

Mariusz J. Golecki
University of Łódź

Three Models of Derivatives' Regulation. Some Thoughts on the Entanglement between Economic Theory and the Evolution of Law¹

Abstract

The paper aims at analysing whether the evolution of options, futures and other derivatives is an effect of a wider impact of the evolution of financial market and economic theories upon legal system. This constitutes, however, a part of a wider topic, namely the legal approach to risk, uncertainty and speculation. Thus it is crucial to examine whether recent regulation of financial markets and exempting such transactions as options, futures or swaps, performed by set-off from the existing anti-speculative regulation (or abolishing of the majority of anti-speculative rules) may have a wider impact on the notion of risk in law and theory of regulation.

1. Introduction

Neoclassical economics considers derivatives as a necessary instrument providing not only liquidity or risk spreading, but enabling the existence of a perfectly competitive market, since without derivatives there is no possibility to meet one of the core requirements of the General Equilibrium Theorem – the complete or contingent contract claim, according to which there should be a market for any possible state of affairs. On the level of law and economics, the issue arises whether derivative law, massive stock and future exchange regulation leads to zero transaction costs micro worlds and a global market of markets. A drive toward dualism might be observed: regulated futures, stock and commodity exchange (with almost no litigation, due to technical regulations; deposits, clearing house, licenses, etc.) or sophisticated conventions (OTC market), rather than typical contracts, are present on this market. The derivative OTC markets are regulated by soft law enforced in a non-jurisdictional way. The paradox lies, however, in the fact that derivatives work efficiently within a perfect competitive market structure, whose existence is conditioned

¹ The research has been sponsored by the Foundation for Polish Science. The previous drafts of this paper were presented at the W.G. Hart Workshop 2009 in London (June 2009), the 69th IAES in Prague (April 2009) and the EALE 2010 Congress in Paris (September 2010).

upon effective work of derivatives. As R. Coase observed many years ago, economists very often behave as if we lived in an ideal world of zero transaction costs, or, to put it differently, within a world of perfect competitive market economy. Unfortunately, not all derivative markets are perfectly competitive and arguably they are not always zero transaction costs worlds. The normative Coase theorem suggests that regulation and judicial decision should pursue efficiency and diminish transactional costs. Additionally, R. Coase suggests that the regulatory framework diminishes the level of transaction costs. If it is so, what is the function of the OTC derivatives market? Why the regulated market did not supersede the OTC market, even if statutory and judge-made law in many jurisdictions aimed at eliminating the OTC market? This paper will concentrate on the comparison of two market regimes: the stock exchange and the OTC market in respect to the level of respective administrative and transaction costs. The applied methodology will thus include a comparative institutional analysis broadened with the assessment of transaction and administrative costs. The purpose of this research is to address the question whether the Coasean theory of regulation is correct and eventually how to explain the existence and growth of the OTC market for derivatives from the perspective of transaction cost economics. The results of the survey can be implemented in preparation of a coherent normative theory of derivative regulation. Such a theory always depends on economic theory. Since at the moment it seems that there is no coherent normative economic theory of derivatives, it is very difficult to expect lawyers to provide with any coherent legal theory as well. The final part of this paper will concentrate on the notion of evolution of law as a process induced by a change of economic theory (in the light of the previous scrutiny on the relations between legal theory, regulation, economic theory, policy recommendations concerning derivatives and, in a broader sense, speculation as a kind of market activity). A brief look at the American deregulatory reform justifies some scepticism toward any theory of linear legal evolution. It seems that there is no determinism as far as the alleged evolution of financial regulations is concerned. Additionally, dynamic growth of financial innovation does not facilitate the regulatory task. The question remains how to combine innovation with security under the conditions of uncertainty (normative uncertainty hypothesis). The normative theory of regulation would favour “dynamic efficiency” and the capability to adapt a regulation to changing circumstances rather than a fixed regulatory approach, concentrated on one particular purpose. Future regulatory frameworks will have to be responsive and multi-purpose. Three different kinds of regulatory frameworks can possibly be distinguished: transaction oriented regulation, institution oriented regulation and market oriented regulation. It seems that evolution of regulatory regimes could be usefully analysed against this analytical framework.

2. Legal evolution and derivatives: from pits to stocks?

Derivatives are usually associated with financial instruments whose value depends on the value of the other right or asset, such as commodity, share, security, or any other derivative.²

² P.R. Wood, *Law and Practice of International Finance*, London 2008, p. 425. P.R. Wood endorses a complete and acute legal definition of derivatives, when he writes: “Derivatives is a generic term used to describe futures, options, swaps and various other similar transactions. They are ‘derived’ from underlying assets, e.g. an option to buy a share in the future is a contract derived from the share (the ‘underlying’). Most derivative contracts are contracts for differences – the difference between the agreed future price of an asset on a future date and the actual market price on that date.”

Excessive speculation with these instruments pushed legislators to prohibit such practice as it was jeopardizing the stability and security of those markets.³ Since the 1970s future exchanges trading derivatives on stocks, bonds, indexes, currencies and other derivatives have begun to spread throughout the world, ending up as institutions of a global market of risk.⁴ Meanwhile, a huge *over-the-counter* (OTC) market has grown up.⁵ The process of globalisation of financial markets seems to have had a powerful impact on the move towards harmonisation of derivatives regulation. It seems, however, that it rather initiated a process of regulatory competition between different jurisdictions. For example there are special propositions for choosing jurisdiction implemented in *ISDA Master Agreements*. The evolution of technical regulations of future exchanges as a means of constraint of potential losses, excessive trading and insider dealing, as well as the process of demutualisation of future exchanges should be mentioned as a part of a wider process of liberalisation and emergence of a global market for investment risk. This legal evolution – liberalisation and institutionalisation of derivative markets – reflects a shift from hostility toward speculation to support provided in legal writings by the academics influenced by economic theory, suggesting that existing barriers for free speculation caused inefficiency and suffered from rigidity and conservatism. As a result of such an approach, the principal anti-speculative rules in the US were reinterpreted or abolished (cf. the OTC regulation within “Commodity Futures Modernization Act of 2000”). In the UK (at least to 2005) their effect was simply marginalised. This conclusion leads to the second part of this paper focused on the traditional anti-speculative approach of legal systems and the underlying reasons of alteration and even abolishment of this approach. In legal terms, the process was based on gradual increase of both marketability and enforceability.⁶ This phenomenon has to some extent been reflected by courts’ changing attitude towards soft law and private regulation on derivatives.⁷ Thus one could be inclined to suggest that this process should be regarded as a herald of potential disappearance of traditional private law based on a set of mandatory rules.⁸ This change could be explained in terms of evolution. There are two basic levels of such evolution: firstly, the apparent legal evolution from an anti-speculative to a pro-derivative approach, and secondly, the evolution of economic theory of risk and uncertainty.⁹

³ G. Rühlend, *The Ruin of the World's Agriculture and Trade: International Fictitious Dealings in "Futures" of Agricultural Produce and Silver with Their Effect on Prices*, translated by Ch.W. Smith, London 1896, pp. 60–63, House Committee on Agriculture, *Fictitious Dealings in Agricultural Products: Hearings on H.R. 392, 2699, and 3870, 52nd Cong., 3rd sess., 1892*, p. 186.

⁴ R. Findlay and K.H. O'Rourke, *Commodity Market Integration, 1500–2000*, in *Globalization in Historical Perspective*, edited by M.D. Bordo, A.M. Taylor, and J.G. Williamson, Chicago 2003, pp. 41–43, E.J. Swan, *United States: The Rise and Decline of Futures Trading in America*, “Futures & Derivatives Law Review” 1994/3, p. 12, F. Braudel, *The Wheels of Commerce*, Berkeley 1992, J. Jones G. Cook, *The Commodity Futures Trading Commission Act 1974*, “Memphis State University Law Review” 1975/5, pp. 457–458.

⁵ E.J. Swan, *The Development of the Law of Financial Services*, London 1993, p. 92, P.R. Wood, *Law and Practice of International Finance*, London 2008, p. 435.

⁶ Cf. *The Financial Services Authority, The Turner Review. A regulatory response to the global banking crisis*, London 2009, pp. 11–29.

⁷ Cf. e.g. *Caiola v. Citibank* case, where the court held that certain provisions of the ISDA Master Agreement could have prevailed over the statutory provisions of the Securities Exchange Act 137 F. Supp. 2d 362, 364–65 (S.D.N.Y. April 2, 2001). The judgment had a serious impact on the evaluation of the legal status of the so called soft law regulations issued by International Swap and Derivatives Association for the OTC derivative transactions.

⁸ L. Bernstein, *Opting Out of the Legal System: Extralegal Contractual Relations in the Diamond Industry*, “Journal of Legal Studies” 1992/21, p. 115.

⁹ J.I. Levy, *Contemplating Delivery: Futures Trading and the Problem of Commodity Exchange in the United States, 1875–1905*, “American Historical Review” 2006/111.

It seems that the evolution is a discernible process albeit not a decisive explanatory tool.¹⁰ In order to draw any interesting conclusion from the evolutionary based analysis it is necessary to specify the crucial direction of development or just a vector of that process. There are two basic problems concerning this question. Firstly, it is doubtful that the evolution of derivative market can be automatically explained in terms of financial innovation, growth of market or other similar data. This is especially uncertain given the fact that the efficiency effect of financial innovation is not clear.¹¹ Secondly, since it is unclear which derivatives are economically profitable or simply useful from the perspective of wealth maximization, it is not evident which type of regulation, liberal or restrictive, is better off.¹²

This contention does not necessarily lead to scepticism, which should rather be controlled and moderated by an analytical approach carefully distinguishing between the difficult and the impossible. At this point some theories of legal evolution might be useful, nonetheless the concept of legal evolution could be modelled in various ways, according to different fundamental assumptions about the role of law, differences between legal systems or regulatory frameworks. Accordingly, the so-called legal origin theory seems to be the first and perhaps the most widespread candidate for a general evolutionary theory of financial law.

In this context it is instructive to investigate the traditional legal doctrine opposing speculation in reference to derivatives known as the common law rules against contracts for differences in American law.¹³ The doctrine is based on the assumption that speculative transactions are inherently bad from the moral point of view and put into jeopardy both people affected by gambling practices and the whole society. This doctrine has been stipulated in the whole line of cases and in commentaries to the state legislature.¹⁴

The anti-speculative framework of American law was for a long time based on the distinction between physical delivery and set-off, encapsulated in the so-called doctrine of contemplated delivery.¹⁵ In contracts for futures, physical delivery – even if virtual and contemplated only by one party to the contract – had a validating effect, provided that physical delivery had been expressly stated within the contract and intended in reality.¹⁶

¹⁰ Or even revolution, as it was suggested by R. Kreitner, *Speculations on Contract, or How Contract Law Stopped Worrying and Learned to Love Risk*, "Columbia Law Review" 2000/4, p. 1096.

¹¹ It is held that financial innovation is efficient only under special conditions, under the assumption that the real market is incomplete. Generally, it is proven that innovation concerning the market for one good is efficient. R. Elul, *Welfare Effects of Financial Innovation in Incomplete Markets with Several Consumption Goods*, "Journal of Economic Theory" 1995/11, p. 43; R. Elul, *Welfare-Improving Financial Innovation with a Single Good*, "Economic Theory" 1999/13, pp. 25–27. The effect in case of at least two goods is far from being clear. Cf. D. Cass, A. Citanna, *Pareto Improving Financial Innovation in Incomplete Markets*, "Economic Theory" 1998/11, pp. 467–469. Cf. The Financial Services Authority, *The Turner Review*... , pp. 47–50.

¹² Cf.P.H. Huang, *A Normative Analysis of New Financially Engineered Derivatives*, "Southern California Law Review" 2000/75, pp. 498–503.

¹³ T.H. Dewey, *A Treatise on Contracts for Future Delivery and Commercial Wagers Including "Options", "Futures", and "Short-Sales"*, New York 1886; J.S. Morton, *Gambling Contracts*, "Michigan Law Journal" 1897/35, pp. 35–40; W. Novak, *The People's Welfare: Law and Regulation in Nineteenth-Century America*, Chapel Hill 1996.

¹⁴ *Pickering v. Cease*, 79 Ill. 328 (1875), 329, *Harris v. Tubbrige*, 83 N.Y. 92,95 (1880), *Bigelow v. Benedict*, 70 N.Y. 202 (1877), *Pixley v. Boynton*, 79 Ill. 351 (1875), *Kirkpatrick & Lyons v. Bonsall*, 72 Pa. 155 (1872). J.R. Dos Passos, *A Treatise on the Law of Stockbrokers and stock Exchanges*, New York, 1882; T.H. Dewey, *Legislation Against Speculation and Gambling in the Forms of Trade*, New York 1905.

¹⁵ T. H. Dewey, *A Treatise on ...*; J.S. Morton, *Gambling Contracts*... , pp. 35–40; J.I. Levy, *Contemplating Delivery: Futures Trading and the Problem of Commodity Exchange in the United States, 1875–1905*, "American Historical Review", 2006/111, pp. 18–22.

¹⁶ *Barnard v. Backhaus* (1881), 53 Wisconsin, 600.

This common law doctrine was gradually elaborated by courts in different states.¹⁷ Finally, the US Supreme Court reaffirmed and reinforced this approach in *Irwin v. Willar*, where the doctrine against contracts for differences was restated in following way: “The generally accepted doctrine in this country is, as stated by Mr. Benjamin, that a contract for the sale of goods to be delivered at a future day is valid, even though the seller has not the goods, nor any other means of getting them than to go into the market and buy them; but such a contract is only valid when the parties really intend and agree that the goods are to be delivered by the seller and the price to be paid by the buyer; and if, under guise of such a contract, the real intent be merely to speculate in the rise or fall of prices, and the goods are not to be delivered, but one party is to pay to the other the difference between the contract price and the market price of the goods at the date fixed for executing the contract, then the whole transaction constitutes nothing more than a wager, and is null and void.”¹⁸

The contract was thus treated as a mere sale with future delivery, even if in reality the transaction was finally concluded by set-off. If, however, the parties originally intended to set off, there was no intention of delivery whatsoever or the physical performance in form of delivery was not stated within the contractual documents, than the transaction was held *ab initio* void. For no surprise the subtleness of the distinction between physical delivery and set-off led to a wave of litigation, as dissatisfied investors who lost their bets tried to challenge the validity of the speculative contract they hastily had entered into.¹⁹ Many cases concerned brokers who sued their principals for non-payment of the loss suffered due to the contracts for futures entered into on commodity stock exchanges.

The sophistication of the judge-made distinctions between legal futures and illegal contracts for differences led to yet another distinction between contracts for futures concluded on organized stock exchanges and very similar transactions entered into on decentralised, over-the-counter basis, at the so-called bucket shops. The differences between stock exchange based and bucket shop based transactions concerned not so much the content of a contract, as rather technical and organizational aspects of these markets. Organized stock exchanges limited access to the market to its members (brokers acting on behalf of external investors), whereas bucket shops offered futures and options on grain and other commodities to anyone, operating in a much more decentralized way. The comparative advantage of the latter group was evident, as the costs of operation of a bucket shop holding were much lower than the costs of stock exchange. On the other hand, bucket shops minimized transaction costs of their activities by virtue of extensive usage of instantaneous means of communication, such as telegraph and telephone. They were, however, depending on stock exchanges in a parasite way, since stock exchanges set out prices for given products. Those prices were used as points of reference for bucket shop transactions.

¹⁷ The distinction was applied for the first time by the Supreme Court of Illinois in *Pickering v. Cease*, 79 Ill. 328 (1875), 329. Later cases included: *Wolcott v. Heath*, 78 Ill. 433 (1875), *Sandborn v. Benedict*, 78 Ill. 309 (1875), *Lyon v. Culbertson*, 83 Ill. 33 (1876), *Williams v. Tidemann*, 6 Mo. App. 269 (Mo. Ct. App., 1878), *Rudolf v. Winters*, 7 Neb. 125 (1878), *Gregory v. Wendell*, 40 Mich. 432 (1879), *Kingsbury v. Kirwan*, 77 N.Y. 612 (N.Y. Ct. App., 1879), *Wallace v. Taggart*, 14 Bush 727 (Ken. Ct. App., 1879); and, once again, in Illinois, *Tenney v. Foote*, 4 Ill. App. 594 (Ill. Ct. App., 1879), *Beveridge v. Hewitt*, 8 Ill. App. 467 (Ill. Ct. App., 1881); in Alabama, *Hawley v. Bibb*, 69 Ala. 52 (1881); in Iowa, *Melchert v. American Union Telegraph Co.*, 11 F. 193 (Cr. Ct., 1882); and in Kansas, *Cobb v. Prell*, 15 F. 774 (Cr. Ct., 1883).

¹⁸ *Irwin v. Willar* 110 U.S. 508–509 (1884).

¹⁹ *Whitesides v. Hunt*, 97 Ind. 191 (1884), *Pearce v. Foote*, 113 Ill. 228 (1885), *Crawford v. Spencer*, 4 S.W. 713 (1887), *Embrey v. Jemison*, 131 U.S. 336 (1889), *Kahn v. Walton*, 20 N.E. 203 (1889), *First National Bank of Creston v. Carrole*, 45 N.W. 304 (1890), *Lester v. Buel*, 30 N.E. 821 (1892), *Connor v. Black*, 24 S.W. 184 (1893), *McGrew v. City Produce Exchange*, 4 S.W. 38 (1886).

Legal uncertainty concerning the validity of the transactions paired with institutional competition between stock exchanges and bucket shops resulted in a suit brought by the Chicago Board of Exchange against C.C. Christie, one of the most active bucket shop dealers. At first glance, the grounds for the claim might have seemed ridiculous. The Chicago Board of Exchange dealers claimed that they had a kind of copy right to the prices settled at the stock exchange and later used by bucket shops, hence they sought injunction against the unlawful exploitation of these prices by bucket shop traders, such as C.C. Christie's firm and Christie Grain & Stock Company of Kansas City. The case provided the Supreme Court with an excellent opportunity to clear and restate the judge-made legal regulation, to review and possibly overrule the state-based statutory limitations of speculation. Moreover, the Supreme Court could have possibly aimed at altering the whole regulatory framework in order to set out a new legal distinction between legal and illegal forms of speculation. The court opted for the third solution, drawing a new distinction between gambling and financial insurance, understood as an uncertainty based economic activity. As Justice O.W. Holmes put it:

“Of course, in a modern market, contracts are not confined to sales for immediate delivery. People will endeavour to forecast the future, and to make agreements according to their prophecy. Speculation of this kind by competent men is the self-adjustment of society to the probable. Its value is well known as a means of avoiding or mitigating catastrophes, equalizing prices, and providing for periods of want. It is true that the success of the strong induces imitation by the weak, and that incompetent persons bring themselves to ruin by undertaking to speculate in their turn. But legislatures and courts generally have recognized that the natural evolutions of a complex society are to be touched only with a very cautious hand, and that such coarse attempts at a remedy for the waste incident to every social function as a simple prohibition and laws to stop its being are harmful and vain.”²⁰

The court exploited the opportunity for reform to the most possible extent, enormously stretching the existing former precedents. The contracts for differences were eventually legalized provided that they were organized by stock exchanges. The reform consisted of two parts: liberalization and institutionalization of financial instruments. Both aspects were mutually entangled, as any transaction entered into at the stock exchange was to be valid. The transaction oriented regulation based on the doctrine of contemplated delivery was thus replaced by a thoroughly new approach. It is worth noting, however, that the same regulatory approach had already been applied by the legislatures in the UK, France and Germany.²¹ The highly praised pragmatic and allegedly innovative approach of O.W. Holmes was not innovative at all, if only juxtaposed with the European regulations that had been established much earlier.

The position of the American Supreme Court found some support in economic theory. A new approach to risk perceived as an essential element of entrepreneurship was suggested by F.B. Hawley.²² Moreover, one of the most influential American economists of that time, the founder of the Chicago school of economics, F. Knight

²⁰ *Board of Trade of Chicago v. Christie Grain & Stock Co.*, 198 U.S. 236 (1905), pp. 247–248.

²¹ Cf. *Gaming Act 1845* in the UK, the 1885 reform of the futures market in France (*Law nr 1885-03-28 of 28.03.1885* “sur les marchés à terme”) and the 1896 German regulation concerning the Capital Market Law (*Börsengesetz vom 22 Juni 1896, RGLB 157*).

²² F.B. Hawley, *The Risk Theory of Profit*, “Quarterly Journal of Economics” 7, p. 460. On the F.B. Hawley's influence on F. Knight see I. M. Kirzner, *The Driving Force of the Market: Essays in Austrian Economics*, New York 2000, pp. 109–111.

regarded the profit gained by speculators as rather justified on moral and economic grounds. Nevertheless, his argumentation seems to be rather vague. F. Knight declared that it was very difficult, if not impossible, to set out the limits of speculation for prudential reasons, albeit such limits should clearly have been established and enforced by the legal system. He wrote: "clearly there are limits to the terms on which the members of society are to be allowed to take chances", yet he added: "the protection of the minimum standard of life is only one of many questions of the human interests involved in the distribution of risk and control, but we cannot here go into or even attempt to classify or enumerate a list."²³

The statement could hardly be treated as a strong manifestation of support for strict regulation aiming at the limitation of speculation. However, it would be an exaggeration to call F. Knight an utterly devoted supporter of the idea of the unlimited exposure towards uncertainty and a promoter of speculation.²⁴ In this respect the main Knight's idea seems to be limited to the acceptance of moral and ethical character of the debate on legitimate limits of speculation rather than economic ones.²⁵ Indeed, it was rather morality and ethics on which the earliest anti-speculative regulations were based.²⁶

Meanwhile, the British and American legislations embraced statutory rules endorsed by *Future Trading Act 1921*, *Grain Futures Act 1922*, *Securities Exchange Act 1934*, *Commodities Exchange Act 1936*, *The Commodity Futures Trading Commission Act 1974*. In the US and the UK the so-called "antigambling legislation" was adapted to the economic needs beginning with the sec. 18 *Gaming Act 1845* and sec. 1 *Gaming Act 1892* regarding contracts for differences as unenforceable. The application of the rule based on *Universal Stock Exchange Ltd v. Stracham* [1896] AC 166 in more recent cases under the *Financial Services Act 1986* (FSA) proved that statutory law was much more flexible than judge-made law, serving as a vehicle for an institutional and regulatory paradigm shift.²⁷ Moreover, it seems that traditional common law was simply unable to initiate the process of liberalisation.²⁸ The change of attitude towards derivatives, which took place in the late 70s and 80s, resulted in massive deregulation and limitation of the previously enforced anti-speculative laws, as it could be reflected by the British legislation dealing with derivatives and contracts for differences as specified types of investments.²⁹

²³ *Ibidem*, pp. 368–369.

²⁴ As it was suggested by R. Kreitner, who stated that: "Thus, when Justice Holmes calls speculation through the commodities futures markets 'the self-adjustment of society to the probable', or when Professor Patterson devotes an article to legitimating hedging contracts in commodities, they are actually relying on an incipient form of the policy argument fleshed out by economists such as Knight." Cf. R. Kreitner, *Speculations of Contract, or How Contract Law Stopped Worrying and Learned to Love Risk*, "Columbia Law Review" 2000/100, p. 1129.

²⁵ For the analysis of the evolution from the moral to economic based approach toward speculation see R. Kreitner, *Calculating Promises: The Emergence of Modern American Contract Doctrine*, Pal Alto 2007, pp. 147–159.

²⁶ J. Hobson, *The Ethics of Gambling*, "International Journal of Ethics" 1905/1, pp.135–148; J.P. Raines, C.G., Leathers, *Financial Derivative Instruments and Social Ethics*, "Journal of Business Ethics" 1994/13, pp. 197–204; E. Schwark, *Spekulation–Markt–Recht. Zur Neuregelung der Börsentermingeschäfte*, in: *Festschrift für Ernst Steindorff zum 70. Geburtstag am 13. März 1990*, edited by J.F. Baur, K.J. Hopt, E. Steindorff, K.P. Mailändered, Berlin-New York 1990, pp. 473–476.

²⁷ *Financial Services Act 1986*, c. 60.(Eng.). Cf. *City Index v. Leslie* [1991] AC 98 by Lord Donaldson MR.

²⁸ R. Kreitner, *Calculating Promises: The Emergence of Modern American Contract Doctrine*, Pal Alto 2007, pp. 97–102.

²⁹ Cf. sec. 63 *FSA 1986*, Par. 7–9 Sch. 1 to *FSA 1986*, sec. 412 *FSMA 2000*, art. 83-85 *FSMA 2000 (Regulated Activities) Order 2001*, *FSMA 2000 (Gaming Contracts) Order 2001* and exempting derivatives from the scope of regulation of sec. 5 of *The Gambling Act 2005*.

A very similar transformation took place in civil law jurisdictions, where the 19th century cautious approach to contracts for differences was substituted with a much more liberal one. German law concentrated on regulating derivatives as a special kind of stock exchange forward transactions (*Börsentermingeschäft*).³⁰ These futures and options were regarded as valid contracts only if entered into at the stock exchange, whereas the OTC derivatives remained valid but unenforceable. This regulation was introduced by the law on stock exchanges and reflected by the German Civil Code.³¹ This regulatory framework was substantially altered and subsequently liberalized by a series of amendments enacted between 1989 and 2007.³² The major liberalisation rendered some types of derivatives, such as options and futures, enforceable also outside the stock exchange, provided that some additional conditions were satisfied.³³ French law developed in a similar way, concentrating on the concept of financial futures and regulating derivatives as financial forward transactions (*les contrats financiers à terme*).³⁴ The French anti-speculative approach resulted in the enactment of the *Law on Futures Exchanges of 28.03.1885*, according to which unauthorized transactions fall within the scope of the art. 1965 of the French Civil Code.³⁵ The regulation was not changed until 1996, when the *Law on Modernization of Financial Activities* was enacted.³⁶ Later on, the regulatory framework was changed, concentrating on prudential standards and the quality of supervision as provided by the integrated regulation under the auspices of the Monetary and Financial Code.³⁷

A brief sketch of evolution of anti-speculative laws proves that on the one hand statutory law being the main vehicle of change and common law being often even an obstacle towards liberalization on the other. Moreover, there is no evidence that the civil law jurisdictions adopted a significantly different attitude towards derivatives. The difference lies in the style of regulation and the institutional regime. In Germany, general legislation was enforced for a long time directly by courts.³⁸ The same could be

³⁰ §48 of *The Stock Exchange Act (Börsengesetz) of 22.06.1896 (RGLB 157)*, which states that: "Als Börsentermingeschäfte in Waren oder Wertpapieren gelten Kauf oder sonstige Anschaffungsgeschäfte auf eine festbestimmten Lieferungsfrist, wenn sie nach Geschäftsbedingungen geschlossen werden, die von dem Börsenvorstande für Terminhandel festgesetzt sind, und wenn für die von dem Börsenvorstande für den Terminhandel festgesetzt sind, und wenn für die an der betreffenden Börse abgeschlossenen Geschäfte solcher Art. eine Feststellung von Terminpreisen (§§ 29, 35)".

³¹ *The Stock Exchange Act (Börsengesetz) of 22.06.1896 (RGLB 157)* and §§ 763 and 764 of the German Civil Code.

³² German law on stock exchanges was gradually liberalized by a series of amendments of *The Stock Exchange Act* and the law on securities. See §§ 50, 53, 57, 58 of *The Law on Amendment of the Stock Exchange Act (Gesetz zur Änderung des Börsengesetzes) of 11.07.1989*, (BGBl I) and § 2 Abs. 2 Nr. 2 of *The Securities Trading Act (Wertpapierhandelsgesetz) of 09.09.1998* (BGBl. I S. 2708), *The Stock Exchange Act (Börsengesetz) of 16.07.2007*, (BGBl. I S. 1330, 1351).

³³ See §§ 50, 53, 57, 58 of *Börsengesetz vom 22 Juni 1896* as amended by the *Gesetz zur Änderung des Börsengesetzes of 11.07.1989*, (BGBl I).

³⁴ M.C. de Nayer, A. Brochard, *Matif: fonctionnement*, "Commercial Banque et Credit", 1990/36, p. 1755; D. Valette, *Les marchés d'options négociables*, mimeo, Clermont-Ferrand 1991, p. 71; K. Medjaoui, *Les marchés à terme dérivés et organisés d'instruments financiers, Etude juridique*, mimeo, Paris 1996, pp. 335–337; H. Loubergé, *Les options sur indices*, Paris 1998, p. 45; A.C. Muller, *Droit des marchés financiers et droit des contrats*, mimeo, Paris 2001, p. 60; T. Bonneau, *Typologie des marchés boursier*, "Reveau Juridique Commercial" 2003/9, p. 11.

³⁵ *The Law on Futures Exchanges (Loi sur les marchés à terme) nr 1885–03-28 of 28.03.1885*.

³⁶ *The Law on Modernization of Financial Activities (de modernisation des activités financier)*, Law nr 96–597 of 02.06.1996.

³⁷ The recently enacted *French Code monétaire et financier, Version consolidée au 1 avril 2009* as amended by the Ordonnance nr 2009-15 of 08.01.2009 (CMF). According to the current regulation, derivatives are treated as the so-called financial contracts and thus they are enforceable even if in fact they comply with the definition of the contract for differences, so the art 1965 of the French Civil Code is not operative in that case. Cf. the art. L211-35 of CMF, which states that all financial contracts are enforceable: "Nul ne peut, pour se soustraire aux obligations qui résultent de contrats financiers, se prévaloir de l'article 1965 du code civil, alors même que ces opérations se résoudraient par le paiement d'une simple différence". However, the transactions which are not mentioned within the special decree are no longer financial contracts. Cf. the art. L211-1 III of the CMF.

³⁸ K. Pistor, C. Xu, *Incomplete Law*, "New York University Journal of International Law and Politics" 2003/35, pp. 933–943.

said about France and the UK in the 19th and the first half of the 20th century. Moreover, there was virtually no difference in the scope of regulation. All anti-speculative laws established in the second half of the 19th century were essentially similar, reflecting the same attitude towards speculation: general enforceability of contracts for differences was balanced with exemption clauses concerning organized stock exchanges. Thus the presently called OTC derivatives became unenforceable. This (European) approach could be contrasted with American common law, which took a much more rigid approach, as it was endorsed by the U.S. Supreme Court in *Irwin v. Willar* 110 U.S. 510, where Justice Matthews lucidly compared the position of the American common law on contracts for differences with the English statutory law on wagering, observing that:

“In England, it is held that the contracts, although wagers, were not void at common law, and that the statute has not made them illegal, but only non-enforceable (*Thacker v. Hardy, ubi supra*), while generally, in this country, all wagering contracts are held to be illegal and void as against public policy; *Dickson's Ex'r v. Thomas*, 97 Pa. St. 278; *Gregory v. Wendell*, 40 Mich. 432; *Lyon v. Culbertson*, 83 Ill. 33; *Melchert v. Amer. Union Tel. co.* 3 McCrary, 521; S. C. 11 Fed. Rep. 193, and note; *Barnard v. Backhaus*, 52 Wis. 593; [S. C. 9 N.W. Rep. 595;] *Kingsbury v. Kirwan*, 77 N. Y. 612; *Story v. Salomon*, 71 N. Y. 420; *Love v. Harvey*, 114 Mass. 80.”³⁹

Nevertheless, the hostility of judges toward derivatives does not seem to be a peculiar feature of the 19th century American common law. British judges also seem to be rather reluctant to promote freedom of contract where the suspicion of speculative transaction looms in the horizon. It is quite instructive how the judges comment on the merits of derivative instruments under the shadow of statutory regime which thoroughly authorizes those transactions. One of the most striking examples of such judicial attitude towards financial innovations was purported by Lord Donaldson MR, who observed:

“In the common coin of political life it is not uncommon to encounter condemnation of ‘City speculators’. It is not for me as a judge to join in that debate, but the day to day working of the markets form part of the background to this dispute and have to be taken into consideration. (...) Clearly this system would not work if all dealers in the market took the same view as to future movements in prices and equally clearly the more people there are dealing in the market, the greater the opportunity for a diversity of view. So it comes about that the intervention of ‘speculators’ from outside the market is not wholly unwelcome and indeed may in some circumstances contribute towards the achievement of the real objective of the market, although in some circumstances they can unsettle a market in no one’s interests other than their own.”⁴⁰

The examined problem concerned the question whether a transaction constituted investment within the meaning of section 1(1) of the FSA 1986, given the fact that the plaintiff had already been found an “authorized person” for carrying out investment business for the purposes of the *Financial Services Act 1986*.

In this context one may examine the question: either liberalization of the derivative market is inefficient from the economic standpoint or judge-made law falls short in terms of flexibility and production of economically efficient rules. Assuming that the evolution of derivative market is efficient and that financial innovations meet impor-

³⁹ *Irwin v. Willar* 110 U.S. 510, (1884).

⁴⁰ *City Index v. Leslie* [1991] AC 98.

tant economic needs such as increase of liquidity, spread of information and dispersion of risk, it seems that the hypothesis about the law's origin does not work in the context of derivative regulation.⁴¹ The differences between the American and British approaches and regulatory techniques create a source of puzzlement for the potential adherents of the hypothesis about the law's origin. It is not clear to what extent the law's origin matters since both systems finally arrive at very different conclusions, adopting strikingly different regulatory regimes. Moreover, the discrepancy between the American and English regulatory approaches is additionally paired with the significant similarity between the English, French and German regulations. In all of these European jurisdictions the regulatory framework seems to be at least analogical, if not the same.

3. Normative uncertainty hypothesis and three models of derivatives regulation

The problem with any coherent legal theory of derivatives regulation is that such a theory is always dependent on economic theory. Thus the economic function of derivatives seems to be crucial for any normative or regulatory assessment. Within the contemporary theories at least three models can be usefully distinguished. According to the first one, risk hedging model, speculation consists in risk arbitrage and thus it is very similar to insurance, since speculators render service consisting in bearing risk from risk adverse individuals.⁴²

Another aspect of speculation is emphasized within the framework of imperfect market theory based on information arbitrage model.⁴³ J. Stiglitz believes that speculators generally invest in acquiring best suitable information about the future value of assets and act relying on this information. Less informed individuals sell them cheaper and in that way pay for information which is spread throughout market adjusting prices.⁴⁴ Thus speculation corrects information deficiency and improves price theory, being regarded as a kind of investment in information.⁴⁵

A very different explanation of speculation has been suggested by the followers of the behavioral finance, based on the assumption that speculation is induced by opposite subjective opinions.⁴⁶ This view had already been suggested by F. Knight, who drew distinction between risk, which could be controlled, spread and predicted at least on the level of statistics, and fully uncontrolled uncertainty.⁴⁷ Many economic institutions play an important role in transforming uncertainty into risk, by its concentration and shift from risk adverse subjects to risk neutral institutions such as insurers.⁴⁸

⁴¹ On efficiency of financial innovations see K.J. Arrow, *Insurance, Risk, and Resource Allocation*, in: *Essays in the Theory of Risk-Bearing*, Cambridge Mass. 1971, pp. 134–137; P.H. Huang, H.-M. Wu, *Competitive Equilibrium of Incomplete Markets for Securities with Smooth Payoffs*, "Journal of Mathematical Economics" 1994/23, pp. 219, 226–228; R. Elul, *Welfare Effects of Financial Innovation in Incomplete Markets with Several Consumption Goods*, "Journal of Mathematical Economics" 1995/11, p.43.

⁴² J.M. Keynes, *A Treatise On Money*, London 1930, chapter 29; J.R. Hicks, *Value And Capital*, Cambridge Mass 1946, pp.137–39.

⁴³ S. Grossman, J. Stiglitz, *On the Impossibility of Informationally Efficient Markets*, "The American. Economic Review" 1980/70, pp. 393–408.

⁴⁴ R. Posner, *Economic Analysis of Law*, New York 2003, p. 458.

⁴⁵ J. Stiglitz, *The Inefficiency of the Stock Market Equilibrium*, "Review of Economic Studies" 1982/49, p. 241.

⁴⁶ J. Hirshleifer, *Speculation and Equilibrium: Information, Risk and Markets*, "The Quarterly Journal of Economics" 1975/89, p. 519; *Idem*, *The Theory of Speculation under Alternative Regimes of Markets*, "Journal of Finance" 1977/32, p. 975.

⁴⁷ F. Knight, *Risk, Uncertainty, and Profit*, New York 1921, pp. 46–48.

⁴⁸ F. Knight, *Risk, Uncertainty...*, pp. 244–247.

The model of risk arbitrage thus operates exclusively on the level of risk, whereas F. Knight emphasizes that speculation has in fact nothing to do with risk.⁴⁹ Speculation concerns uncertainty and consists in a kind of exchange of the opposite expectations about fully unpredictable events. In other words, speculation cannot be adequately described either in terms of risk bearing or information spreading.⁵⁰

Speculators do not act on any valuable information since there is none.⁵¹ Lack of information or absolute ignorance about future contingences is the essence of uncertainty.⁵² Thus the expectations of speculators are based on estimates and "if the estimates are a matter of pure chance, it would seem that the variations in the two directions would be equal, the average correct, and the general level of pure profit zero."⁵³ The essential feature of dealing with uncertainty in contemporary economy is based on the fact that speculators trade with other speculators, which leads to impoverishment of one of them, because speculation seems to be a zero sum game: the profit of one is only the loss of another. Additionally, as both F. Knight and contemporary surveys suggest, the result of this game is even below zero, and eventually economy as a whole suffers loss.⁵⁴ Moreover, to the irritation of orthodox mainstream economists, it is suggested that the mechanism of speculation is not necessarily based on the assumption of rationality and cannot be based on the classical rational choice theory.⁵⁵

Since there is no coherent normative economic theory of derivatives, it is very difficult to expect lawyers to provide with any coherent legal theory as well.⁵⁶ Is then the whole effort doomed to failure? It seems that the economic function of derivatives is somehow paradoxical. Neoclassical economics regards derivatives as a necessary instrument providing not only liquidity or risk spreading, but enabling the existence of a perfectly competitive market, since without derivatives there is no possibility to meet one of the core requirements of the General Equilibrium Theorem - the complete or contingent contract claim, according to which there should be a market for any possible state of affairs.⁵⁷

⁴⁹ F. Knight, *Risk, Uncertainty...*, pp. 48, 232.

⁵⁰ J. Hirshleifer, *Two Models of Speculation and Information*, in: *Time, Uncertainty, and Information*, New York 1989, pp. 291–300; L.A. Stout *Are Stock Markets Costly Casinos? Disagreement, Market Failure, and Securities Regulation*, "Virginia Law Review" 1995/81, p. 611.

⁵¹ J. Hirshleifer, *Speculation and Equilibrium: Information, Risk and Markets*, "The Quarterly Journal of Economics" 1975/89, p. 519; L.A. Stout, *Irrational Expectations*, "Legal Theory" 1997/3, p. 240.

⁵² L.A. Stout, *Irrational...*, pp. 210–222.

⁵³ F. Knight, *Risk, Uncertainty...*, p. 564.

⁵⁴ L.G. Tesler, *Why there are Organized Future Markets*, "Journal of Law and Economics" 1981/24, pp. 1, 9–10; C. Stein, *Informational Externalities and Welfare-reducing Speculation*, "Journal of Political Economics" 1987/95, pp. 1123–1125; J. Hirshleifer, *Two Models...*; L.A. Stout, *Betting the Bank: How Derivatives Trading Under Conditions of Uncertainty Can Increase Risk and Erode Returns in Financial Markets*, "Journal of Corporate Law" 1995/21 p. 53; L. A Stout, *Are Stock Markets...*, pp. 670–677; L. A Stout, *Why the Law Hates Speculators: Regulation and Private Ordering in the Market for OTC Derivatives*, "Duke Law Journal" 1999/48, p. 701.

⁵⁵ Cf. M.C. Adam, A. Szafarz, *Speculative Bubbles and Financial Markets*, "Oxford Economic Papers" 1992/44, pp. 626, 637–638; The Financial Services Authority, *The Turner Review...*, pp. 39–42.

⁵⁶ P.H. Huang, *A Normative Analysis of New Financially Engineered Derivatives*, "Southern California Law Review" 2000/75, p. 482.

⁵⁷ L. Walras, *Elements d'économie politique pure*, Lausanne 1874; K.J. Arrow, G. Debreu, *Existence of an Equilibrium for a Competitive Economy*, "Econometrica" 1954/22, pp. 265–290, As B.E. Hermalin *et al.* explain, those conditions are extremely unrealistic from a regulatory perspective because: "In a neoclassical exchange economy of the sort analyzed by Walras or Arrow-Debreu, there is little need for either contracts or contract law, since buyers and sellers can exploit all gains from trade through spot transactions." B.E. Hermalin, A.W. Katz, R. Craswell, *Contract Law in: Handbook of Law and Economics*, edited by A.M. Polinsky, S. Shavell, Amsterdam 2007, Vol. 1, pp. 7–8.

A paradox lies, however, in the fact that derivatives work efficiently within a perfect competitive market structure, whose existence is conditioned upon the effective work of derivatives.⁵⁸ As R. Coase observed many years ago, economists very often behave as if we lived in an ideal world of zero transaction costs, or, to put it differently, within a world of perfect competitive market economy.⁵⁹ Unfortunately, not all derivative markets are perfectly competitive and arguably they are not always zero transaction cost worlds.⁶⁰ The sheer fact is that derivative markets are diversified, since it is very difficult to analyse derivatives as such. Certainly an optimal regulation concerns well institutionalized stock exchanges. This is not to say that there is no place for the OTC derivatives – the question should be raised, however, how to minimize possible market failures on the OTC derivatives markets. Additionally, the dynamic growth of financial innovation does not facilitate the regulatory task.

Thus the question remains how to combine innovation with security under the conditions of uncertainty. This fundamental regulatory consideration could be called normative uncertainty theory. The theory is based on two assumptions. Firstly, the regulators cognitive capacity is limited and the access to information remains costly. Secondly, it is generally not clear what kind of financial innovations and under which conditions could be desirable from the perspective of basic policies and principles such as efficiency maximization. This second assumption could be regarded as an extended version of the so-called generic normative indeterminacy of derivative innovation suggested by R. Elul and exhaustively explained by P. H. Huang.⁶¹ Such a regulatory strategy would be based on the assumption that some decisions of regulatory bodies are at least partially taken under the veil of ignorance.

Therefore, the normative theory of regulation would favour the capability to adapt the regulation to changing circumstances rather than the fixed regulatory approach, concentrated on one particular purpose. Such an approach is very often called reflexive regulation.⁶² Not intending to define reflexive regulation or a wider concept of reflexive governance, it is still important that it is oriented on maximization of dynamic efficiency as juxtaposed with mere static allocative efficiency, so often associated with law and economics scholarship.⁶³ Reflexive regulation could also be associated with the I. Ayres' and J. Braithwaite's theory of responsive regulation and the so-called Australian theory of regulation.⁶⁴ The main point is that the reflexive or responsive

⁵⁸ See H. T.C. Hu, *Misunderstood Derivatives: The Causes of Informational Failure and the Promise of Regulatory Incrementalism*, "Yale Law Journal" 1993/102, pp. 1457, 1464–1467; P.H. Huang, *A Normative Analysis of New Financially Engineered Derivatives*, "Southern California Law Review" 2000/75, pp. 472, 491–498.

⁵⁹ R. Coase, *The Problem of Social Costs* in: *The Firm, the Market and the Law*, Chicago 1990, pp. 15–16.

⁶⁰ One can even claim that the recent framework and the functional characteristic of the OTC market reflected a typical market failure or that the OTC market was at least to some extent based on aggregated market failures such as information asymmetry, hold-up, network effect and unequal bargaining power. A.S. Kyle, *Informed Speculation with Imperfect Competition*, "Review of Economic Studies" 1989/56, p. 317; P.G. Mahoney, *The Allocation of Government Authority: The Exchange as Regulator*, "Valparaiso Law Review" 1997/83, p. 1453.

⁶¹ Cf. R. Elul, *Welfare Effects of Financial Innovation in Incomplete Markets with Several Consumption Goods*, "Journal of Economic Theory" 1995/11, p. 73; P.H. Huang, *A Normative Analysis of New, Financially Engineered Derivatives*, "Southern California Law Review" 2000/75, pp. 498–500, 503–505.

⁶² J. Black, *Proceduralising Regulation*, "Oxford Journal of Legal Studies" 2000/20, pp. 297–299.

⁶³ The concept of the reflexive regulation is, however, vague, see S. Deakin, A. Hughes, *Economic Efficiency and the Proceduralisation of Company Law*, "Company, Financial and Insolvency Law Review" 1999/3, p. 169, 173–175; J. Lenoble, M. Maesschalck, *Toward a Theory of Governance: the Action of Norms*, The Hague-Boston 2003, p. 244.

⁶⁴ I. Ayres, J. Braithwaite, *Responsive Regulation: Transcending Deregulatory Debate*, Oxford 1992; N. Gunningham, P. Grabovsky, *Smart Regulation*, Oxford 1998; J. Braithwaite, *Restorative Justice and Responsive Regulation*, New York 2002; K. Yeung, *Securing Compliance*, Oxford 2004, pp. 37–51.

regulation should be based on a flexible regulatory framework, founded on principles rather than on rules.⁶⁵

The difference between rules and principles could be expressed in various ways.⁶⁶ Within the context of the theory of regulation perhaps the most significant difference concerns a much higher degree of flexibility and openness of principles in comparison with relatively well entrenched and precise rules.⁶⁷ Thus major features of reflexive regulation contain the predominance of purpose oriented rules and principles, a vast scope of discretionary powers, a hierarchy of legal remedies in a form of the so-called pyramid of sanctions and the dialogical-discursive approach as the regulator collects data and transforms private information revealed within the process of regulation into the public one.⁶⁸

The last feature of the responsive regulation, namely the discursive process of adaptation and dialogical character of regulator-agent interactions, is sometimes described in terms of a bargain taking place between a regulatory agency and an operating business enterprise. This contractual aspect of the relation plays an important role in a regulatory endeavour, since the regulator, due to constant monitoring and dialogue with the regulated subjects, could obtain relevant private information possessed by business entities. Information centred strategy reflects the fact that the access to the relevant private information on derivative strategies, techniques, methods and relevant practices is otherwise difficult to collect and prohibitively costly. Communication between the regulator and entrepreneurs plays an important if not crucial role, according to the contemporary network-oriented theories of regulation.⁶⁹

Nevertheless, the acceptance of responsive regulation in a style proposed by I. Ayres and J. Braithwaite raises some well known problems. One of the most serious issues consist in the fact that it is not clear how the regulator could sustain cooperation with the agents whose activities are being regulated, thus being the subject of constrains.⁷⁰ An economically sound proposition for a more relational approach and cooperation based strategy on behalf of regulators could potentially suffer from lack of clear limits of both the inevitable uncertainty of regulation and of legal position and additionally from indeterminacy concerning the scope of the regulator's power, given the fact that it should be based on wide discretion.

Certainly, a principle based regulation is always affected by the limited scope of accountability of regulatory bodies. Sometimes it is even suggested that the responsive regulation contradicts basic constitutional principles, such as proportionality principle, leading to the illegitimate interference of public bodies with potential economic actions

⁶⁵ Within the context of the financial crisis cf. K. Alexander, *Supplemental written evidence to the oral evidence submitted on 23 June 2009 by Dr. Kern Alexander to Treasury Select Committee*, point 3 *Rules versus discretion in capital regulation* p. 12, *Macro-prudential regulation and principles-based regulation*, in: *House of Commons, Treasury-Fourteenth Report, Banking Crisis: regulation and supervision*, Session 2008–09, *Treasury Committee Publications*, available at: <http://www.publications.parliament.uk/pa/cm200809/cmselect/cmtreasy/767/767we03.htm>, ed. 31.08.2009, p. 2.

⁶⁶ Cf. F. Schauer *Playing by the Rules*, Oxford 1991, pp. 47–52; L. Kaplow, *Rules versus Standards: An Economic Analysis*, "Duke Law Journal" 1992/42, pp. 557–629.

⁶⁷ J. Black distinguishes four forms of principles-based regulation: formal, substantive, full and polycentric, see J. Black, *Forms and paradoxes of principles-based regulation*, "Capital Markets Law Journal" 2008/3, pp. 425–430.

⁶⁸ The same dialogue based mechanism could be applied to the global coordination of regulatory activity. An example of such dialogue based communication between two regulators: the US Exchange Commission and the EU Commission, was analyzed by K. Alexander *et al*, see K. Alexander, E Ferran, H. Jackson, N. Moloney, *Transatlantic financial services regulatory dialogue*, "European Business Organization Law Review" 2006/7, pp. 647–673.

⁶⁹ For characteristics of the institutional theories of regulation, in both, information based and network oriented forms see B. Morgan, K. Yeung, *An Introduction to Law and Regulation*, Cambridge 2007, pp. 53–79.

⁷⁰ K. Yeung, *Securing Compliance*, Oxford 2004, pp. 37–51.

of private agents, who are unable to predict the potential strategy, purposes and actions of regulators.⁷¹ These observations, even if valuable, seem to be far-fetched, given the fact that the actions of regulators are not deprived of substantial control of legality. Judicial control of administrative actions seems to be the best way of combining regulatory efficiency with the requirement of the rule of law and constitutional accountability. The division of power and tasks between the regulators and markets seems to be a constant point of reference for any feasible and realistic theory of regulation.⁷²

Additionally, the evolution of the derivative regulation seems to follow the direction towards the type of a highly complex, though responsive, regulatory framework, as R. Coase wrote:

“if the traditional markets of the past have diminished in importance, new markets have emerged in recent times of comparable importance in our modern economy. I refer to commodity exchanges and stock exchanges. (...) All exchanges regulate in great detail the activities of those who trade in these markets (the times at which transactions can be made, what can be traded, the responsibilities of the parties, the terms of settlement of disputes and impose sanctions against those who infringe the rules of the exchange. It is not without significance that these exchanges, often used by economists as examples of a perfect market and perfect competition, are markets in which transactions are highly regulated. It suggests, I think correctly, that for anything approaching perfect competition to exist, an intricate system of rules and regulations would normally be needed.”⁷³

Such a system should embrace the whole market infrastructure instead of concentrating on a particular transaction or institution. The evolution of technical regulations of future exchanges as a means of constraint of potential losses, excessive trading and insider dealing, as well as the process of demutualisation of future exchanges, should be mentioned as a part of a wider process of liberalisation and the emergence of a global market for investment risk.

Future regulatory frameworks will have to be responsive and multi-purposive. This is especially important given the fact that the regulators lack a solid normative economic theory, thus are regulating under uncertainty. If the regulation should be multi-purposive, reflexive and adequate in a sense that it maintains the balance between restrictive and liberal attitudes, then three different kinds of regulatory frameworks could possibly be distinguished:

- 1) transaction-oriented regulation (e.g. contract for differences - both statutory and judge-made law, as in the UK: statutory consequences of *the Gaming Act 1845* set out in judicial decisions; common law on contracts for differences);
- 2) institution-oriented regulation (institutional regulation as in *FSA 1986* – stock exchange regulator (might be private), commodities, OTC, securities, banking system etc.);
- 3) market-oriented regulation (the need for integrated supervision in form of the *FSMA 2000*, *MiFID 2006*, probably future US regulation).

It seems that the evolution of the regulatory regimes could be usefully analyzed against the above distinction between transactions-oriented, institution-oriented and market-oriented regulations. Thus the transaction-oriented regulatory designs could be named the regulation of the first generation, whereas the institutional-oriented model

⁷¹ K. Yeung, *Securing...*, pp. 167–170.

⁷² J. Black, *Rules and Regulators*, Oxford 1997, p. 33.

⁷³ R.H. Coase, *The Firm, the Market and the Law*, Chicago 1990, pp. 8–9.

might be termed the regulation of the second generation. Consecutively, the market-oriented regulatory frameworks should be called the regulation of the third generation. The evolution of law on derivatives could be satisfactorily explained in terms of a combination of a gradual change of economic rationale and an abrupt, even revolutionary, alteration of legal regulation. Two turning points could be indicated. The first one marks the departure from the transaction-oriented approach towards the institutional-oriented regulation. The second one could be associated with a recent shift from the institution-oriented to the market-oriented regulation. This process is discernible within a vast majority of analyzed jurisdictions. In American law, the original common law based doctrine against differences, as established by courts, was obviously the transaction-oriented one, since it clearly concentrated on the substantial distinction between a contract with a physical delivery and a contract performed by set-off. This doctrine was elaborated by courts on a case-by-case basis. Eventually, the establishment of the doctrine was extended in time for technical reasons. It obviously takes some time to establish a precise and thorough judge-made law regulation. In case of the doctrine of contemplated delivery, it took just 9 years between initial judgment of the Supreme Court of Illinois in *Pickering v. Cease* and ultimate establishment of the doctrine by the US Supreme Court in *Irwin v. Williar*⁷⁴ Additionally, for constitutional and procedural reasons the federal legal system such as the 19th century American law produced judge-made law as a result of systemic effort of either regulatory competition between the states or federal coordination and harmonization by the US Supreme Court. In case of the first generation derivative regulation both elements were present. Initial differences in the application of the doctrine against differences finally led to a harmonizing activity brought about by the US Supreme Court. Later on the drawbacks of this regulatory approach became so obvious that it was not even 20 years before the Supreme Court demolished the doctrine of contemplated delivery and destroyed the whole transaction-oriented regulation in *Board of Trade of Chicago v. Christie*.⁷⁵ At the same time, Justice O.W. Holmes was probably quite aware of the fact that the judgment in *Christi* would create a thoroughly new type of regulatory arrangement. Its novelty laid not so much in the fact that it considerably liberalized the previous anti-speculative approach, but rather in a paradigm shift from the transaction to the institution-oriented model of regulation. Additionally, the anti-speculative approach was changed only in respect to organized stock exchanges. The difference between physical and contemplated delivery has been replaced with the distinction between stock exchange based derivatives and over-the-counter or bucket shop based illegal speculation.

The later statutory unfolding of the same regulatory approach was abruptly changed only in 2000, when the remnants of the *Christi* based regulatory framework were ultimately rejected and substituted with its opposite – deregulation.⁷⁶ But even though the result of the *Commodities Futures Modernization Act 2000* was finally somehow opposite to other third generation regulations such as *British Financial Services and Markets Act 2000*, the logic of the regulatory paradigm shift from institution-oriented to market-

⁷⁴ The Supreme Court of Illinois *Pickering v. Cease*, 79 Ill. 328 (1875), 329 and *The US Supreme Court Irwin v. Williar* 110 U.S. 499 (1884).

⁷⁵ *Board of Trade of Chicago v. Christie Grain & Stock Co.*, 198 U.S. 236 (1905).

⁷⁶ That statutory development of *Christi* based second generation regulation would include: *Future Trading Act 1921*, *Grain Futures Act 1922*, *Securities Exchange Act 1934*, *Commodities Exchange Act 1936*, *The Commodity Futures Trading Commission Act 1974*.

oriented regulation was not shattered. This logic initiated market-oriented deregulation of over-the-counter derivatives. Moreover, one of the major rationales for the reform was the need for a more coherent regulatory vehicle that would substitute patchwork of the *ad hoc* issued CEA exemptions with a broader deregulatory framework. In other words, the enactment of the CFMA 2000 was a market-oriented regulation *a rebours*. Needless to say, the forthcoming American regulation will have to become a market-oriented one if it is expected to recover the major weakness of the CFMA deregulatory reform. Meanwhile, the US Secretary of the Treasury, Timothy F. Geithner, characterized the awaited American regulation of derivative as: “(1) preventing activities in those markets from posing risk to the financial system; (2) promoting the efficiency and transparency of those markets; (3) preventing market manipulation, fraud, and other market abuses; and (4) ensuring that TC derivatives are not marketed inappropriately to unsophisticated parties.”⁷⁷

The same path-dependence could be detected in European jurisdictions. In France the 1885 reform of the futures market (“sur les marchés à terme”) introduced the distinction between a contract for differences and stock exchange futures. A very similar regulatory framework was introduced by the German *Stock Exchange Law 1896* (*Börsengesetz 1896*) (*RGLB 157*). The classification of those regulations is, however, much more complex than in case of the US law. It seems that European regulations worked as a peculiar combination of statutory law and the judge-made doctrine of contracts for differences. All the above mentioned statutory regulations were institution-oriented and thus constituted an equivalent of the American *Christi* case in terms of the type of regulation. These regulations were the second generation ones even if they were gradually amended and liberalized. A drive towards liberalisation of financial markets in general and the markets for derivatives in particular did not change the character of liberalizing regulatory interventions, which thus could be described as institution-oriented deregulatory devices.⁷⁸ This does not constitute the whole story about European regulatory framework. In terms of its function, every regulation, whether British *Gaming Act 1845*, French *Law nr 1885-03-28 of 28.03.1885* on the markets of futures or German *Stock Exchange Law 1896*, created an institution-oriented model supplemented with transaction-oriented judge-made law. The statutory component introduced the distinction between regulated stock exchange based on derivatives as valid and recognized financial instrument. Additionally, the jurisprudence of courts established the limits of speculation outside this institutional framework.⁷⁹

Accordingly, courts were free to evaluate on the case-by-case basis whether a given transaction was to be regarded as a mere wager which was void or a valid contract. The statutory or common law regulation was broad enough to provide with a necessary degree of flexibility, since it was based on some open-ended rules or vague definitions of contracts of differences.⁸⁰ Strikingly enough, all three European jurisdictions applied

⁷⁷ The letter from the Secretary of the Treasury Timothy F. Geithner to Senator Harry Reid, May 13 2009.

⁷⁸ This would certainly refer to the British *Financial Services Act 1986*, the French *Law on Modernization of Financial Activities* (*de modernisation des activités financier*), *Law nr 96-597 of 02.06.1996*, German *Law on Amendment of the Stock Exchange Act* (*Gesetz zur Änderung des Börsengesetzes*) of 11.07.1989.

⁷⁹ For France see e.g. *Cour de cassation, Chambre commerciale*, 08.07.2003; *Vantrou vs. Banca Commerciale Italiana France*, n 45-46, 06/11/2003, 1818-1820; for Germany: BGH 172/1980, “*Neue Juristische Wochenschrift*” 1981, p. 1898; BGH 172/1980, “*Neue Juristische Wochenschrift*” 1981, p. 1898, BGH 136/1995 “*Neue Juristische Wochenschrift*” 1996, p. 1167.

⁸⁰ Cf. *Universal Stock Exchange Ltd v. Stracham* [1896] AC 16 6in English law, §§ 763 and 764 of the German Civil Code, art 1965 of the French Civil Code, and recently the sec. 5 of *Gambling Act 2005*, which in fact confers the considerable amount of discretion to the FSA.

the concept of unenforceability of gaming contracts, whereas the American common law treated them as void and even illegal. This combination of statutory based regulation of the second generation and judicial supplementary regulation of the first generation continued to operate till the enactment of the *MiFID 2006*, the third generation regulatory device, with one exception, namely the British *FSMA 2000*, which, in fact, anticipated the *MiFID 2006* and strongly influenced the EU regulation.⁸¹ The case of British regulation is remarkable, since the statutory regulation obviously belonged to the third generation, but the practice of a regulatory agency and the main financial supervisor remained institution-oriented. In other words, the FSA operated in an institution-oriented way within the market-oriented regulatory framework.⁸²

The enactment of the *FSMA 2000* could thus be described as a move from an institution oriented (stock exchange oriented *FSA 1986*) to a new, more market-oriented regulatory framework.⁸³ This framework does not concentrate on a particular institution, but embraces the whole spectrum of agents, transactions, markets and institutions.⁸⁴ The exhaustive scope of regulation was combined with the creation of an integrated supervisor (FSA), but the existence of such single supervision does not necessarily belong to essential characteristics of the market-oriented regulations. At the same time, the enactment of the *Commodity Futures Modernization Act 2000* could be perceived as a step back from the institution-oriented CEA regulation to the transaction-oriented one, with a definition of derivative transaction becoming a crucial element of regulatory regime and virtually establishing the boundaries and scope of a potential regulation. Alternatively, the same fact, namely the passage of the *Commodity Futures Modernization Act*, could be perceived as a market-oriented deregulation, since, in fact, it created the whole complex of the unregulated OTC derivative markets exempted from any supervision. Thus the British and American approaches can be usefully contrasted. The *FSMA 2000* adopted a liberal approach toward OTC derivatives, although accompanied by extensive supervision. The regulation could therefore be responsive and complete. On the other hand, the American regulation created heavily regulated patchwork with a huge unregulated sector of the market. Hence, it could be stated that the *CFMA 2000* generally focuses on the regulation of products and markets, whereas under the British *FSMA 2000* the market-oriented nature of regulation concentrates on information standards and customer protection. As a result, all potential derivative transactions are organized and supervised; there is e.g. no restriction for a natural person being an unsophisticated and unauthorized party to enter a highly sophisticated derivative transaction, provided that the product is offered by an authorized person and complying with all consumer protection requirements. The *FSMA 2000* as a market-oriented regulation contains the principle of segmentation, based on the assumption that the access to financial market should be open and at the same time the participants should be covered by different levels and intensity of regulatory instruments, beginning with authorization requirements for business institutions and ending with consumer and credit protection rules in case of physical, unauthorized persons.⁸⁵ The regulation

⁸¹ These would include: French *Code monétaire et financier, Version consolidée au 1 avril 2009* as amended by the *Ordonnance nr 2009-15 of 08.01.2009 (CMF)*, German new *Stock Exchange Act (Börsengesetz) of 16.07.2007, (BGBl. I S. 1330, 1351)*.

⁸² The Financial Services Authority, *The Turner Review...*, pp. 86–88.

⁸³ Cf. The Financial Services Authority, *The Turner Review...*, pp. 86–88.

⁸⁴ For the characteristic of the *FSA 1986* development of the regulatory structure see J. Black, *Rules...*, p. 48.

⁸⁵ J. Black, *Rules...*, pp. 88–91.

as such essentially aims at the creation of the biggest possible market characterized by the highest prudential standards. It seems then that the market oriented model of regulation was not accidentally adopted by the European Commission (*MiFID 2006*) and many other jurisdictions including the UK, Germany and France.

4. Conclusion

The evolution of derivative regulation could be analytically modelled as normative uncertainty hypothesis, which assumes that since there is no coherent normative economic theory of derivatives, some decisions of regulatory bodies are at least partially taken under the veil of ignorance. Therefore, the normative theory of regulation would favour the capability to adapt a regulation to changing circumstances rather than a fixed regulatory approach, concentrated on one particular purpose. The market oriented regulation would be optimal under those conditions.

Within the evolutionary process of the global market for financial risk a specific drive towards dualism might be observed: regulated futures, stock and commodity exchange (with almost no litigation, due to technical regulations, deposits, clearing house, licenses, etc.) or sophisticated conventions (the OTC market), rather than typical contracts, are present on this market. The role of technical regulations regarding clearing house, netting, margins deposits, etc. in respect to traded options and futures seems to be crucial.

Taking the evolution of derivatives regulation into account, two lessons should possibly be remembered.

Firstly, the financial crisis proved that quality regulation matters. Therefore, the normative theory of regulation should take the limits of regulator's capacities and the existence of uncertainty into account. In a sense, the regulator who faces uncertainty is forced to behave in a way slightly similar to that of a speculating investor. However, communication and a kind of dialogue between regulators and the regulated environment could help to accumulate information and to provide with an adequate regulatory response.

The second problem concerns the diversity of regulatory approaches. It seems that the deregulated American market for derivatives, especially for credit derivatives, such as credit default swap's, created regulatory externality, hence a more coordinated regulatory activity would be recommended, albeit there is not much institutional space for such coordination, and certainly global summits are not the best way to deal with regulatory problems.

BIBLIOGRAFIA / REFERENCES:

- Adam, M.C., Szafarz, A. (1992). Speculative Bubbles and Financial Markets. *Oxford Economic Papers* 44/4, 626–640.
- Alexander, K., Ferran, E., Jackson, H., Moloney, N. (2006). Transatlantic financial services regulatory dialogue. *European Business Organization Law Review* 7/3, 647–673.
- Arrow, K.J. (1971). *Essays in the Theory of Risk-Bearing*. Cambridge (Mass.): Harvard University Press.
- Arrow, K.J., Debreu, G. (1954). Existence of an Equilibrium for a Competitive Economy. *Econometrica* 22/3, 265–290.
- Ayres, I., Braithwaite, J. (1992). *Responsive Regulation: Transcending Deregulatory Debate*. Oxford: Oxford University Press.
- Bernstein, L. (1992). Opting Out of the Legal System: Extralegal Contractual Relations in the Diamond Industry. *Journal of Legal Studies* 21/1, 115–158.
- Black, J. (2008). Forms and paradoxes of principles-based regulation. *Capital Markets Law Journal* 3/4.
- Black, J. (2000). Proceduralising Regulation. Part 1. *Oxford Journal of Legal Studies* 20/4, 597–614.
- Black, J. (1997). *Rules and Regulators*. Oxford: Clarendon Press.
- Bonneau, T. (2003). Typologie des marchés boursier. *Reveau Juridique Commercial* 9.
- Braithwaite, J. (2002). *Restorative Justice and Responsive Regulation*. New York: Oxford University Press.
- Braudel, F. (1992). *The Wheels of Commerce*. Berkeley: Phoenix.
- Cass, D., Citanna, A. (1998). Pareto Improving Financial Innovation in Incomplete Markets. *Economic Theory* 11/3, 467–494.
- Coase, R. (1990). *The Firm, the Market and the Law*. Chicago: The University of Chicago Press.
- Cook, J.F., Jones, E. (1975). The Commodity Futures Trading Commission Act 1974. *Memphis State University Law Review* 5/4, 457–484.
- Craswell, R., Hermalin, B.E., Katz, A.W. (2007). Contract Law. In A.M. Polinsky, S. Shavell (Eds.), *Handbook of Law and Economics*. Amsterdam: North-Holland.
- Deakin, S., Hughes, A. (1999). Economic Efficiency and the Proceduralisation of Company Law. *Company, Financial and Insolvency Law Review* 3/2.
- Dewey, T.H. (1886). *A Treatise on Contracts for Future Delivery and Commercial Wagers Including "Options", "Futures", and "Short-Sales"*. New York: Baker, Voorhis & Co.
- Dewey, T.H. (1905). *Legislation Against Speculation and Gambling in the Forms of Trade*. New York: Baker, Voorhis & Co.
- Dos Passos, J.R. (1882). *A Treatise on the Law of Stockbrokers and stock Exchanges*. New York: Harper & Bros.

- Elul, R. (1995). Welfare Effects of Financial Innovation in Incomplete Markets with Several Consumption Goods. *Journal of Economic Theory* 65/1, 43–78.
- Elul, R. (1999). Welfare-Improving Financial Innovation with a Single Good. *Economic Theory* 13/1, 25–40.
- Findlay, R., O'Rourke, K.H. (2003). Commodity Market Integration, 1500–2000. In M.D. Bordo, A.M. Taylor, J.G. Williamson (Eds.), *Globalization in Historical Perspective*. Chicago: The University of Chicago Press.
- Grabovsky, P., Gunningham, N. (1998). *Smart Regulation*. Oxford: Oxford University Press.
- Grossman, S.J., Stiglitz, J.E. (1980). On the Impossibility of Informationally Efficient Markets. *The American Economic Review* 70/3, 393–408.
- Hawley, F.B. (1893). The Risk Theory of Profit. *Quarterly Journal of Economics* 7/4, 459–479.
- Hicks, J.R. (1946). *Value and Capital: An Inquiry into Some Fundamental Principles of Economic Theory*. Oxford: Clarendon Press.
- Hirshleifer, J. (1989). *Time, Uncertainty, and Information*. New York: Blackwell.
- Hirshleifer, J. (1975). Speculation and Equilibrium: Information, Risk and Markets. *The Quarterly Journal of Economics* 89/4, 519–542.
- Hobson, J.A. (1905). The Ethics of Gambling. *International Journal of Ethics* 1, 135–148.
- Hu, H.T.C. (1993). Misunderstood Derivatives: The Causes of Informational Failure and the Promise of Regulatory Incrementalism. *Yale Law Journal* 102/6, 1457–1514.
- Huang, P.H. (2000). A Normative Analysis of New Financially Engineered Derivatives. *Southern California Law Review* 73/3, 471–522.
- Huang, P.H., Wu, H.-M. (1994). Competitive Equilibrium of Incomplete Markets for Securities with Smooth Payoffs. *Journal of Mathematical Economics* 23/3, 219–234.
- Kaplow, L. (1992). Rules versus Standards: An Economic Analysis. *Duke Law Journal* 42/3, 557–629.
- Keynes, J.M. (1930). *A Treatise On Money*. London: Harcourt, Brace and Company.
- Kirzner, I.M. (2000). *The Driving Force of the Market: Essays in Austrian Economics*. New York: Routledge.
- Knight, F.M. (1921). *Risk, Uncertainty, and Profit*. New York: Houghton Mifflin.
- Kreitner, R. (2007). *Calculating Promises: The Emergence of Modern American Contract Doctrine*. Stanford: Stanford University Press.
- Kreitner, R. (2000). Speculations on Contract, or How Contract Law Stopped Worrying and Learned to Love Risk. *Columbia Law Review* 100/4, 1096–1138.
- Kyle, A.S. (1989). Informed Speculation with Imperfect Competition. *Review of Economic Studies* 56/3, 317–355.
- Leathers, C.G., Raines, J.P. (1994). Financial Derivative Instruments and Social Ethics. *Journal of Business Ethics* 13/3, 197–204.
- Lenoble, J., Maesschalck, M. (2003). *Toward a Theory of Governance: the Action of Norms*. Hague-Boston: Kluwer Law International.

- Levy, J.I. (2006). Contemplating Delivery: Futures Trading and the Problem of Commodity Exchange in the United States, 1875–1905. *American Historical Review* 111/2, 307–335.
- Loubergé, H. (1998). *Les options sur indices*. Paris: Economica.
- Mahoney, P.G. (1997). The Allocation of Government Authority: The Exchange as Regulator. *Valparaiso Law Review* 83, 1453–1500.
- Medjaoui, K. (1996). *Les marchés à terme dérivés et organisés d'instruments financiers*. Paris: L.G.D.J.
- Morgan, B., Yeung, K. (2007). *An Introduction to Law and Regulation*. Cambridge: Cambridge University Press.
- Morton, J.S. (1897). Gambling Contracts. *Michigan Law Journal* 35, 35–40.
- Muller, A.C. (2001). *Droit des marchés financiers et droit des contrats*. Paris: Economica.
- Novak, W. (1996). *The People's Welfare: Law and Regulation in Nineteenth-Century America*. Chapel Hill: American Historical Association.
- Pistor, K., Xu, C. (2002). Incomplete Law – a Conceptual and Analytical Framework and its Application to the Evolution of Financial Market Regulation. *Journal of International Law and Politics* 35/4, 931–1013.
- Posner, R. (2003). *Economic Analysis of Law*. New York: Aspen Publ.
- Rühland, G. (1896). *The Ruin of the World's Agriculture and Trade: International Fictitious Dealings in "Futures" of Agricultural Produce and Silver with Their Effect on Prices*. London: Sampson Low & Co.
- Schauer, F.F. (1991). *Playing by the Rules*. Oxford: Oxford University Press.
- Stein, C. (1987). Informational Externalities and Welfare-Reducing Speculation. *Journal of Political Economics* 95/6, 1123–1145.
- Stiglitz, J.E. (1982). The Inefficiency of the Stock Market Equilibrium. *Review of Economic Studies* 49/2, 241–261.
- Stout, L.A. (1995a). Are Stock Markets Costly Casinos? Disagreement, Market Failure, and Securities Regulation. *Virginia Law Review* 81/3, 611–712.
- Stout, L.A. (1995b). Betting the Bank: How Derivatives Trading Under Conditions of Uncertainty Can Increase Risk and Erode Returns in Financial Markets. *Journal of Corporate Law* 21/1, 53–68.
- Stout, L.A. (1997). Irrational Expectations. *Legal Theory* 3/3, 227–248.
- Stout, L.A. (1999). Why the Law Hates Speculators: Regulation and Private Ordering in the Market for OTC Derivatives. *Duke Law Journal* 48/4, 701–786.
- Swan, E.J. (1993). *The Development of the Law of Financial Services*. London: Cavendish Publishing Ltd.
- Swan, E.J. (1994). United States; The Rise and Decline of Futures Trading in America. *Futures & Derivatives Law Review* 3.
- Tesler, L.G. (1981). Why there are Organized Future Markets. *Journal of Law & Economics* 24/1, 1–22.
- Walras, L. (1874). *Éléments d'économie politique pure*. Lausanne: L. Corbaz.

Wood, P.R. (2008). *Law and Practice of International Finance*. London: Sweet & Maxwell.

Yeung, K. (2004). *Securing Compliance*. Oxford: Hart Publishing.