “any form of state intervention”. Twenty years later, Laffont describes regulation

market mechanisms. Regulatory activities are typically associated with rules that direct economic behavior.⁴² In our definition, regulators combine continuous lawmaking rights with proactive law enforcement powers. We regard the combination of these two function as a crucial institutional innovation to deal with the problem of under-enforcement that results from the incompleteness of law. Viewed in this light, regulators are not substitutes for market mechanisms, but an integral part of highly complex and rapidly developing markets.

Regulation does not come without cost. The direct costs of regulation include the size of the budget needed to hire monitors, investigators, file information, and launch lawsuits.⁴³ The indirect costs of regulation comprise the costs market participants incur because they have to comply with regulation, and that society incurs when regulatory lawmaking and law enforcement is sub-optimal. A regulator can impose costs that outweigh the benefits of proactive law enforcement. Conversely, a regulator may err by under-detering potentially harmful actions.⁴⁴ Thus, not every regulation is “good”, but only regulation that optimizes the cost of law enforcement as compared with other enforcement devices.

To summarize, regulators perform a different function than courts in law enforcement. As proactive law enforcers, regulators can enjoin actions and initiate enforcement procedures, which is an important advantage over courts when law is incomplete. Still, even under this condition we do not observe regulators in all areas of the law, and in fact cannot justify the establishment of

in an article that reviews the new regulatory literature as “the public economics face of industrial regulation. It explores the various ways in which governments interfere with industrial activities for the good or for the bad.” See Jean-Jacques Laffont, *The New Economics of Regulation Ten Years After*, 62 *Econometrica* 507 (1994) at p. 507.

⁴² See Shavell (1984) op cit at note [].

⁴³ See also Steven Shavell, *Liability for Harm versus Regulation of Safety*, 13 *J. Legal Stud.* 357 (1984) op cit note [] who points out that regulators operate even when there is no harm. The same is true for courts, of course, unless a legal system relies exclusively on ad hoc dispute settlement institutions. However, courts may shift to different cases when there is a drop in litigation, whereas regulators are much more specialized law enforcers.

⁴⁴ On the tradeoff between monitoring and investigating and the cost implications of these regulatory enforcement mechanisms, compare Dilip Mookerjee & I.P.L. Png, *Monitoring vis-a-vis Investigation in Enforcement of Law*, 82 *Am. Ec. Rev.* 556 (1992). Using a formal model to compare the tradeoffs, they conclude that the use of these alternative enforcement devices should be tailored to the severity of the

regulators in all cases. The costs of proactive law enforcement by regulators can be justified only when harmful actions are likely to create substantial negative externalities, which cannot be fully remedied by reactive law enforcement.

Examples for areas of the law where a regulator can be justified on the above grounds include the production and dissemination of pharmaceuticals, the construction of nuclear power plants, or safety standards for aviation industry. The probability that harm will occur may be low, but if it occurs, the life of many people may be at stake. The actions that may result in the harmful outcome are difficult to specify ex ante. With respect to pharmaceuticals, for example, they may include mistakes in basic research that led to the identification of a new substance used in the drug, in the design or assessment of test trials, or in the production of the pharmaceutical. Only an accumulation of indicators may suggest which actions, if left unchecked, will result in substantial harm. These features call for monitoring and investigation.

Financial markets are another area where regulation can be justified. Cheating a couple of shareholders will not undermine the viability of financial markets. Wide-spread stock fraud, however, can seriously undermine investors' confidence in capital markets and hurt the economy.⁴⁵ The history of the law governing financial markets, which we will further address in Part IV below, demonstrates the ingenuity of market actors in developing schemes to defraud investors in ways that time and again proved to be beyond the reach of existing law. Attempts to

offense. Smaller offenses should not be investigated, but only monitored. Larger offenses should be investigated in accordance with their severity and fines should be maximized.

⁴⁵ Paul Milgrom & Nancy Stokey, *Information, Trade, and Common Knowledge*, 26 Journal of Economic Theory 17 (1982). On the importance of financial market regulation for sustainable market development, compare also Bernard Black, *The Legal and Institutional Preconditions for Strong Securities Markets*, 48 UCLA L. Rev. (2000). The proposition that mandatory disclosure can help avoid externalities is highly disputed in the legal literature. Proponents of this proposition include Lucian Bebchuk, *Federalism and the Corporation: The Desirable Limits on State Competition and the Corporation*, Harvard L. Rev. 1437 (1992); John C. Coffee, Jr., *SEC Deregulation: Sense and Nonsense*, 214 New York Law Journal 5 (1995); John C. Jr. Coffee, *The Lessons From Securities Market Failure: Privatization, Minority Protection, and Investor Confidence*, Draft, September 1999 (1999); Merritt B. Fox, *Retaining Mandatory Disclosure: Why Issuer Choice is not Investor Empowerment*, 85 VA L. Rev. 1369 (1999); opponents include Roberta Romano, *Empowering Investors: A market Approach to Securities Regulation*, 107 The Yale Law Journal 2359 (1998); Frank H. Easterbrook & Daniel R. Fischel, *The Economic Structure of Corporate Law*, (1991).

deter such actions by enhancing the completeness of case or statutory law proved to be unsuccessful, because the law constantly lagged behind new market developments, including new methods for cheating investors. The inability of lawmakers to prevent harmful actions in the future simply by writing better laws eventually gave way to the emergence of regulators, first in the form of stock exchanges, later in the form of state regulators.

3. Regime Choice: Regulators vs. Courts

In section 1 above, we identified three potential holders of residual lawmaking powers: legislatures, courts, and regulators. In section 2, we argued that when law is incomplete, reactive law enforcement by courts may not be sufficient to ensure effective law enforcement, but proactive enforcement is needed. In this section, we discuss how lawmaking and law enforcement functions combine to offer different legal regimes – a classic division of power regime, a pure court regime, or a pure regulatory regime - and identify factors that determine the optimal regime choice.

Recall that incomplete law can occur in two forms, Type I and Type II incomplete law. Type I refers to broadly phrased outcome orientated “norms”, Type II depicts highly specific rules that define actions that constitute violations of the law. Starting from a given Type of incomplete law, the allocation of residual lawmaking and law enforcement powers is determined by the level of expected externalities on the one hand, and the possibility to standardize actions ex ante, continuously, or not at all, on the other. If actions are not expected to generate externalities, reactive enforcement by the courts will be sufficient. In this case, law can be made either by legislatures ex ante or by courts ex post. Rule of law concerns may, however, constrain the scope of ex post lawmaking. In case there are externalities, the key issue is whether or not regulation can be designed to be cost effective. This is the case only, if at least some actions can be standardized, which in turn requires some experience so that lawmakers can identify actions,

which typically result in harm. Otherwise legislatures can only circumscribe broad areas of liability and leave the specification of actions that shall result in liability to courts.

The greatest problem of under-enforcement occurs in the case when expected externalities are substantial, yet standardization ex ante is not feasible, at least not at the time the law is drafted, because sufficient information about the type of actions that typically cause the harm the law seeks to prevent is not available. A possible way out is to give regulators the discretionary power to bring such areas under their control when sufficient evidence becomes available to warrant regulation. An example is the U.S. Securities Act (SA) of 1933, which vests the SEC with the powers to “make, amend, and rescind such rules and regulations as may be necessary to carry out the provisions of this title”.⁴⁶ Such a broad mandate raises concerns about the scope of acceptable discretionary power regulators shall exercise. We have stressed the benefits of combining lawmaking and law enforcement powers in the hands of a regulator, and in fact, have defined regulators as agents that combine continuous lawmaking with proactive law enforcement. The same features that make this a powerful enforcement device raise concerns with regards to the principle of the division of powers, which was designed to limit the powers of the state.⁴⁷ These concerns should not be treated lightly. The task for any legal system to weigh the trade-offs between effective law enforcement and the division of power and to design mechanisms of checks and balances that mitigate the powerful combination of lawmaking and law enforcement rights of regulators.

Part III. Incompleteness of Law and Related Theories

In this Part we place the theory of the incompleteness of the law into the context of related literatures, including the incompleteness of contracts, the indeterminacy of law, and theories on

⁴⁶ Compare Sec. 19 SA.

regulation. We do not attempt a comprehensive survey of these literatures, but seek only to delineate our theory of the incompleteness of law from related theories.⁴⁸

1. Incompleteness of Contracts

The theory of incompleteness of the law is inspired by the incompleteness of contracts theory as developed in the economics literature. The notion that contracts are incomplete is now widely recognized.⁴⁹ The concept was introduced as a critical ingredient to explain property rights and the boundary of the firm.⁵⁰ According to the incomplete contract literature, a contract is complete if (and only if) all relevant contingencies and corresponding control rights – such as responsibilities of the parties for different aspects of the relation, rewards and punishments for certain actions, etc., – are specified unambiguously. Complete contracts resolve all possible disputes between the contractual parties *ex ante*. A contract is incomplete, when some relevant contingencies are missing, or some items are specified ambiguously. As a result, the contract is not literally enforceable and on its own cannot resolve disputes. The central question then becomes who has the right to decide the issues that are not specified in the contract, i.e. who holds the residual rights. The answer to this question is that owners hold residual rights, in fact that holding residual rights of control is the very nature of property rights. The owner of an asset or right holds all rights that are not specified by contract and thus controls future decisions over

⁴⁷ In fact, the emergence of regulators was accompanied by a major debate about the constitutionality of these new agents. For a critical assessment of this debate, see Landis, *The Administrative Process*, (1938).

⁴⁸ Since we have discussed the law enforcement literature at some length in Part II of this paper, we do not address it in this section.

⁴⁹ Oliver Hart & John Moore, *Foundations of Incomplete Contracts*, 66 *Review of Economic Studies* (1999) and Eric Maskin & Jean A.F. Tirole, *Unforeseen Contingencies and Incomplete Contracts*, 66 *Review of Economic Studies* 83 (1999).

⁵⁰ Sanford J. Grossman & Oliver D. Hart, *The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration*, 94 *J. Pol. Econ.* 691 (1986; Oliver Hart & John Moore, *Property Rights and the Nature of the Firm*, 98 *J. Pol. Econ.* 1119 (1990; Oliver Hart, *Firms, Contracts, and Financial Structure*, 228 (1995)

the asset. The incompleteness of contracts literature has only begun to be absorbed by legal scholars.⁵¹

The main difference between the theory of the incompleteness of law and the theory of the incompleteness of contracts is the subject of inquiry. The incompleteness of contracts literature is concerned with private contracts among economic agents and seeks to optimize the allocation of residual rights in economic efficiency terms. Our focus of analysis is the legal system, i.e. the social contract that binds lawmakers, law enforcers and all individuals under their jurisdiction for a long (potentially indefinite) period of time. The different subjects of inquiry imply different objectives. A major concern for the allocation of residual lawmaking and law enforcement powers that we posited at the outset of our analysis is that in a country governed by the rule of law, law must in principle be general and everyone is equal before the law. These principles limit the extent to which law enforcement can be optimized by writing as complete law as might be possible under efficiency considerations only (i.e. by writing multiple single case laws). They also limit the scope for renegotiation, as retroactive lawmaking is limited especially in the area of criminal law. The incompleteness of contracts theory does not face similar constraints but can experiment more freely with the optimal allocation of residual rights of contracts and strategies to enhance the completeness of contracts.

2. Indeterminacy of Law

Lawyers are familiar with the basic notion that neither statutory nor case law can unambiguously predict the outcome of a particular case. They tend to associate this notion with the concept of “legal indeterminacy”. Scholars of legal indeterminacy have long argued that it is a fundamental feature of human predicament that we simply cannot “regulate, unambiguously and

⁵¹ For a careful analysis of the implications of the theory on the incompleteness of law for legal analysis, compare Karen Eggleston, Eric A. Posner et al., *Simplicity and Complexity in Contracts*, John M. Olin Law

in advance, some spheres of conduct by means of general standards to be used without further official direction on particular outcomes”.⁵² The reason is that the world is too complex. In the words of H.L.A. Hart, “If the world in which we live were characterized only by a finite number of features, and these together with all the modes in which they could combine were known to us, then provision could be made in advance for every possibility (...)” And he adds, “plainly this world is not our world.”⁵³ The theories of incompleteness of contract or incompleteness of law do not have much to add to this description of the state of our world. Still, there are good reasons to keep the concepts of legal indeterminacy and incompleteness of the law apart from each other. Most importantly, they have different agendas and they use different analytical tools.

The indeterminacy debate has a strong normative connotation. It questions the long held assumption that legal rules developed in case law or stipulated in statutory law can unambiguously resolve cases. The idea that judges are subject to the law and nothing but the law is closely associated with this notion, often described as legal formalism. The “discovery” that law is not as firm a guide for resolving cases as legal formalists would have it, has shed doubts on the administration of justice. Radical critiques have used the concept of legal indeterminacy to argue that “Law is politics” and to debunk the concept of the rule of law as a myth. Since law does not determine the outcome of a particular dispute, other factors must, including political preferences of judges or the political cloud of the parties to the dispute.

There is a range of more nuanced uses of the concept.⁵⁴ Many have rejected the radical notion of indeterminacy and distinguish the law’s ability to *determine* outcome (which it cannot) from the law’s ability to *constrain* outcomes (which it does). The emerging consensus appears to be that law is neither radically indeterminate, but nor is law radically determinate. More recently the “indeterminacy” concept has been used to explain the political economy of rule making. It has

& Economics Working Paper (2000).

⁵² H.L.A. Hart, *The Concept of Law*, (1961) second edition 1994 at p. 128.

⁵³ Ibid

been suggested, for example, that the legal profession in the state of Delaware has a vested interest in writing highly indeterminate corporate law, because this gives it a comparative advantage over other states. Delaware competes with these states for incorporation of major companies and they could easily copy Delaware law – as some have done – to undermine Delaware’s dominant role. Indeterminate law, however, requires greater involvement of legal professionals. The specialization of the legal profession in corporate law is difficult to emulate by other jurisdictions, but will be valued by shareholders and other ‘consumers’ of the law.⁵⁵ While this may be a plausible explanation for Delaware’s comparative advantage in corporate law, there is no attempt to develop a theory of the optimal level of indeterminacy of corporate law or of the design of institutions, even as only a second best option, once it is acknowledged that law is inherently indeterminate.

Our goal is to develop such a theory. In particular, we investigate possible institutional responses to the problem of incompleteness of the law. Our focus is on the allocation of residual lawmaking and law enforcement powers and the tradeoffs between allocating these powers to different agents. We do not propose that a reallocation of lawmaking and law enforcement powers would solve the incompleteness of law problem. Since law is intrinsically incomplete, this is futile. However, we do attempt to determine, which among several second best options is superior given certain conditions and constraints that we identify.

Our approach differs from the indeterminacy debate also in other respects. Most importantly, our goal is to offer a positive theory about law, not to seek normative solutions. In this paper we only seek to establish that law is incomplete and that the incompleteness of law implies that law cannot effectively deter, but that a well designed allocation of residual lawmaking and law enforcement powers can enhance, even if not perfect, law enforcement. While we derive some

⁵⁴ For an excellent summary of this debate with further references, see Lawrence B. Solum, *Indeterminacy, A Companion to Philosophy of Law and Legal Theory* Dennis Patterson ed. 2 488 (1999) at pp. 489.

⁵⁵ See Ehud Kamar, *Costs of Departure from Formalism: Shareholder Litigation Under Indeterminate Corporate Law*, 66 *University of Chicago Law Review* 887 (1999).

suggestions about the ‘optimal design’ of law enforcement institutions in light of the incompleteness of law, this is part of our analytical framework and is not meant to offer normative solutions for lawmaking or the allocation of law enforcement powers, at least not at this stage.

The two theories – legal indeterminacy and incompleteness of law - may lead to similar results. Since law cannot determine outcome, proponents of the indeterminacy theory must also acknowledge that law cannot fully deter behavior.⁵⁶ Both concepts recognize that reactive law enforcement contains an element of lawmaking, precisely because law cannot be fully specified ex ante. Both recognize the limitations of purely “ex post facto” law enforcement. H.L.A. Hart expounded some forty years ago that “Sometimes the sphere to be legally controlled is recognized from the start as one in which the features of individual cases will vary so much in socially important but unpredictable respects, that uniform rules to be applied from case to case without further official direction cannot usefully be framed by the legislature in advance. Accordingly, to regulate such a sphere the legislature sets up very general standards and then delegates to an administrative, rule-making body acquainted with the varying types of case, the task of fashioning rules adapted to their special needs.”⁵⁷ Our definition of the functions of proactive lawmaking by regulators is very similar to the functions Hart attributes to administrative rule. The difference is that in Hart’s analysis, this insight is only one element in broader theory on the concept of law and the function of courts. By contrast, the design of optimal enforcement mechanisms under incomplete law is the very core of our theory.

There are also notable differences in conclusions both theories draw. We argued above that core features of the rule of law, such as generality of law so that it can be applied to an indefinite number of addressees, and the principle of equality before the law, imply that the law is highly incomplete. This proposition stands in contrast certainly to the radical version of the

⁵⁶ For the most part, the literature does not explicitly address this problem, presumably because it addresses a function of law that most lawyers would regard to be over-simplistic.

indeterminacy proposition, which holds that indeterminacy and rule of law are incompatible.⁵⁸

The indeterminacy debate seeks to critique or reconcile – depending on which side of the debate one stands - basic principles of justice and rule of law with the fact that law does not determine outcome, but at best constrains the choices law enforcers face. By contrast, our argument is closer to Hayek’s proposition that writing highly specific rules may at least in the extreme violate the principles of generality of and equality before the law and thus is at odds with the basic notion of the rule of law.⁵⁹ But we differ also from him in that we do not take a normative stand on whether incomplete law is good or bad. We simply assert that from our theoretical vantage point, general rules designed to address multiple actors and to remain unchanged for long periods of time are inherently incomplete. Given this starting point, the task for any legal system is to allocate residual lawmaking as well as law enforcement powers in a manner that ensures optimal law enforcement.

3. Theories on Regulation

There is a substantial literature on regulation both in economics and in law. As mentioned earlier, economists treat regulation typically as an intervention by the state that is designed to

⁵⁷ H.L.A. Hart, *The Concept of Law*, (1961) (2nd edition) at p. 131.

⁵⁸ Even Hart *The Concept of Law*, (1961) seems to subscribe to this result, as he does not disqualify it on first principles, but argues that the indeterminacy of law is counteracted by the invention of courts that can make authoritative judgments. “(...) the existence of a court entails the existence of secondary rules conferring jurisdiction on a changing succession of individuals and so making their decision authoritative.” Ibid at p. 136.

⁵⁹ Hayek has argued that any attempt to write precise law undermines the impartiality of the legislatures and is therefore inconsistent with the rule of law: “If the state is precisely to foresee the incidence of its actions, it means that it can leave those affected no choice. Wherever the state can exactly foresee effects on particular people of alternative courses of action, it is also the state, which chooses between the different ends. If we want to create new opportunities open to all, to offer chances of which people can make what use they like, the precise results cannot be foreseen. General rules, genuine laws as distinguished from specific orders, must therefore be intended to operate in circumstances which cannot be foreseen in detail, and, therefore, their effect on particular ends or particular people cannot be known beforehand. It is in this sense alone that it is at all possible for the legislator to be impartial. To be impartial means to have no answer to a certain questions - the kind of questions, which, if we have to decide them, we decide by

address market failures. The means to do so is typically the enactment of rules designed to direct behavior.⁶⁰ Our theory differs from this approach in that we do not treat regulation as a substitute to, but as a key institution for the functioning of markets. The definition of regulation as any form of state intervention does not allow for distinctions between legislatures, courts, and regulators as lawmakers and law enforcers. By contrast, we identify structural differences in the timing and process of lawmaking and law enforcement that distinguishes these agents and that helps explain why under certain conditions vesting one or the other with residual lawmaking and law enforcement powers may be superior. An important aspect of our argument is that the functions that regulators perform cannot be performed by courts, as this would violate their role as impartial arbiters. In fact, if the same proactive enforcement and ex ante lawmaking rights were performed by courts, this would turn them into regulators.⁶¹

We are not the first to suggest that enforcement by regulators may, under certain conditions, be an improvement over law enforcement by courts. A recent paper suggests that enforcement by regulators may be more effective than enforcement by courts when enforcement entails the need to invest in costly collection of evidence, because it is easier to design incentives for regulators than for courts to optimize their law enforcement activities.⁶² Our theory differs also differs from this approach. We follow Glaeser and Shleifer in arguing that regulators have a potential role in law enforcement that is different from courts, and that may be more effective than court

tossing a coin. In a world where everything was precisely foreseen, the state could hardly do anything and remain impartial." Friedrich A. von Hayek, *The Road to Serfdom*, (1944) p. [].

⁶⁰ See our discussion of Posner and Laffont above at text accompanying footnote 41.

⁶¹ Obviously, a fully developed positive theory of regulation would have to account for the process by which new forms of law enforcement (proactive as opposed to reactive) become law, which requires a full account of political dynamics. Nevertheless, the fact that many countries when faced with the problem of rapid socioeconomic change selected similar solutions does suggest that politics – which we presume to be different across countries and serve different interest groups – cannot fully explain the emergence of regulators.

⁶² Edward Glaeser, Simon Johnson et al., *Coase vs. Coasians*, 116 Quarterly Journal of Economics 853 (2001). For related arguments on the importance of securities market regulation in transition economies and emerging markets, compare Jack C. Jr. Coffee, *Privatization and Corporate Governance: The Lessons from Securities Market Failure*, 25 J. Corp. L. 1 (1999); Katharina Pistor, *Law as a Determinant for Stockmarket Development in Eastern Europe*, Assessing the Value of Law in Transition Economies Peter Murrell 249

enforcement. In contrast to Glaeser et al, however, we are less interested in incentive problems. Instead, we rest our argument on the notion of the incompleteness of law. The thrust of our argument is that even if we assume that both courts and regulators can be optimally incentivized, there may be a need for regulators in addition to courts to ensure effective law enforcement when law is incomplete.

Our argument differs also from the public choice literature on regulation, which was inspired by the work of Stigler and Posner in the early 1970s.⁶³ The emergence of regulators and the regulatory state is explained in this literature primarily by the ability of special interest groups to establish an agency that would protect or enhance their interests. Over the past thirty years, the literature has moved away from the explanation as to why regulators exist, to explaining the behavior of regulators. Meanwhile this approach has come under increasing criticism for failing to fully account for the justification as well as the behavior of regulators.⁶⁴ In particular, recent behavioral and psychological research, including controlled experiments, have shown that individuals act not only in their own self interest, and this literature has questioned the basic assumptions of the public choice literature.⁶⁵

(2001) and Bernard Black, *The Legal and Institutional Preconditions for Strong Securities Markets*, 48 *UCLA L. Rev.* (2000).

⁶³ Joseph Stigler, *The Theory of Economic Regulation*, *Bell Journal of Economics* (1971); Richard Posner, *Theories of Economic Regulation*, 5 *Bell Journal of Economic Management* 335 (1974).

⁶⁴ In what might be regarded a comprehensive critique of the public choice literature, Cass Sunstein, *After the Rights Revolution: Reconceiving the Regulatory State*, (1990) identifies eight ends for which regulation may be undertaken (Ibid at pp. 48): response to market failure; public-interested redistribution of resources; achievement of collective desires and aspirations; promotion of diverse experiences and preferences; reduction of social subordination; the reduction of undesirable preferences, the prevention of outcomes that may prove irreversible and harmful to future generations, and achievements of interest group transfers. Note that some of these explanations are fully consistent with our theory, in particular the desire to prevent outcomes that may prove irreversible. As we argued above, in these cases reactive enforcement by the courts is not sufficient and thus a shift of law enforcement rights to proactive enforcers, such as regulators, becomes crucial.

⁶⁵ The change in the administrative law literature is reflected in a recent special issue of the *Cornell Law Review* (Volume 87, No. 2, January 2002) devoted to a Symposium held at Cornell Law School, entitled "Getting Beyond Cynicism: New Theories of the Regulatory State". At this symposium, the public choice perspective was represented by Jonathan R. Macey, *Cynicism and Trust in Politics and Constitutional Theory*, 87 *Cornell L. Rev.* 280 (2002). Most of the other papers present alternatives for understanding the functioning of regulators. See, for example, Edward L. Rubin, *Public Choice, Phenomenology, and the Meaning of the Modern State: Keep the Bathwater, but Throw Out that Baby*, 87 *Cornell L. Rev.* 309 (2002). For an approach that makes use of cognitive psychology, see Jeffrey J. Rachlinski & Cynthia R.

We share the interest in the emergence of or the justification for regulators with the early public choice literature, as well as some of its critiques. Our explanation differs from both in our focus on law enforcement. Moreover, while the behavior of regulators has become the focus of much research in the public choice literature as well as among its opponents, we currently abstract from factors that might explain behavior. Our theory does not exclude the possibility that shifts in political bargaining power explain the timing for the establishment of regulators and the powers allocated to them, but we suggest that the particular design features of regulators and their functions has not been fully explained in the existing literature. Moreover, we find that regulatory functions as defined here - proactive law enforcement and continuous lawmaking - emerged in different countries in response to very similar events, namely the growth of stock markets and the challenges transactions in securities posed to the existing enforcement mechanisms (see Part V of this paper). This finding is difficult to reconcile with the prevailing public choice explanations, which focuses almost exclusively on the United States.

Our theory of the incompleteness of law is probably closest to Goldberg's work⁶⁶ Goldberg suggested twenty five years ago that regulation might best be understood as a device to manage long term contracts, which create serious enforcement problems. This argument can be easily extended to the analysis of law understood as social contract between the state and multiple current and future addressees.

Farina, *Cognitive Psychology and Optimal Government Design*, 87 Cornell L. Rev. 549 (2002). The differences between the various approaches to analyzing agency behavior in the administrative law literature is neatly captured in the essay by Jerry L. Mashaw, *Essay: Deconstructing Debate: Reconstructing Law*, 87 Cornell L. Rev. 682 (2002) who describes the two fractions as "idealists" and "realists".

⁶⁶ Victor Goldberg, *Regulation and Administered Contracts*, 7 Bell Journal of Economics 426 (1976). A similar argument is made by Priest in his analysis of the historical origins of utilities regulation. See George L. Priest, *The Origins of Utility Regulation and the Theories of Regulation Debate*, 36 J.L. & Econ. 289 (1993).

4. Contemporary Observations

Our theory is largely consistent with analytical accounts by contemporary observers of the emergence of state regulation of financial markets. Landis, the first chairman of the US Securities and Exchange Commission (SEC), explains the emergence of the administrative process, which today is usually referred to as the regulatory state, in his 1938 book with the growing complexity of social and economic relations in the process of industrialization on the one hand, and the inadequacy of judicial law making and law enforcement under this conditions on the other.⁶⁷

He views the rationale for the emergence of the administrative process as the need for “uninterrupted supervisory interest” - what we call monitoring – which he describes as “incompatible with the demands of judicial office”⁶⁸, and uniformity in the approach to different cases, which can be achieved by the judiciary process only through the time consuming process of appeal to higher courts.⁶⁹ In addition, he argues that the process of litigation has left “too much in the way of the enforcement of claims and interests to private initiative”.⁷⁰ The slow process of adjudication created “the demand for a power to initiate action”.⁷¹ This was the case in particular in areas of substantial inequality of economic power between potential litigants. While this can be remedied in part by shifting the prima facie burden of proof, ultimately a state agent with the power to initiate law enforcement is required. Landis also points out that an important distinction between the judicial process and the administrative process is the latter’s power of independent investigation, which he deems crucial both for initiating enforcement and for the development of adequate rules.

⁶⁷ Landis (1938) quoted in note [] above.

⁶⁸ Ibid at p. 33.

⁶⁹ He adds to these considerations that lawmaking in some areas requires practical expertise rather than general judicial reasoning (“there are certain fields where the making of law springs less from generalizations and principles drawn from the majestic authority of textbooks and cases, than from a “practical” judgment...”).

⁷⁰ Ibid at p. 34

⁷¹ Ibid at p. 35.

Landis clearly recognizes that the administrative process often combines lawmaking and law enforcement functions that in accordance with the classic division of powers have been allocated with different branches of the government.⁷² However, he points out that the type of remedies effectuated by the administrative process differ from enforcement mechanisms imposed by courts. Moreover, he argues that this combination was a response to the inadequacies of the judicial process. Judges and judge made law were slow to respond to changes in the environment and sometimes even used their lawmaking power to dislodge attempts by the legislature to modernize the law.⁷³ Landis points to the importance of coordination between policy-making and enforcement when regulating the industrial enterprise. Only such a coordinated effort can ensure effective enforcement . He also shows that the administrative process is not without checks, even when lawmaking and law enforcement functions are combined in one agency. The most important checks he lists include the narrow field of activity of regulators as compared to courts; the professionalism of the regulator; the need to produce facts to sustain an order; and the independence of administrative tribunals, which is ensured by a division of labor within the administration; and judicial review of administrative orders.

5. Summary

The theory of the incompleteness of the law is closely related to a number of existing theories and consistent with contemporary analysis of the emergence of financial market regulation in the first half of the 20th century. Its novelty is that it offers a new coherent analytical framework for

⁷² “No one can fail to recognize that there are dangers implicit in this combination of functions in an administrative agency”, p. 56.

⁷³ This one statement seems to be consistent with the claim made by Glaeser and Shleifer in a recent paper that the emergence of the regulatory state can be explained by the fact that the judiciary yielded to strong economic interests. See Glaeser and Shleifer []. However, there is little further substantiation of this claim in the text. In fact, Landis’ observations seem to be more consistent with our claim that incompleteness of law rendered existing lawmaking and law enforcement mechanisms ineffective in an area as highly susceptible to socioeconomic change and as loaded with potential negative externalities as financial market

analyzing the design and evolution of legal systems. Incompleteness of the law is the foundation of this analytical framework. The allocation of residual lawmaking and law enforcement powers and the detailed analysis of how institutions differ in the way in which they use these powers are its analytical tools. In this paper we use this framework for analyzing law enforcement, but the implications of this theory go much further. In particular, the theory can be used to compare legal systems, as suggested by our brief discussion of civil law vs. common law countries and to analyze lawmaking and law enforcement in countries where the choice of legal institutions may be more limited.

IV. The Evolution of Financial Market Regulation in England

In this part of the paper we use the development of financial market regulation in England as a case study as an illustration for the theoretical framework that was developed in Part I. Since financial market regulation is too broad a subject, we limit the analysis to the disclosure regime for initial public offerings and listing on stock markets.

The choice of jurisdiction was motivated by several factors. England was not only the first industrializing economy, but also among the first to develop a sophisticated financial market for corporate securities.⁷⁴ Being the mother country of the common law, England offers an excellent case for testing the effectiveness of judge made law in coping with challenges of rapid socioeconomic and technological change that accompanied the development of financial markets. Common law is known to evolve incrementally as new cases are brought to court. In fact, a major part of judicial reasoning is to distinguish new cases from old ones and to determine, whether

regulation. We are grateful to Andrei Shleifer for pointing us to Landis' book as an important source for understanding the emergence of the regulatory state.

⁷⁴ Arguably, the Netherlands had the first market in corporate securities after the floating of the shares of the Dutch East Indian Company, which was founded in 1602.

existing law extends to factually new cases. While theorists of the common law do not use the term “incompleteness of the law”, the idea that the common law is constantly challenged by new developments is widely acknowledged.⁷⁵ As noted above, some scholars have argued that this process is more likely to achieve efficient law than top down imposed legislated law.⁷⁶ Using the case law on misrepresentation of information as an example, we seek to explore the effectiveness of lawmaking and law enforcement in the hands of courts in an area that was and still is highly susceptible to socioeconomic and technological change, and that is likely to suffer from negative externalities as a result of harmful actions.

Moreover, in light of the extensive literature on the emergence of the regulatory state in the U.S. since the late 19th century, it seems advisable to focus on another country, where political and economic conditions were quite different. In fact, financial market regulation in the United Kingdom has been lauded as vastly superior to the regulatory model that was created in the U.S. following the 1929 stock market crash.⁷⁷ However, closer inspection reveals that regulatory functions emerged in England long before the Big Bang reforms of 1986. Since the late nineteenth century, the Companies Act incorporated many provisions on disclosure that later became part of the securities regulations in the United States. Further, the London Stock Exchange gradually assumed the right to screen companies that wished to list on the exchange, and to issue disclosure rules.⁷⁸ As we will explain below, these powers were not as extensive as those exercised by the New York Stock Exchange (NYSE), but they existed nevertheless. In addition, the Department of Trade and Industry as well as Company registrars carried out some

⁷⁵ Compare only standard text books on legal methods, such as Jane C. Ginsburg, *Legal Methods - Cases and Materials*, (1996).

⁷⁶ See Rubin and Priest op cit. at [].

⁷⁷ See only George J. Stigler, *Public Regulation of the Securities Markets*, XXVII *Journal of Business* 117 (1964) and George J. Benston, *Corporate Financial Disclosure in the UK and the USA*, (1976). For a more recent attack on federal regulation of financial markets, compare Roberta Romano, *Empowering Investors: A Market Approach to Securities Regulation*, 107 *The Yale Law Journal* 2359 (1998).

⁷⁸ For the purpose of this paper, we do not distinguish between state and non-state regulators. The reason is that we focus our analysis on the responsibility of issuers of securities to ensure that investors receive relevant and truthful information about the undertaking in which they are about to invest. From the

functions that were centralized in the US style securities regulation. We find similar trends in Germany, the third comparative case included in this study. Observing a similar shift from reactive to proactive law enforcement and a reallocation of lawmaking powers to regulators (be they state or private) suggests that other factors might have been at work than usually addressed in the public choice literature.

Finally, recent literature attributes the emergence of financial market regulation to failures in the judicial system, in particular to endemic judicial corruption in the United States in the nineteenth century.⁷⁹ While there are some allegations that English courts were less rigorous with well-off gentlemen who came before them as directors or company promoters than with little thieves or embezzlers,⁸⁰ there is less concern with judicial failure. Since we argue that regulation emerged in a response to the fundamental problem of incompleteness of the law, which even a well-functioning court system could not solve, we choose a country that is less tarnished by judicial mal-performance during this crucial period.

In the subsequent analysis, we first address the evolution of contract and tort law in relation to misrepresentation of information in a prospectus (1). In section (2) we analyze the legislative responses to the challenges posed by the evolving securities market. Finally, in section 3 the emergence of a regulatory framework is discussed, which added proactive law enforcement by a regulator to the classic reactive law enforcement by courts.

1) The Incompleteness Criminal, Contract and Tort Law

perspective of the issuer, however, the distinction between state and non-state regulators is less important than the function performed by these agents.

⁷⁹ John C. Jr. Coffee, *The Rise of Dispersed Ownership: The Roles of Law and the State in the Separation of Ownership and Control*, 111 *Yale L.J.* 1 (2001). A similar argument has been advanced shortly afterwards by Edward Glaeser & Andrei Shleifer, *The Rise of the Regulatory State*, unpublished mimeo (2002).

⁸⁰ George Robb, *White-Collar Crime in Modern England: Financial Fraud and Business Morality, 1845-1929*, (1992).

England was the first country to develop a liquid market in corporate securities.⁸¹ The emergence of a market for financial instruments raised the fundamental question, whether and to what extent existing law was applicable to these transactions. Under English law, shares were considered personal property, which could be used and transferred as any other asset. By implication, general principles of criminal, contract, and tort law applied. The major principles of these areas of the law had been developed over centuries. The evolving market in securities rendered many of these principles highly incomplete as transactions in rights embodied in paper challenged basic assumptions that had earlier determined the threshold for criminal or civil liability, and the allocation of risks between the parties to the transaction.

The case and statutory law we discuss below was not selected to demonstrate bad lawmaking by either courts or legislatures. While arguably courts in England could have taken more radical decisions and developed the law further so as to prevent legislative intervention, the decisions are firmly embedded in existing legal doctrines at the time. The point we want to make is not that bad law existed or was made. The point is that changes in the socioeconomic environment rendered law that was perfectly appropriate for a given set of cases highly incomplete when applied to a new set of cases. Thus, the quality of the law we are interested in, is its ability to deal with unforeseen future contingencies.

a) Criminal law

⁸¹ Even in this country corporate securities surpassed government bonds as the dominant paper traded on stock exchanges only in the second half of the nineteenth century. In 1853, 70.2 percent of the securities had been issued by the British government or other UK public bodies. In 1900 they accounted only for 13.5%. The most substantial increase came from securities issued by financial institutions (increase from 1.1% in 1853 to 6.4% in 1900) and commercial enterprises (increase from 1.8% in 1853 to 9.6% in 1900). Railway securities made up the largest fraction of non-state securities (18.5% in 1853, 43.4% in 1900), but the growth can be largely attributed to listings of foreign, in particular, of US railway companies. For details, see Table 3.2 and 3.3 in Ranald C. Michie, *The London Stock Exchange: A History*, (1999) at pp. 88, 89.

As other areas of the law, criminal law in England developed primarily through case law. The first statutory law to address the scope of criminal liability of those responsible for publishing and disseminating a prospectus was the Larceny Act of 1861.⁸² It established criminal liability for directors, company managers, and others who *knowingly* included in the prospectus false information that was material.⁸³ The act clearly requires intent, which not only proved difficult to establish (a problem of evidence), but raised the more fundamental legal question about the appropriate threshold of liability for the actions concerned.⁸⁴ It is also noteworthy that the crime is only a misdemeanor, not a felony. Moreover, the Act addresses only the inclusion of false information, not the omission thereof. Case law increasingly revealed that the lack of disclosure was at least as damaging to investors as the inclusion of false information.

Comprehensive criminal statistics are not available, but secondary sources suggest that only relatively few criminal charges were brought successfully against key figures in the speculative bubbles that England experienced in the nineteenth and early twentieth century.⁸⁵ One explanation is the rather high threshold criminal charges must meet in specifying the types of actions that would be punishable.⁸⁶ This is fully consistent with out theoretical analysis. Recall that criminal law is subject to the *nulla poena sine lege* constraint, which constraints state power to prosecute and punish only on the basis of a firm legal foundation. At the same time, this makes criminal law incomplete in the sense of Type II incompleteness.

⁸² Larceny Act, 1861 (24 & 25 Vict. c. 96), s. 84

⁸³ The exact wording is: "Whosoever, being a director, manager, or public officer of any body corporate or public company, shall make, circulate, or publish, or concur in making, circulating, or publishing, any written statement or account which he shall know to be false in any material particular, with intent to induce any person to entrust or advance any property to such body corporate or public company shall be guilty of a misdemeanor.".

⁸⁴ See the discussion under [] below.

⁸⁵ For a detailed account, compare George Robb, *White-Collar Crime in Modern England: Financial Fraud and Business Morality, 1845-1929*, (1992).

⁸⁶ Another reason is the lack of capacity. In this regard it is noteworthy that England established a public prosecutor only in the 1870s. Previously, victims of criminal acts acted as prosecutors. Compare David Philips, *Crime and Authority in Victorian England*, (1977). Fraud actions were notoriously difficult to prove. Only after WWII was an Anti-Fraud taskforce established at Scotland Yard. The Roskill Report completed in 1986 still found fraud prevention still highly wanting. This led to the creation of the Serious Fraud Office (SFO), which is part of the UK criminal justice system.

Over time, the courts relaxed these principles somewhat, but only reluctantly, as demonstrated in a finally successful criminal charge against a famous company promoter of the 1920s, Kysant. The prospectus of a mail steam shipping company promoted by the defendant disclosed adequate figures about the performance history of the company in question. It did not mention, however, that in recent years business had slowed considerably and the company had made substantial trading losses. The court considered the 1861 Larceny Act, which establishes criminal liability only for the inclusion of wrongful information. In an appeal against the lower court's conviction, the court had to clarify whether it was permissible in criminal law to extend the wording of the statute and convict under the law for omitting information from a prospectus. The court held that although a criminal act must be "strictly construed", a criminal conviction was possible. It argued that criminal liability for omitting facts was covered by the wording of the statute. Even when each statement in the prospectus was literally true, the entire prospectus could be regarded as false, because of what it failed to state.⁸⁷ This clarification came over sixty years after the Larceny Act had been adopted.

Nevertheless, criminal convictions remained a rare event. The legislature attempted to enhance the state's ability to punish violators by revising criminal statutes as well as by allocating additional resources to law enforcement agencies. In 1939, the Prevention of Fraud (Investments) Act was adopted to address the outbreak of fraudulent share pushing in the late 1930s. The Act was replaced in 1958 by an Act of the same name. It extends criminal liability to reckless inclusion of wrongful information in secondary offerings and also mentions the omission of material facts, where previously only intentional acts could be punished.⁸⁸ In addition, the Act

⁸⁷ Rex v. Kysant, C.C.A. 1931. 1 K.B. [1932], 442.

⁸⁸ Prevention of Fraud (Investments) Act, 1958, 6 & 7 Eliz. 2, 380. Art. 13 (1) (a) of the Act stipulates that "any person who, by any statement, promise or forecast which he knows to be misleading, false or deceptive, or by any dishonest concealment of material facts, or by the reckless making of any statement, promise or forecast which is misleading, false or deceptive, induces or attempts to induce another person to enter into or offer to enter into any agreement for, or with a view to, acquiring, disposing of, subscribing for or underwriting securities (...) shall be guilty of an offence, and liable to imprisonment for a term not exceeding seven years."

now imposed criminal liability on the dissemination of information concerning the issuance of securities unless this was done by way of a prospectus that complied with the provisions of the Companies Act – even if the information as such was correct.⁸⁹

The most important recent attempt to enhance criminal law enforcement in this area was the enactment of the fraud prevention act and the creation of a special state agency, the Serious Fraud Office in 1988, charged with investigating and prosecuting major fraud cases.⁹⁰ The establishment of this agency came in response to short fallings of the existing justice system to deter and prosecute major fraud cases. Existing law was regarded as insufficient and the creation of the SFO was also seen as a way to support the development of more sophisticated laws to deal with cases of serious fraud. While the SFO does not exercise residual lawmaking powers, it helps prepare acts of parliament. It also supports law enforcement activities of the prosecution. Although it is one step removed from lawmaking and law enforcement, it thus combines important functions that we have associated with a regulator.

b) Contract Law

Contractual claims under common law require the existence of a contractual relation between buyer and seller. They could therefore be brought only by investors who bought securities directly from the person (or agent) responsible for the misrepresentation of information, not by shareholders who acquired their shares on the secondary market. Contractual relations establish special obligations between the parties neither of them owes to others, which makes contractual claims relatively easy to establish. At the same time, courts sought to balance the rights and responsibilities of the contracting parties. One doctrine they developed along those lines is *caveat*

⁸⁹ See Art. 14 Prevention of Fraud (Investments) Act. See also L.C. B. Gower, *Review of Investor Protection*, (1982) p. 20 footnote 27.

⁹⁰ <http://www.sfo.gov.uk/about/creation.asp>.

emptor (let the buyer beware). The rule dates back to the early sixteenth century.⁹¹ Under this rule, failure to examine a good properly destroys a claim based on contract. The doctrine assumes that both parties have equal access to information and reflects what was perceived to be a natural allocation of responsibilities between buyer and seller with naturally conflicting interests. Trade in financial instruments differed from trade in real assets in that it was more difficult for the buyer to examine the good he was buying. In fact, reliance on information provided by others, including the seller or intermediary, is the hallmark of financial market transactions. When transactions in securities expanded, the courts therefore faced the challenge of redefining the scope of the seller's obligation to provide the buyer with information and the scope of the buyer's obligation to make use of sources of information that were readily available to him.

The most important contractual remedy is rescission, i.e. the unwinding of the contractual relationship. Existing contract law ruled out the right to rescind a contract, if the buyer had affirmed it after he had discovered the facts that allowed him to rescind the contract. An obvious case is the continuous use of the good. The complex relationship between investor/shareholders and the corporation raised new questions as to what amounted to an affirmation of contracts: selling the shares? Advising a broker to sell them? Attending a shareholder meeting?

Finally, courts had to come to terms with the problem of balancing the rights of shareholders and creditors in a company with limited liability. The first statutory corporate law of England, the Companies Act of 1844 allowed for the free incorporation of companies subject only to registration, but did not grant shareholders limited liability by law. This was accomplished only in 1855. The implication of this change was that creditors contracted only with the corporation, not with the shareholders and therefore could enforce their claims only against the former, not the latter. This new arrangement affected the contractual relation between the company and its shareholders. Should they be allowed to rescind the contract even when the

⁹¹ The formulation of this doctrine apparently goes back to Anthony Fitzherert's *Booke of Husbandrie*, 1524 § 118, in which he warns the potential buyer of a horse: „If he be tamed and have been ridden upon,

company was bankrupt with the implication that they would receive their money back before creditors could enforce their claims?

The following analysis will discuss how courts have handled these three problem areas, caveat emptor, affirmation of contracts, and the balancing of shareholders' and creditors' contractual rights.⁹²

i) Caveat emptor

To illustrate the incompleteness of existing contract law with respect to trade in securities consider the following case. In 1865, Mr. Briggs acquired shares in a malt company. He had read the prospectus, which listed the production and storage of hops and malts as the firm's main business activities. He was not aware, however, that the provisions of the prospectus were inconsistent with provisions in the articles of association. The latter were accessible through the Registrar of Companies and, indeed, the prospectus explicitly referred to this document. Mr. Briggs consulted the articles of association only *after* the shares had been allotted, and discovered a clause that permitted the directors of the company "to make advances of money upon hops and other produce to the growers, producers, or sellers thereof, and to such other persons as they shall think fit, and upon such security, negotiable or otherwise, as they shall deem expedient." In other words, beyond the production and storage activities, the company also purported to engage in financial activities. Upon learning this, Mr. Briggs advised his broker to sell the shares and when this was impossible, because trading in the shares had been suspended, he sought to rescind the contract. The court argued that "the applicant for shares cannot plead ignorance of the clauses of the articles of associations".⁹³ Affirming the applicability of *caveat emptor* to transactions in

then caveat emptor. "Heinz-Dieter Assmann, *Prospekthaftung*, (1985) p. 21 footnote 18.

⁹² The three areas are only a selection of the legal challenges transactions in securities posed to lawmakers and law enforcers, but a very instructive one.

⁹³ *Ex parte Briggs* (1866) LR 1 Eq 483 at p. 484.

securities, the court made it thus clear that it was the duty of the buyer to consult material readily accessible to him. Nevertheless, it did not take a final view on this issue, because it rejected the appeal for different reasons.⁹⁴

This ruling did not put matters to rest. The law was still incomplete, because it did not specify, how far the buyer's obligation to inform himself would go. In a case decided only a year later by the House of Lords, it was held that where the prospectus was plainly false, the seller could not defend himself by suggesting "that he might have known the truth by proper inquiry".⁹⁵ The relevant prospectus had disguised the fact that the concession for constructing a railway in Venezuela had yet to be acquired from middlemen, and that the cost of this transaction would consume ten percent of the capital the company was claiming to raise for the purpose of exploration. Instead, the prospectus created the impression that the necessary concessions had already been acquired. Under these circumstances, the buyer had every right in the words of Lord Chelmsford to 'retort upon his objector', "You, at least, who have stated what is untrue, or have concealed the truth, for the purpose of drawing me into a contract, cannot accuse me of want of caution because I relied implicitly upon your fairness and honesty."⁹⁶

Given the information asymmetry between parties to securities transactions, the courts qualified the *caveat emptor* doctrine, so that dishonest issuers could not use it as a simple defense. The result was that now the doctrine became less rigid, creating Type I incomplete law (broad, ambiguously defined standard). The scope of contractual remedies was enlarged, but at the cost of greater uncertainty about the obligations buyers and sellers owed each other, creating more, rather than less demand for clarifying litigation.

ii) Affirmation of contract

⁹⁴ See below under Affirmation of Contracts.

⁹⁵ *Directors of Central Railway of Venezuela v. Kisch* (1867) L.R. 2. H.L. 99

Under contract law as it existed by mid-nineteenth century, a claim to rescind a contract could fail, if the buyer took actions that affirmed the contract after he had learnt the facts that supported a rescission.⁹⁷ Existing law did not specify the types of actions that would be regarded as affirmation in the context of securities trading. Courts became increasingly concerned that buyers of securities would gamble on a happy outcome and hold the seller responsible only in case the gamble did not work in their favor.

In *Ex parte Briggs* discussed above, the court suggested that by requesting a broker to sell his shares, Briggs acted as the owner of shares, which indicated that he affirmed the contract and thus forfeited his right to rescind it. Since at the time he had knowledge of the contents of the articles of association and thus knew that facts that allowed him to rescind the contract, he implicitly affirmed the contract.⁹⁸ In the same spirit, the chancery court denied a shareholder the right to rescind a contract after he had actively supported the continuation of an investment project despite the fact that its terms clearly differed from those in the prospectus.⁹⁹ The court explained that the shareholder had the option to remonstrate at once and require that the prospectus be acted on, and otherwise rescind. After he had supported the deviation from the prospectus in an attempt to salvage the investment project, he was bound by the terms of the agreement. As a result, the company had the right to request the unpaid amount of shares he had subscribed to.

Other actions that were deemed by the courts to amount to an affirmation of contracts included attending shareholder meetings and voting on shareholder issues.¹⁰⁰ But could silence

⁹⁶ See *ibid* at p. 121.

⁹⁷ Horst Roller, *Prospekthaftung im Englischen und Deutschen Recht*, (1991) at p. [].

⁹⁸ *Ex parte Briggs* (1866) LR 1 Eq 483 at p. 487.

⁹⁹ *Sharpley v. Louth and East Coast Railway Company* (1876) 2 Ch.D. 663. In this particular case, the relevant shareholder was a local activist who strongly supported the construction of a railway of 17 miles to link the town to other places at the East coast, for which sufficient funding could not be raised. Subsequently he supported a shorter link, which eventually failed as well. [CHECK DETAILS].

¹⁰⁰ For details, see Roller *op cit* at 97 pp. [].

also be regarded as affirmation? In *re Scottish Petroleum Company*,¹⁰¹ a shareholder had subscribed to shares and paid part of the purchase price in the belief that the directors named in the prospectus would actually carry out their duties. When two of the directors resigned shortly after his shares were allotted, he requested to withdraw from the shareholder register and asked that his money be returned. The company refused and after some communication back and forth, the issue was left unresolved. A year later, the company was liquidated and the receiver demanded from the shareholder to pay up his unpaid capital. The court held that, in principle, the early resignation of the directors could justify the rescission of the contract. However, the inaction on the part of the shareholder after the company denied his request for rescission was regarded as an affirmation. While some time to take additional action is allowed for, once a shareholder knows all the facts, “he ought to lose no time in repudiating”. But what, if the shareholder did not know these facts? Could he then later rescind based on fraud? In 1896, the House of Lords argued that a shareholder who was not aware of fraud, but discovered it when the company charged him with payment for shares he had subscribed to, could rescind. He could even wait until the company sued him before he declared rescission.¹⁰²

The case demonstrates that affirmation of contracts developed a new meaning in the context of the relation between shareholders and corporations. Courts decided these cases on the basis of established legal principles. The changed law at the margin, but each new solution eventually gave rise to new litigation, as private actors tested the limits of the law or new developments questioned the scope its applicability.

iii) Rescission of Contract and Creditor Rights

¹⁰¹ (1883) C.D. 413.

¹⁰² *Aaron Reefs, Limited v. Twiss*, .L. 1896, 273.

Where rescission was possible and no affirmative action had been taken, shareholders could still lose their right to rescind to creditors of the company. Obviously, shareholders' request to have their money returned or to be relieved from the obligation to pay up the full amount they had subscribed to always put creditors potentially at risk. Yet, this was a logical result from the recognition of the concept of limited liability, which was enshrined in the law in 1855. Creditors had claims against the corporation, not directly against shareholders. But would this enable shareholders to rescind their contract after the firm had become insolvent, entered into bankruptcy, or was liquidated? Courts were called upon to specify the meaning of the highly incomplete law and to delineate the rights of shareholders from those of creditors.

In *Oakes v. Turquand*¹⁰³ the court ruled that once the creditors proceeded to enforce their claims against the corporation by filing for bankruptcy, shareholders had to live up to their responsibilities. Shareholders retained their claims against the person who cheated them, but lost their rights against the corporation. When exactly shareholders would lose their right to rescind remained subject to further litigation. In 1879 it was established that the formal commencement of liquidation procedures was not required, but that insolvency was sufficient.¹⁰⁴ The issue arose when a shareholder commenced proceedings to rescind his contract prior to the beginning of liquidation procedures, but only after the company had become insolvent. In the eyes of the court, not the formal initiation of the procedure was crucial, but the fact that after a company had become insolvent, the assumption of new liabilities was no longer an affair of the company, but of the creditors.¹⁰⁵ However, in a case, where the shareholder had filed an affidavit stating his

¹⁰³ (1867) L.R. 2 H.L. 325. Interestingly, the court itself notes the challenge posed to the law by these new companies. Lord Cranworth plainly stated that "when it became the habit and interest of persons engaged in commerce to unite in great numbers for carrying on any particular trade it soon became evident that the ordinary provisions of the laws of this country were ill adapted to the business of such bodies." See *ibid* at p. 358.

¹⁰⁴ See *Tennent v. The City of Glasgow Banks and Liquidators* (1879) H.L. 615.

¹⁰⁵ *Ibid* at p. 622.

intention to file a counter-claim before the winding-up of the company was initiated, it did not matter that rescission was declared formally only after the commencement of liquidation.¹⁰⁶

iv) Summary

The basic principles of contract law date back centuries, yet the scope of their applicability has changed over time. Differences in the nature of assets or the type of transaction render existing law incomplete. The development of securities markets created new challenges for contract law and questioned the allocation of risks and rights and responsibilities that had been developed with different transactions in mind. As the cases discussed above have shown, courts proved quite capable of adapting existing legal principles to the changing environment. But they did not succeed in creating complete law as each solution created new questions. Once courts had accepted that caveat emptor would not stand in the way of contractual remedies if the defendant was fraudulent, the door had been opened for further challenges of the doctrine. Similarly, when courts decided that only bankruptcy would stand in the way of rescission claims, they had not decided the case of insolvency. It also became apparent that contract law did not offer powerful remedies for buyers of securities. Liquid markets meant that at the time a buyer of securities discovered that something was wrong, the paper had passed hands several times and as a result the current holder did not have a contractual claim against the cheater – i.e. the corporation, its directors, or promoters. Moreover, the high turnover of companies that entered and quickly exited the market often meant that contractual claims were worthless by the time the fraud was discovered.¹⁰⁷ Many claimants therefore chose to base their claims on tort, suing

¹⁰⁶ *In re General Railway Syndicate (Whiteley's Case)* C.A. 1900, 1 Ch. 365.

¹⁰⁷ Shannon *The Limited Companies of 1866-1883*, 4 *Economic History Review* 290 (1933) at p. 292 calculates that of the 6,111 companies registered as limited liability companies in 1866-74, some 1,878 or about 31 percent were abortive; from 1875-77 the rate was 33 percent; 1878-80 45 percent.

companies, their directors and promoters for deceit.

c) Tort Remedies

Unlike contractual claims, claims based on tort do not require a contractual relation between plaintiff and defendant. Investors who relied on wrongful information could therefore invoke liability against a broader range of actors under tort principles. The downside from the cheated investor's point of view is that the threshold for tort liability is higher than for contractual claims. Tort law at the time required that the plaintiff had to prove intent or at least gross negligence to establish liability under tort rules. More importantly from the vantage point of incomplete law, the principles of tort law had been developed on the basis of assaults against property, personal integrity or life. Existing principles could be easily adapted to clear cases of embezzlement, but did not fit as well in cases of misrepresentation of information. To put simply, the evolution of securities markets necessitated the transition from a tort regime developed for "blue collar" type actions to those of "white collar" type ones, such as deceit.

By the mid nineteenth century, the basic requirements for a successful deceit claim can be summarized with the formula that "but for" the wrongful information, the other party would not have entered into the contractual arrangement. This formula was, however, of little help for determining how much weight would be placed on the wrongful information as the sole, primary, or just one of many causes that led to the acquisition of shares. Would any mistake, including misjudgments about future developments in the prospectus give rise to liability? What was required to establish intent of the seller: Must he have positively known that the information was objectively false? What, if he believed that the information was true even though this belief might have been unreasonable? And finally, would buyers on the secondary market have a claim based on tort, if they had bought securities relying on the prospectus that had been disseminated for the initial public offering?

Tort law as it existed prior to the development of securities markets did not offer clear-cut answers to most of these questions and was thus highly incomplete.

i) Misrepresentation of Information

A prospectus was the instrument used by companies and their promoters to attract investors. As such it was used as much as a document that contained information about the investment project as a tool for advertising. Since 1844, companies wishing to issue shares to the public were obliged to publish a prospectus, but the law was initially silent on the contents of this document.

In 1867, a shareholder launched a lawsuit against the company and its directors for compensation claiming that he had been misled by a provision in the prospectus stating that the directors and their friends had acquired large proportions of shares in the company. In fact, none of them had taken a substantial stake.¹⁰⁸ The shareholder argued that he had relied on this statement when subscribing to shares in the company, which meanwhile had been liquidated. An important question in this case was, whether the information about the stakes held by directors and their friend was *material* for the transaction. The court stated that it was, without, however, giving much guidance as to how to discriminate between information that was material and information that was not. Obviously, materiality is a highly incomplete concept, the context of which can hardly be determined absent a detailed knowledge of the specifics of a case. This implied that residual lawmaking powers were best allocated to an agent – such as a court – capable of exercising residual lawmaking powers after the fact.

In another case from the same year, the question arose, whether the omission of information could constitute deceit. The company in question had failed to disclose a contract that

¹⁰⁸ Henderson v. Lacon 1867, L.R. (Equity Cases), 249.

transferred a huge liability to it from the company whose legal successor it was.¹⁰⁹ While the court had no problem acknowledging that the omission of material fact could amount to a misrepresentation of information, it denied liability in this case. It argued that statutory provisions on prospectus disclosure did not include an obligation to disclose contracts. In response to this decision, the CA was amended and a provision was inserted that required that a prospectus inviting the subscription of shares “shall specify the Dates and the Names of the Parties to any Contract entered into by the Company, or the Promoters, Directors or Trustees thereof (...) and any Prospectus or Notice not specifying the same shall be deemed fraudulent...”.¹¹⁰ The provision, however, had relatively little effect. Listing all contracts proved to be more confusing than illuminating to investors and certainly did not ensure that they would spot those contracts that were potentially harmful to them. Moreover, listing the dates and names of the parties to the contracts did not reveal their contents.¹¹¹ A more comprehensive regulation of items that needed to be disclosed in a prospectus can be found in the revised CA of 1900.¹¹² The law still required that contracts were listed, but excluded contracts carried out in the ordinary course of business or those concluded more than three years prior to the publication of the prospectus.¹¹³ Moreover, companies were required to state a place and time where these contracts could be examined. These revisions reflect attempts by lawmakers to specify disclosure requirements and thereby enhance the completeness of law regulating misrepresentation of information. They also demonstrate that lawmakers went through an extensive learning process as they proved to be incapable of foreseeing future developments each time they changed the law in response to evolving case law, which revealed the continuing incompleteness of the law. By the time the CA was revised in 1928 (consolidated in 1929), a detailed schedule listing the items that needed to be

¹⁰⁹ In re Overend, Gurney & Co. (1867), L.R. 325.

¹¹⁰ See Art. [38] of the 1867 CA,

¹¹¹ Roller, op cit at note 97 pp. [].

¹¹² Art. 10 CA 1900, 63 & 64 Vict, p. 100. The items that had to disclose included the memorandum of association, the number of shares, the names of directors and proposed directors, among others.

¹¹³ Art. 10 (1.) (k) CA 1900, 63 & 64 Vict.

disclosed was included in the law.¹¹⁴ In sum, by the late 1920s a comprehensive system of extensive ex ante disclosure rules, stipulated in the Companies Act, combined with reactive enforcement by the courts had been established.

Not every misstatement gave rise to an action under existing case law, but only those designed to *induce* investors to buy. The difficulty in determining causality is illustrated by another case. The prospectus of a company invited subscriptions for debentures. It stated that the money was intended for alterations in the buildings of the company, to purchase horses and vans, and to develop the trade of the company, whereas in fact, the money was intended to cover existing liabilities. The court held that this statement induced investors to believe that the debentures would be a charge on the property, and since this was in fact not the case, held the directors to be liable.¹¹⁵ The court used this case to summarize the major elements of an action based on deceit. First, the prospectus must include not only “a mere statement of possibility, or of a contingency, or of an intention as to what might occur according to the person who is making the statement, but there must be something which amounts in the opinion of the Judge or jury (...) to a statement of a fact as existing which is not in truth existing.”¹¹⁶ The rather ambiguous phrasing demonstrates how difficult it was for judges to draw the line between facts and opinion. Second, the statement must have been made fraudulently. Fraudulent action according to the court does not require the willful telling of a lie. It is sufficient that a person who makes factual statements “recklessly, and so to speak, in a gambling spirit” willfully abstains from making additional inquiries and thereby endorses a statement without which investors would not have parted with their money.

This definition of fraudulent behavior is quite narrow. By requiring recklessness the court implied that there was no liability for negligent misstatements. It is in this spirit of earlier case

¹¹⁴ Art. 35 CA 1929, 19 & 20 Geo.5. refers to the Fourth Schedule attached to the act.

¹¹⁵ Edington v. Fitzmaurice (1884) C.D. 459.

¹¹⁶ Ibid at p. 465.

law that the landmark case *Derry v. Peek*, decided in 1889,¹¹⁷ has to be assessed. The prospectus of a railway company stated that approval by the relevant state authorities had been granted to convert an animal powered track into a steam powered one.¹¹⁸ In fact, approval had been granted only for parts of the track. After the company was wound up, the directors were sued for compensation by shareholders who had lost their money. The House of Lord confirmed that the statement in the prospectus was objectively incorrect. But it relieved the directors – “five men of good character and conduct” - of liability, because they honestly believed in the correctness of their statement. Without proof of fraud – and the burden of proof lies with the plaintiff – an action of deceit could not be maintained. The House of Lords reviewed earlier case law attempting to discern general principles of tort law. It criticized the attempt to do justice in individual cases rather than sticking to principles of established law. “It might, perhaps, be desirable to enact that in prospectuses of public companies there should be a warranty of the truth of all statements”,¹¹⁹ but existing law did not include such a provision. Essentially the message was that it was not for the courts to fill this gap and write a more complete law, but for the legislature to do so.

Applying our framework of the incompleteness of law, by clearly stating that negligent misrepresentation was not sufficient for establishing fraud, *Derry v. Peek* specified – and thereby narrowed - the scope of actions that could give rise to liability. The law as stated in this decision required a high subjective threshold of liability and did not merely circumscribe areas of outcome that could result in liability. The rationale, according to the court, was to avoid discouraging risk-averse people to engage in financial market activities (“the objection is (...) to the danger of driving respectable and responsible men from being promoters, and of substituting for them those who are neither”).

¹¹⁷ *Derry and Others v. Peek*, [1886-90] All E.R. Rep. 1.

¹¹⁸ The prospectus stated explicitly that “the company has the right to use steam or mechanical power instead of horses”. See *ibid* at p. 6.

¹¹⁹ Lord Bramwell *ibid* at p. 9.

The legislature responded to the court's quest for legislative intervention, if a lowering of the threshold for liability was desired by enacting the Directors' Liability Act (DLA) only a year after *Derry v. Peek* had been decided. Under this Act, directors and company promoters can be held liable for negligent misrepresentation of information.¹²⁰ The Act stipulates that any untrue statement in the prospectus or other notice concerning the issuance of shares gives rise to liability, unless those responsible for the statement can prove that they had "reasonable ground to believe, and did up to the time of the allotment of the shares, debentures, or debenture stock, as the case may be, believe, that the statement was true". In effect, the law lowered the threshold for liability by shifting the burden of proof for showing that the defendant had grounds to believe that the statement was true. Absent such proof, misrepresentation that results in damages gives rise to liability. Had the Act been adopted prior to *Derry v. Peek*, there is little doubt that the directors would have had to pay compensation to shareholders. The threshold for liability was lowered further with the adoption of the Misrepresentation Act in 1967.¹²¹ This Act does not specifically target securities, but deals more generally with misrepresentation of information. Under its provisions, even innocent misrepresentation can lead to liability, unless the offender demonstrates that he reasonably believed in the truthfulness of the information. In terms of our conceptual framework, the DLA and later the Misrepresentation Act shifted the incompleteness problem from a Type II to a Type I problem. It thereby signaled to courts that the scope of their residual lawmaking powers was more extensive than they had previously assumed and included cases, which they had dismissed earlier.

Outside the area of securities transactions, however, the principles of fraud law laid down in *Derry v. Peek* remained applicable. Only in 1963 did the House of Lords reduce the threshold for liability by stating that negligence could give rise to liability for misrepresentation of

¹²⁰ This was accomplished with the passage of the Directors' Liability Act in 1890..

¹²¹ UK ST 1967 c. 7.

information. While the case was ultimately dismissed,¹²² it gave the House of Lord the opportunity to revisit *Derry v. Peek* and related cases and restate the conditions for negligent misrepresentation. The Lords argued that in light of case law after *Derry v. Peek* decision, “it must now be taken that *Derry v. Peek* did not establish any universal rule that in the absence of contract an innocent but negligent misrepresentation cannot give rise to an action”.¹²³ At the time *Derry v. Peek* was decided courts hesitated to extend the same standards of conduct to words that existed for deeds. However, this attitude had changed in the meantime. It was now widely accepted that words, i.e. information or advice, could give rise to liability for negligent conduct. The Lords were careful to point out that liability for negligence required a special relation between the parties. But they broadened the type of relations that could meet these conditions. In particular, they explained that a special relation need not be an implied or express contract, nor is a special relation confined to fiduciary duties. Rather it includes “all those relationships where it is plain that the party seeking information or advice was trusting the other to exercise such a degree of care as the circumstances required, where it was reasonable for him to do that, and where the other give the information or advice when he knew or ought to have known that the inquirer was relying on him”.¹²⁴ This time the courts assumed greater residual lawmaking powers even without further instructions by the legislature.

ii) Liability to Whom?

¹²² *Hedley Byrne & Co. v. Heller &* Partners* (1963) All. E.R. 577. In this case a bank developed second thoughts about the financial position of a firm it was lending to. It contacted the firm’s regular bankers and asked them to confidentially report on the financial standing of the firm. They responded “without responsibility on the part of the bank or its officials” that the firm was in good standing. Yet the firm soon failed and the bank lost substantial amounts of money. It sued the bankers who had given the incorrect information. Since a contractual relation between the two banks did not exist, the action was based on tort. The case was dismissed and upon appeal the House of Lord upheld this decision, mostly because of the clear statement that the information was given “without responsibility”.

¹²³ *Hedley Byrne & Co. v. Heller &* Partners* (1963) All. E.R. 577 at 581.

¹²⁴ Lord Reid *ibid.* at p. 583.

Hedley v. Byrne addresses an issue that had been repeatedly litigated over the years, namely to whom directors, company promoters and others responsible for the contents of the prospectus would be liable. As the above examples have shown, the information included in or omitted from a prospectus was crucial for establishing liability of those responsible for the prospectus. Clearly, a contractual relation with the acquirer of shares was not required for actions based on tort. This, however, did not mean that anyone who relied on the prospectus would have a claim. In order to establish liability they required that “there must be something to connect the directors making the representation with the party complaining that he has been deceived and injured by it.”¹²⁵ In the case at hand, the plaintiff had acquired shares not directly from the company, but on the secondary market. The court argued that the prospectus was issued for the *initial* public offering. Absent any direct communication with secondary buyers, the directors were not liable to those who acquired shares on the secondary market.

This left secondary buyers for the most part without a real chance to recover their losses, as their immediate seller was not the one who had created or disseminated the wrongful information. It allowed issuers of shares to develop schemes by which they would target secondary buyers with a prospectus or other information without being held liable for wrongful information contained therein. Courts were soon confronted with such schemes, as their previous case law had virtually opened the door for designing strategies to circumvent Type II incomplete law.

Father and son set up a company to explore gold-bearing reef in Transvaal. Investors were invited to buy shares. The prospectus included information on the yield of gold from a ton of quartz, which was objectively wrong. The plaintiff did not buy shares upon receiving the prospectus. However, a few weeks later, a major newspaper carried an article with the headline “A big jump in Sutherland Reefs” alleging that there had been a very rich discovery of gold. The plaintiff now bought shares on the secondary market, basing his decision on the prospectus –

¹²⁵ Lord Chelmsford in *Peek v. Gurney* (1873) L.R. 377 at p. 399.

which he had kept – and the good news reported, only to find out later that the son had initiated the newspaper article and that it was part of a fraudulent scheme designed by father and son. The court distinguished this case from *Peek v. Gurney* by arguing that the publication of the prospectus and the launching of the newspaper article was part of a comprehensive scheme designed to induce those that had earlier read the prospectus to buy. It therefore held in favor of the investor. The definition of what amounted to a comprehensive scheme that would extend liability of those responsible for the contents of the prospectus to buyers on the secondary market, however, was left to future case law. Once again, case law rendered existing principles more rather than less complete, establishing only some broad guidelines to delineate the scope of liability.

Changes in financial practice over time questioned the principle that the prospectus was addressed only at initial purchasers. In 1996, a case was brought by an investor who had acquired securities of an unlisted company both in the initial public offering and subsequently - a much larger amount - on the secondary market.¹²⁶ For both investment decisions he had relied on the information stated in the prospectus, which proved to be incorrect. The defendant argued that he could not be held liable for the share acquisitions on the secondary market. Yet, the court held with the plaintiff arguing that commercial practice had changed substantially over the years. It argued that the purpose of a prospectus today is not merely to induce investors to become places during the initial offering, but also to induce the public to make after-market purchase. In light of this changed practice, the relation between the issuer and the secondary buyer revealed sufficient proximity to establish liability. The decision acknowledges the principle that there must be a special relation between plaintiff and defendant in a tort action based on deceit, but greatly expands the scope of relations that fell into this category.

¹²⁶ *Possfund Custodian Trustee Ltd and Others v. Diamond and Others* (1996), 2 All ER 774.

iii) Summary

Until well into the nineteenth century, the major realm for tort actions were deeds committed against persons or assets. With the development of financial markets words achieved an importance that necessitated a reassessment of the type of actions that could give rise to tort liability. Courts struggled with balancing the interests of investors in effective legal protection against the need to limit the scope of liability in order not to suffocate markets. They also were careful to guard well-established legal principles of tort law against a quick overhaul in response to only one segment of the market (securities transactions). These multiple objectives led only in few cases to the development of clearer, more complete, case law. More often than not, courts extended existing principles to capture the new cases, thereby blurring the lines and creating more incomplete law capable of capturing many different actions. Examples include the acknowledgment that words could weigh as heavily as deeds, the extension of the scope of liability to claimants that had not acquired securities in the initial offering but only on the secondary market, and the lowering of the threshold for liability from gross negligence to simple negligence. This strategy had to increase uncertainty about what actions would lead to liability and thus undermined the deterrence effect of the law. An exception to this rule is *Derry v. Peek*. In this case, the court rejected the idea of holding directors liable for negligent misconduct, but referred such a decision to the legislature. The legislature indeed intervened, writing a law that was substantially broader than existing case law and as such more incomplete.

The case law we discussed was not erroneous, or “bad” law. In each case, courts faced the tradeoff of sticking to well established legal principles and changing them to fit the needs of the new type of cases before them. Given the limited information they had about the nature of market transactions at the time, their decisions can well be justified. Had courts been more responsive to changes in the market, this may have made legislative intervention not necessary on some occasions. However, we are doubtful that this would have been sufficient to ensure

effective law enforcement and thereby prevent the growing need for a proactive law enforcer – the regulator.

2) The Emergence of a Regulator

In the above sections we have shown that neither case law nor statutory law can offer fully satisfactory solutions for an area of the law that not only is subject to considerable change over time and as a result remains highly incomplete despite all efforts to readjust it, but where harmful actions can produce substantial negative externalities. This section explores the emergence of regulatory functions in England. As noted at the outset, we do not emphasize the nature of the regulator, i.e. whether it is private (i.e. a stock exchange), or state. We are mainly interested in regulatory functions, including residual lawmaking and proactive law enforcement, which in England has been carried out by both private and state institutions. The major stock exchange in England, the London Stock Exchange, increasingly assumed regulatory functions. In addition, the Department of Trade and Industry was vested with regulatory powers by the legislature. Recent changes have consolidated regulatory functions first in the Securities and Investment Board (SIB) and subsequently in the Financial Services Authority (FSA), which now regulates, among others, the issuance of shares to the public.

Evidence for the stock exchange assuming regulatory functions over issuers of securities is available as early as 1827. The Minutes of the – then - foreign stock exchange¹²⁷ stated that the exchange’s committee in charge of admitting securities had refused the admission of securities by a foreign state on the grounds that it was in default on previous obligations.¹²⁸ The case demonstrates the exchange’s willingness and capacity to stop actions – the issuance of securities to the public – that was likely to result in harmful outcome. The incident, however, remained an

¹²⁷ The foreign stock exchange subsequently merged with the London Stock Exchange.

isolated event. General rules for the admittance of securities were not established for some time. Securities were admitted on an ad hoc bases, primarily with consideration to the expected liquidity of the shares and thus to its profitability for members of the exchange.¹²⁹

It took some time for the LSE to realize that it had to play a role in protecting not only the interests of the exchange and its members, but of the broader investor community – in fact, that these objectives were linked.¹³⁰ The crucial role of the exchange in protecting investor interests in England was underlined by the fact that public offerings were made through the exchange. The two acts – issuance of shares and listing them on an exchange – were conducted as one, subjecting virtually all publicly traded companies to the rules of the exchange.¹³¹ It is therefore not surprising that stock exchanges were regularly blamed for stock market scandals.¹³² It also became increasingly clear that the quality of the securities traded affected the business of the exchange and its members.

Towards the end of the nineteenth century, the LSE developed some screening device, primarily in the form of disclosure requirements. These requirements were low by today's

¹²⁸ Victor E. Morgan & W. A. Thomas, *The London Stock Exchange - Its History and Functions*, (1962) p. 152.

¹²⁹ Ranald C. Michie, *The London Stock Exchange: A History*, (1999) p. [].

¹³⁰ As discussed by R.C. Michie, *The London and New York Stock Exchanges*, (1987) and more recently by John C. Jr. Coffee, *The Rise of Dispersed Ownership: The Roles of Law and the State in teh Separation of Ownership and Control*, 111 *Yale L.J.* 1 (2001), the LSE was much less proactive than the NYSE in developing into a regulatory agent by exercising proactive law enforcement and ex ante lawmaking powers. Coffee relates these differences to the structure of the exchanges, rules on membership and the competition they faced in their respective markets.

¹³¹ This practice is in marked contrast to the practice in continental Europe and in the U.S. In continental European countries, listing is separate from the public issuance of shares. In fact, France and Germany require that shares are place before the company can be registered – although it is of course possible to place the shares among a smaller circle of shareholders and disseminate them more widely through a subsequent increase in capital and secondary offering, or for the original shareholders to sell them after the company has been established. The major difference between the U.S. and England is that in the U.S. many companies are traded over the counter rather than on an official exchange. For an analysis of the differences in issuance between continental Europe and the U.S., compare Friedrich Kessler, *The American Securities Act and Its Foreign Counterparts: A Comparative Study*, 44 *Yale L.J.* 1133 (1935) at p. 1136. For a comparison between the law governing initial public offerings in the U.S. and England after the adoption of the Securities and Exchange Act in the U.S., see John Hanna & Edgar Turlington, *The Securities Act of 1933*, 7 *S. Cal. L. Rev.* 18 (1933).

¹³² The attitudes of the public at large about stock exchanges in mid-nineteenth century England are well captured in Stuart Banner, *Anglo-American Securities Regulation- Cultural and Political Roots, 1690-1860*,). For a critical review of this book, see Mahoney [ADD].

standards, but exceeded the requirements of existing company law at the time. The rules required the submission of a copy of the prospectus and a statutory declaration stating the amount allotted to the general public, the amount paid up, and a confirmation that the securities were ready to be issued. In the case of new companies a statement of capital and the nominal value of shares had to be submitted.¹³³ Only companies that complied with them would be quoted on the exchange.

Initially, the exchange did not have much capacity to engage in continuous monitoring. However, it revisited its law enforcement role in the 1930s. By that time, the market for domestic securities had become the exchange's core market and by 1928/29, statutory law had surpassed the exchange's disclosure requirements – effectively imposing its own regime on the otherwise largely autonomous exchange.¹³⁴ Nevertheless, investor confidence was falling in the wake of wide spread share-pushing schemes in the early 1930s, which the law had not been able to prevent. The LSE came under increasing pressure to either improve its regulatory regime or face more extensive state intervention.¹³⁵ The LSE reacted by imposing more stringent disclosure requirements and by enhancing its capacity to screen the information that was submitted. That this indeed amounted to an improvement of the exchange's regulatory standing was recognized in the 1948 revision of the Companies Act, which established the most extensive legal disclosure requirements under English law. Notably, however, it exempted companies who had made adequate disclosure under the exchange's rules, a clear indication that the lawmaker was satisfied with the exchange's regulatory activities.

¹³³ Victor E. Morgan & W. A. Thomas, *The London Stock Exchange - Its History and Functions*, (1962) at p. 152, 153. By contrast, Ranald C. Michie, *The London Stock Exchange: A History*, (1999) argues that the LSE did not assume this type of powers before the end of World War I, when state pressure became an important factor in inducing the exchange to assume regulatory powers on its own rather than have to accept state regulation.

¹³⁴ The relevant law was the Prevention of Fraud (Investments) Act of 1939, which, however, went into force only in 1944.

¹³⁵ Ranald C. Michie, *The London Stock Exchange: A History*, (1999) p....

After 1948, the LSE further extended its role as regulator of companies listed on the exchange. It now required audited financial statements.¹³⁶ In addition, since 1954 the exchange required the disclosure of directors' remuneration and since 1965 of semi-annual reports. To ensure correctness of the information submitted, the exchange relied extensively on the standards of the issuing house, sponsoring broker and the professional auditing bodies.¹³⁷ However, through its own Quotation's Department, the LSE reviewed the information submitted and on this basis approved - or disapproved - the quotation of the securities. This is clearly a proactive law enforcement function. The benchmark for the Quotations Department to this day is not simply a list of detailed items, but a broad – in our terms highly incomplete – rule that requires companies to submit all information necessary for investors to make an informed judgment.¹³⁸ The exchange thereby reserves the right to tailor the information it requests from specific companies. The LSE has continuously changed its disclosure requirements over the years, which is in marked contrast to the statutory legal framework, which hardly changed after 1948.¹³⁹

The only competitor to the exchange's role as regulator of issuers prior to the Big Bang reforms of 1986 was the Department of Trade (DT) (later Department of Trade and Industry, DTI). The 1948 CA explicitly allocated to the DT the power to instigate investigations, request books and information from corporate directors, and bring proceedings in the name and on behalf of shareholders.¹⁴⁰ The DT had the power to adapt the disclosure requirements stipulated in the law, i.e. to exercise residual lawmaking powers over these issues. However, this came with important strings attached, namely that these regulations could not “render more onerous the

¹³⁶ Initially, financial statements for the past ten years had to be disclosed. In 1973 this was reduced to five years. See George J. Benston, *Corporate Financial Disclosure in the UK and the USA*, (1976) p. 27. Today, three audited financial statements for a period of only three years is sufficient.

¹³⁷ For a review of the self-regulatory framework and its limits, see L.C. B. Gower, *Review of Investor Protection*, (1982) pp. 32.

¹³⁸ The Admission and Disclosure Standards of the LSE as of May 2001 include a provision that states that issuers must comply with all provisions set forth in the “Standards” of the exchange. However, in addition, the exchange “may make additions to, dispense with or modify the application of Standards either unconditionally or subject to conditions) in such cases and by reference to such circumstances as it considers appropriate.” Compare 4.2. of the Admission and Disclosure standards.

¹³⁹ For a critique, compare L.C. B. Gower, *Review of Investor Protection*, (1982) at p. [].

requirements” stipulated in the law.¹⁴¹ This provision substantially restricted the DT’s residual lawmaking powers. Perhaps not surprisingly in light of these constraints, the DTI did not develop into an active regulator. It did not publish detailed rules and regulations regarding disclosure requirements, nor did it routinely examine reports that companies submitted. The only cases when the DT would take action were cases “when fraud or misfeasance is in question and damage has been caused”.¹⁴² In other words, the DT adopted a passive and primarily reactive enforcement policy even though the law had allowed it to play a more proactive enforcement role.¹⁴³

The Big Bang reforms of 1986 constituted a major overhaul of the system of financial market regulation in the U.K.¹⁴⁴ Nevertheless, the exchange’s jurisdiction over newly issued shares to the public was not fundamentally altered. Part IV of the Financial Services Act (FSA) of 1986 Act on “official listing of securities” explicitly designates the Council of the Stock Exchange as the “competent authority” for this part of the Act.¹⁴⁵ Its jurisdiction extended not only to securities traded on the official exchange, but also to securities admitted to alternative trading systems and those that were to be placed on markets of other EU member states.¹⁴⁶ The only securities beyond its reach were unlisted securities.¹⁴⁷

¹⁴⁰ See §§ 431-35 1985 CA.

¹⁴¹ Quote section

¹⁴² Direct quote from the report by the Jenkins Committee of 1962 in George J. Benston, *Corporate Financial Disclosure in the UK and the USA*, (1976) p. 23.

¹⁴³ In part, this may have been the result of limited capacity at the DTI. For a comprehensive assessment of its role in proactive law enforcement of fraud cases, see the Report by the Roskill Committee. [ADD]

¹⁴⁴ Add references

¹⁴⁵ Sec 142 (6) FSA 1986.

¹⁴⁶ The latter was accomplished by the incorporation of the EU Prospectus Directive (89/298, 1989 OJL 124 (May 5, 1989)) into English law. Since England had only a small over the counter trade and issuance of shares and listing were usually accomplished in one step, it lacked a “competent” authority for stocks not listed in England. For details on the realization of the directive in England, compare Vanessa Edwards, *EC Company Law*, (1999) pp. pp. 266, p. 275; Simon Gleenson & Harold S. Bloomenthal, *The Public Offer of Securities in the United Kingdom*, 27 Denver Journal of International Law and Policy 359 (1999) pp. 371-376.

¹⁴⁷ EU Prospectus Directive 89/298, 1989 OJL 124 (May 5, 1989). For details on the realization of the directive in England, compare Vanessa Edwards, *EC Company Law*, (1999) pp. pp. 266, p. 275; Simon Gleenson & Harold S. Bloomenthal, *The Public Offer of Securities in the United Kingdom*, 27 Denver Journal of International Law and Policy 359 (1999) pp. 371-376.

To be sure, the fact that the FSAct explicitly delegated regulatory functions to the stock exchange marked a change in the history of financial market regulation. Whereas previously the stock exchange exercised rule making autonomously, it now carried out this function on behalf of and under the supervision of the state regulator. The state's role was further strengthened with the adoption of the Financial Services and Market Act (FSMA) in 2000. The new law takes away much of the power that under the 1986 law had been delegated to the exchange. From now on, not the exchange, but a state agency, the Financial Services Authority (FSA) defines listing standards and approves the issuance of shares.¹⁴⁸ The shift from self-regulation to state regulation has many causes, of which the effectiveness of the LSE as lawmaker and law enforcer is only one. We do not seek to explain this shift with our theoretical framework, but leave a closer investigation of the pros and cons of self- and state-regulation to future work.

The history of financial market regulation in England exemplifies the growing demand for residual lawmaking and law enforcement in ways that legislatures and courts could not accomplish. Flexible adjustment of entry requirements were crucial in order to keep up with market development at home and abroad. While the statutory lawmaker made some remarkable progress in enhancing disclosure rules in 1928/29 and 1948 in particular, for the next decades the legislature again fell behind market developments and left the field to the exchange. With regards to law enforcement, it became apparent already in the nineteenth century that exclusive law enforcement by courts was insufficient. The pace of market development and the amount of damages caused by harmful actions not only to parties of the dispute, but to investors at large, and the reputation of financial markets evidenced serious underenforcement problems. The LSE may have assumed more extensive regulatory functions only reluctantly. In fact, it is likely that it would have further delayed this process had not the government threatened with legislative intervention, which the exchange preempted by developing its own regulatory capacity. The main point, however, is that regulatory functions as we define them – proactive law enforcement and

¹⁴⁸ Sec. 79 (1) (a) FSMA.

ex ante lawmaking – were taken up by the exchange in response to the problem of under-deterrence of existing law and thus wide spread violation of investors’ rights.

V. Incompleteness of the Law in Comparative Perspective

England is not the only country that struggled with the problem of law enforcement in an area that because of its constant change is prone to render laws highly incomplete. Other countries faced similar problems. A detailed comparison of responses to the problem of incompleteness of financial market law would go beyond the scope of this paper. A brief summary of the experience in the United States and Germany, however, will demonstrate first, that the demand for regulatory functions (proactive law enforcement combined with flexible lawmaking) was not limited to a particular jurisdiction, and second, that misallocation of lawmaking and law enforcement powers may influence the development of financial markets in the long term.

1. United States

The general legal provisions to deal with misrepresentation of information in the United States were similar to those found in the UK prior to the Director’s Liability Act of 1890. As in the UK, case law increasingly revealed the limitations of these principles in ensuring effective law enforcement in financial markets where asymmetry of information was rampant and rapid economic change implied high levels of incompleteness of the law.

Nevertheless, courts did not feel compelled to develop principles that would mimic English statutory law. Although the “citadel of privity of contracts” had been eroded to some extent by the late 1920s, American courts refused to hold directors, company promoters, or accountants

liable for negligent misrepresentation of information.¹⁴⁹ In fact, they extensively quoted *Derry vs. Peek*, the decision that had triggered the passage of Director's Liability Act in the UK.

As late as 1931, the Court of Appeals of New York held that negligence was reserved for contractual relations between the defendant and the plaintiff, or required at least a duty on the part of the defendant "to act with the same care that would have been due under a contract of employment" (at p. 179). For fraudulent action it was not sufficient.¹⁵⁰

In part, the problem of underenforcement that resulted from the incompleteness of law was mitigated by the fact that stock exchanges assumed extensive proactive law enforcement powers. In the U.S., the New York Stock Exchange soon emerged as the dominant stock exchange. It was formally established in 1817 as a corporation. The original constitutive acts regulated members and traders. As early as 1853 did the exchange stipulate requirements for companies that wished to be listed on the exchange.¹⁵¹ They had to provide complete statements of shares outstanding and capital resources. In 1869 a rule was introduced that required all shares to be registered with a bank or other appropriate institution. In 1895 NYSE recommended, but not mandated, that all companies submitted annual reports with income statements and balance sheets. In 1923 it established a fraud bureau and in 1926 tightened listing requirements, encouraging companies to give equal voting rights to shareholders.

¹⁴⁹ *Ultramares Corp. v. Touche*, 174 N.E. 441 (N.Y. 1931).

¹⁵⁰ The case *Ultramares Corp. vs. Touche* concerned the question whether an accounting firm should be held liable for certifying accounts that had been forged. While it was ruled out that the accountants positively knew about the fraudulent action, it was equally clear that they had made no attempt to verify changes in the books that were included by hand after the books had already been closed. The same court had ruled earlier that in product liability cases negligent conduct might suffice for liability. Yet, it felt compelled to distinguish those cases where "what is released or set in motion is a physical force" from cases where only "words, written or oral" will be released to third parties. In other words, although the accountants were clearly negligent, and knew that their reports would be transmitted to third parties, such as creditors, since they did not have a direct contractual relationship with those creditors, they should not be held liable for negligence. "Negligence alone is not a substitute for fraud" (p. 29). This principle limited liability for misrepresentation of information more generally, including the issuance of securities.

¹⁵¹ Compare this with the LSE, which began to play a role as proactive law enforcer only at the end of the 19th century. For a more detailed comparison of NYSE and LSE, see Coffee (2001), at note [].

These attempts to develop a set of rules and proactive enforcement devices aimed at protecting shareholders could protect only investors of companies listed on that exchange. Realizing the limits of its own regulation as well as the competition from other exchanges, NYSE supported the enactment of the federal securities regulations in 1933/34.¹⁵² Since then it has focused its efforts on continuous disclosure rather than the initial offering of shares, which is covered by the SA registration requirements.

From the vantage point of the theory of incomplete law, the most important contribution of the 1933/34 securities regulations was the creation of regulator (the SEC) that combined ex ante rule making with proactive enforcement powers, including the right to monitor, investigate, enjoin actions, and impose fines or seek sanctions by the courts.

Individual states had addressed the problem of stock fraud for over two decades already. By 1933, 39 states had adopted so called “blue sky laws”, which encompassed regulations for persons or entities wishing to sell securities to their residents.¹⁵³ Most states introduced registration requirements for securities that were issued and/or traded within its jurisdiction allowing them to screen issuers and enforce the law proactively through entry requirements. Thirty-seven of the thirty-nine states also revised and extended their antifraud provisions. The most sweeping definition of fraudulent behavior can be found in New York’s Martin Act of 1921 (§352).¹⁵⁴

Federal regulators faced the choice among different regulatory philosophies.¹⁵⁵ One was to follow the New York example and rely primarily on reactive enforcement of anti-fraud provisions. The other was to expand proactive law enforcement, which was the choice they

¹⁵² Joel Seligman, *The Historical Need for a Mandatory Corporate Disclosure System*, 9 J. Corp. L. 1 (1983) PAGE

¹⁵³ Louis Loss & Edward M. Cowett, *Blue Sky Law*, (1958) at p. []

¹⁵⁴ Essentially, any action that had the appearance of fiction, deception or fraud could trigger intervention by the Attorney General. He could investigate, subpoena witnesses and require the submission of books and paper. Failure to comply with a subpoena was deemed a misdemeanor. In addition, the Attorney General had the right to enjoin either a violation of the act or the sale of securities by the defendant in any capacity within the state. Violation of any injunction could be penalized with a US\$1000 fine.

made.¹⁵⁶ The core provision of the SA is that the distribution of any security is unlawful unless it has been registered (Sec. 5) and unless it is accompanied by a prospectus that meets the requirements further stipulated in the act. The definition of what constitutes a security under the act is very comprehensive, listing what seems to be an inexhaustible list of papers that are regarded as security under the law.¹⁵⁷ Registration is not equivalent with approval powers, which would be the clearest form of proactive enforcement. Still, the SEC can use its powers to delay or even stop the issuance of securities at the registration stage.

The SEC also exercises extensive residual lawmaking powers. While much of the literature on securities regulation focuses on the SEC's lawmaking powers, we regard this only as part of the regulatory functions the SEC exercises. Much of the lawmaking powers could indeed be exercised by the legislature, at least if it set up a special committee staffed with professionals with expertise in financial markets. The case for a regulator in our framework rests on the combination of proactive law enforcement with ex ante lawmaking powers, as enforcement activities allow the SEC to get insights into market behavior, which then can be used to adapt regulation over time.

The residual lawmaking powers vested with the SEC allow it regularly make, amend, or rescind those rules it deems necessary to carry out the provisions of the law "including rules and

¹⁵⁵ Louis Loss, *The Fundamentals of Securities Regulation*, (2001)

¹⁵⁶ The 1933 Securities Act (SA) is concerned primarily with the initial distribution of securities. The Federal Trade Commission (FTC), which had been established in 1914, was initially charged with enforcing the SA. The Securities and Exchange Commission (SEC), was established only by the Securities Exchange Act (SEA) of 1934, an Act that addresses trading securities on the secondary market, i.e. with continuous disclosure. The SEC today administers five other statutes, the Trust Indenture Act (1939), the Public Utility Holding Company Act (1935), the Investment Company Act (1940), the Investment Advisers Act (1940), and the Securities Investor Protection Act (1970).

¹⁵⁷ According to section 2 it means "any note, stock, bond, debenture, evidence of indebtedness, certificate of interest or participation in any profit-sharing agreement, collateral-trust certificate, reorganization certificate or subscription, transferable share, investment contract, voting-trust certificate, certificate of deposit for a security, fractional undivided interest in oil, gas, or other mineral rights, any put, call straddle, option, or privilege on any security, certificate of deposit, or group or index of securities (including any interest therein or based on the value thereof), or any put, call straddle, option, or privilege entered into on a national securities exchange relating to foreign currency, or in general, any interest or instrument commonly known as a "security", or any certificate of interest or participation in, temporary or interim certificate for, receipt for, guarantee of, or warrant or right to subscribe to or purchase, any of the foregoing." Note, however, that since 1996 the SEC may exempt "any security" from the provisions of the act.

regulations governing registration statements and prospectuses for various classes of securities and issuers, and defining accounting, technical and trade terms under this Act” (Sec. 19). In order to ensure compliance with these rules and the provisions of the law, the SEC was vested with proactive enforcement powers. In particular, the SEC may administer oaths, and affirmations, subpoena witnesses, take evidence, demand the production of books, papers or other documents, which it deems relevant or material to the inquiry. The proactive enforcement powers are complemented with the right to initiate formal proceedings for a stop or refusal order and to initiate court proceedings including preliminary injunctions to enjoin actions.¹⁵⁸

This brief overview shows that the U.S. did not follow the English example in gradually adapting liability rules, long before moving to a system of regulation. It almost seems as if the U.S. at some point skipped this process of trial and error and immediately moved towards a different enforcement system based primarily on proactive enforcement, when it became apparent that harmful actions could result in substantial negative externalities.¹⁵⁹ But trial and error did take place in the U.S. The states’ experimentation with blue sky laws and the history New York Stock exchange offered important insights into the benefits of a system that offered not only reactive, but also proactive enforcement. The timing and scope of the regulatory regime for financial markets established in 1933 was, undoubtedly, influenced by political factors. However the fact that first stock exchanges and later state legislators recognized the need for a different allocation of residual lawmaking and law enforcement powers suggests that other than political factors supported the emergence of regulatory functions.

¹⁵⁸ See Arts. 8 and 17 SA. In the words of Loss, these provision make “it possible to nip certain types of fraud in the bud rather than to rely exclusively on criminal prosecution after the deed” Louis Loss, *The Fundamentals of Securities Regulation*, (2001) at p [].

¹⁵⁹ Note that there is still a substantial debate about the causal relation between stock fraud and the market crash of 1929. See Roberta Romano, *Empowering Investors: A market Approach to Securities Regulation*, 107 The Yale Law Journal 2359 (1998) for a recent summary of this debate.

2. Germany

We can observe a similar process in other countries as well. Germany is typically characterized as “late developer”¹⁶⁰ when it comes to the process of industrialization. As a “late developer” Germany can be said to have benefited from developments in other countries. Yet, this seeming advantage also preempted the experimentation and flexibility in lawmaking that could be observed in England.

As in other countries, the early development of securities markets and the law governing corporations and securities in Germany was closely related to railway construction in the mid 19th century. In 1838, Prussia enacted a law on railway companies followed in 1843 by a corporate law. The law sought to prevent speculative bubbles of the kind that England experienced during the railway mania by upholding the requirement of state approval for the establishment of companies with limited liability (concession system).¹⁶¹ Thus, the lesson from England was to seek to control the formation of capital markets, not to encourage it. However, an increasing number of lawsuits suggested that the law was not very effective in preventing company fraud and thus protecting investors. Where fraud did occur, investors had recourse to general principles of contract or tort law that had been codified in regional codes (Saxony, Prussia), or could be derived from the *ius commune*.¹⁶² As elsewhere, this law was not very effective in addressing the problem of misrepresentation of information. Judges and legal scholars agreed that the publication of a prospectus that included wrongful information alone was not sufficient to

¹⁶⁰ Alexander Gerschenkron, *Economic Backwardness in Historical Perspective*, Alexander Gerschenkron 5 (1962). Indeed, the dominance of banks over equity markets has been explained by pointing out that the desire to catch up with the leading industrial power, England, warranted other strategies to accumulate capital within a much shorter period of time. For a critical assessment of the role of banks in early industrialization in Germany, see, however, Jeremy Edwards & Sheilagh Ogilvie, *Universal Banks and German Industrialization: A Reappraisal*, XLIX Economic History Review 427 (1996).

¹⁶¹ Heinz-Dieter Assmann, *Die Aktiengesellschaft und das Aktienrecht von den Anfängen bis 1945*, 1 Aktiengesetz Großkommentar Klaus J. Hop & Herbert Wiedemann Vol. 1, Rn. 13 (1992).

establish liability. They reasoned that the prospectus created only a *demonstratio*, a general notification addressed at potential investors about the emission of securities to finance a particular undertaking, but was not a binding agreement.¹⁶³

The Lucca-Pistoja case of 1861, a landmark case on misrepresentation of information in prospectuses, demonstrated the limits of contract and tort law to deal with the challenges of securities market development. The case is similar to many of the English cases discussed above.

The undisputed facts that can be discerned from the series of lawsuits that were filed in relation to this incident are as follows: Goldschmidt Bank in Frankfurt published an invitation for acquisition of bonds in a company that was constructing a railway track from Lucca to Pistoja (Italy). According to the invitation, the operating company had obtained approval from the government of Tuscany to issue bonds worth 5.25 Million Lira, 3 Million of which had been reserved for underwriting in Germany. The offer was immediately oversubscribed. After the company constructing the railway had collapsed and it had transpired that the prospectus omitted crucial information, investors who had lost their money sued Goldschmidt Bank.

Since the bank itself was not the issuer and had not acquired the bonds in its own name, it could be held responsible only as an intermediary. According to the law, intermediaries were liable only for intentional wrongdoing. The question courts needed to solve was whether under the relevant Roman law doctrine (*actio emti*) intentional wrongdoing required only the suppression of relevant information, or in addition to this the intent to cheat – which was disputed. German courts held that liability for fraud required that the offender knew or reasonably could have known that the information was wrongful – not unlike English case law prior to the enactment of the Directors' Liability Act in 1890. This interpretation was confirmed by the *Reichsgericht* in 1886, and upheld in subsequent decisions.¹⁶⁴

¹⁶² The *ius commune* are Roman law principles that were recognized as the general principles of law throughout the continent and complemented local customs and codifications.

¹⁶³ Heinz-Dieter Assmann, *Prospekthaftung*, (1985)

¹⁶⁴ RGZ 39, 245 (247).

The existing legal remedies for fraud were put to a new test when Germany liberalized its corporate law in 1870 and allowed companies to freely register without a special concession granted by the state. Shortly after this change, Germany experienced a major boom and subsequent crash (1871-1873), which resulted in two legislative responses: The tightening of the corporate code in 1884 and the passage of the Stock Exchange Law (*Börsengesetz, hereinafter SEL*) of 1896. In combination, these statutes sought to establish comprehensive control over the process of company formation and their listing on an exchange, as it was in these areas where lawmakers identified the greatest problems.¹⁶⁵ Unlike English or US legislation, the German lawmaker responded by greatly restricting the use of the corporate form and by imposing legislated restrictions on access to stock markets. It also placed stock markets squarely under the supervision of the state. Thus, Germany is an example of a legal system that responded to the problem of under-enforcement by greatly expanding ex ante lawmaking, not by changing the law enforcement apparatus. We argue that this was detrimental to the further development of stock markets in Germany.

Under the SEL, stock exchanges, of which there were many scattered around the country, were squarely put under state control by requiring that they were licensed by the regional state authority.¹⁶⁶ The law explicitly delegated important law enforcement powers to the exchanges. Each stock exchange was required to establish an admission's office to scrutinize companies prior to being admitted to the exchange.¹⁶⁷ The admission regulations themselves were drafted by the Upper House of the Parliament, not the stock exchange. Thus, the legislature retained residual

¹⁶⁵ The dissemination of shares outside these two processes was left unregulated by German law. As Max Weber pointed out even prior to the passage of the 1896 law, this design created incentives to avoid the official exchange. Max Weber, *Die Ergebnisse der deutschen Börsenenquête (1894)*, 44 *Zeitschrift für Handelsrecht* 45 (1895).

¹⁶⁶ Historically, exchanges emerged as autonomous undertakings. For a historical overview of the history of stock exchanges in Germany, see Hanno Merkt, *Zur Entwicklung des Deutschen Börsenrechts von den Anfängen bis zum Zweiten Finanzmarktförderungsgesetz, Börsenreform - Eine ökonomische, rechtsvergleichende und rechtspolitische Untersuchung* Klaus J. Hopt, Bernd Rudolph et al. 15 (1997).

¹⁶⁷ This office was staffed by the exchanges with representatives from major banks and large industrial enterprises Heinz Bremer, *Grundzüge des deutschen und ausländischen Börsenrechts*, (1969).

lawmaking powers over this crucial area. The fact that the legislature retained lawmaking rights over this area, seems to have retarded the evolution of listing standards as the rule making process in the Upper House proved much more cumbersome than comparable rule making at LSE or NYSE.

The SEL also included liability rules for misrepresentation of the prospectus. Responsible parties were defined as those who published the prospectus or initiated its publication. In practice this meant that banks, which acted as the main company promoters, were the most likely defendants in liability suits. These provisions proved to be of little practical relevance. First, they covered only the listing process, which companies could avoid by issuing shares outside the exchange. Second, they did not tighten the liability requirements as the UK Directors' Liability Act of 1890 had done. Thus, only intent established liability.¹⁶⁸ The German Supreme Court clarified only in 1998 that gross negligence was sufficient.¹⁶⁹ Third, the provisions captured only misrepresentation of information in the prospectus that was issued for the purpose of listing a company on the exchange and did not cover the circulation of information for other reasons.¹⁷⁰ Fourth, the *defendant* could choose to remedy the claim by taking back the security and repaying the original sale's price. Giving the defendant this choice implied that investors who had sold the securities on the secondary market had preempted a lawsuit as they were unable to return the security should the defendant choose rescission rather than compensation. This requirement was justified by the need to limit the potential number of claimants and to ensure some certainty (*Rechtssicherheit*) for the issuer of a prospectus. Finally, there were serious doubts as to whether only the original acquirer of securities or also secondary buyers had a claim.

The German law has remained remarkably stable over the years. Political and economic circumstances may not have been very conducive for the development of a vibrant stock market

¹⁶⁸ This was in contrast to an earlier draft that had sought to establish the standard of diligence in ones own affairs (*diligentia quam in suis*).

¹⁶⁹ Michael Kort, *Neuere Entwicklungen im Recht der Börsenprospekthafung (§§ 45 ff. BörsG) und der Unternehmensberichtshaftung (§ 77 BörsG)*, 1999 Die Aktiengesellschaft 9 (1999)

for much of the 20th century. However, even in the post-war period a case could be made that the legal infrastructure was not very supportive. The major tool to regulate financial markets was the stock exchange law and the state sponsored listing requirements. Stock exchanges operated under the supervision of regional governments. A federal securities regulator, the *Bundesaufsichtsamt für das Wertpapierwesen* [Federal Supervisory Agency for Securities] (*BAW*) was established in Germany only in 1994.¹⁷¹ Its enforcement powers have been quite limited when compared to the US Securities and Exchange Commission, or even the English Financial Services Authority. Prior to the enactment of the Law on Prospectuses in 1998, law making and law enforcement powers of the *BAW* were largely confined to insider trading.¹⁷² Under the 1998 law, the *BAW* can impose fines of up to DM 1 Mln on companies failing to issue a prospectus, or for including wrongful information in the prospectus. However, it cannot enjoin actions or bring civil suits against a wrongdoer. By implication, this is left to investors, whose rights remain ill-protected both by substantive and procedural law.

3. Summary

The brief overview of financial market regulation in the U.S. and Germany demonstrates that different legal systems have allocated residual lawmaking and law enforcement powers in different ways. In the U.S., the SEC was given extensive lawmaking and law enforcement powers under the 1933/34 legislation. Courts still play an important role in law enforcement of stock fraud and related issues, perhaps even more so, because the SEC can bring action, or can be a defendant in actions brought against decisions taken by the SEC, but many potentially harmful

¹⁷⁰ Heinz-Dieter Assmann, *Prospekthaftung*, (1985)

¹⁷¹ Wertpapierhandelsgesetz of 26 June 1994, BGBl. I, 1749.

¹⁷² Even with regards to insider trading, the law enforcement powers of the *BAW* were quite limited. They included monitoring, including the right to request additional information from likely violators, and the imposition of fines for failure to disclose relevant information. Investigations and punishment of share price

actions never make it to the courts, because they were caught in midstream by the regulator. By contrast, in Germany, the legislature for a long time retained residual lawmaking powers over determining the contents of listing requirements. Reactive law enforcement by courts was not very effective, because of the difficulty shareholders faced in demonstrating loss, causality and intent or gross negligence. In addition, the limited lawmaking rights courts can exercise in a civil law system may have prevented investors from making use of this enforcement mechanism more aggressively. The stock exchanges developed into the most important proactive law enforcers, given their power to refuse listings or to delist companies. However, the regulatory reach of the exchange could be circumvented by placing shares outside the exchange. In fact, in the post war era, the unofficial market has played a substantial role in German financial market development. Law enforcement for these markets was left to the courts, which developed a remarkable set of case of law in dealing with misrepresentation of information.¹⁷³ In light of the problems we have associated with purely reactive law enforcement in this area of the law, however, this reactive form of law enforcement remained suboptimal.

V. Conclusion

In this paper we develop a theory of the incompleteness of law. We argue that law is intrinsically incomplete. Because lawmakers are unable to foresee all future contingencies, they cannot write complete law. We further conjecture that if law is incomplete, then it is impossible to design punishment that will optimally deter violations of the law. In other words, law enforcement that relies exclusively on deterrence combined with reactive law enforcement will be

manipulations was not part of its portfolio. See also Alfred Kueppers, Germans Look Longingly at SEC Model, *The Wallstreet Journal* [DATE and PAGE].

¹⁷³ Liability for misrepresentation of information was based on liability for pre-contractual obligations (*culpa in contrahendo*), a flexible interpretation as to when a contract was deemed to have been concluded –, and the recognition of implied contractual obligations. These judge-made

sub-optimal. Therefore, other means of lawmaking and law enforcement are required to achieve optimal law enforcement. We suggest that proactive law enforcement combined with the right to adapt rules flexibly over time can enhance law enforcement. Given that law is incomplete, perfect deterrence is unachievable. The question therefore is, what the optimal solution is in a world of only second best options.

We suggest that regulators are agencies that are vested with proactive law enforcement and residual lawmaking powers. We explain the emergence of regulators as a response to the problem of under-enforcement of highly incomplete law. Regulators perform functions that distinguish them both from legislatures as lawmakers and from courts as holders of residual lawmaking and reactive law enforcement powers. While the scope of their lawmaking rights is limited, they are more flexible in adapting law over time than legislatures are. As proactive law enforcers they can initiate actions and exercise enforcement rights where courts by design must be passive and wait for others to bring action.

We apply this theory to the development of financial market regulation in England. We show that even in England, a country with a well functioning court system and access to courts to enforce investors' rights, regulators increasingly assumed residual lawmaking and proactive law enforcement powers. This development was spearheaded by self-regulatory bodies, the stock exchanges – an important indicator that theories that regard the emergence of regulation primarily as policy intervention fail to explain the whole story. Developing listing and disclosure requirements was the stock exchanges' response to the problem of under-enforcement of stock frauds, which ultimately threatened their business of organizing a stock market. The limits of the exchanges' reach explains why state agents eventually took over. They can regulate not only official exchanges, but also securities traded elsewhere. With the growth of unregulated markets, this became ever more important.

legal principles were often more stringent than those established by the SEL Heinz-Dieter Assmann, *Prospekthaftung*, (1985) (pp. 80).

Comparisons with other jurisdictions, including Germany and the US lend support to this argument. Germany has long focused on regulating exchanges, rather than the market for securities – leaving the latter by default to case law. Only recently were legal changes introduced that establish a more general regulatory framework. Still, the powers of the regulator have remained rather limited when compared with the UK or US regimes. In the US, the New York stock exchange also preceded state and federal regulation. The shift to a federal regulatory regime as early as 1933 can be explained with the size of the preceding market crash, and perhaps also with political conditions. But the important point is that political conditions may explain the timing, but do not fully explain the rationale for the development of a demand for regulatory functions, which consist of flexible rule making and proactive law enforcement.

Our theory has focused on institutional design assuming that lawmaking and law enforcement agents discussed – legislatures, courts, and regulators – are all welfare maximizers. In future work we hope to integrate incentive problems and political concerns into our analysis. We also expect to extend the analysis to other areas of the law as well as to other legal systems, in particular to emerging markets.