Comparing American and European Regulation of Over-the-Counter Derivative Securities[#]

Karel JANDA[*] *– Gordon RAUSSER*[**]

1 Introduction

The global financial crisis that unfolded in 2008 highlighted the importance of over-the-counter (OTC) derivatives in maintaining global financial stability. While the most common types of OTC derivatives (swaps, forwards, exotic options) did not cause this financial crisis, they significantly contributed to the spreading of the crisis beyond the US sub-prime mortgages market and transforming it into a global financial crisis. As a part of comprehensive financial reform legislation, important regulatory changes with respect to OTC derivatives market were called for to serve the "public interest". The Dodd-Frank Wall Street Reform and Consumer Protection Act enacted in July 2010 and the European Market Infrastructure Regulation (EMIR) proposed in September 2010 were legislative responses to this call for a new regulation of OTC derivatives markets.

This paper contributes to the discussion of current OTC regulation reform by describing the major issues in the clearing of OTC derivatives and the current regulatory initiatives aimed at solving these problems. The

[#] The work on this paper was supported by the Czech Science Foundation, grant numbers 402/11/0948, 403/10/1235, 402/09/0380, and by the research project MSM0021620841.

[*] Prof. Ing. Karel Janda M. A., Dr., Ph.D. – Professor; Department of Banking and Insurance, Faculty of Finance and Accounting, University of Economics Prague, W. Churchill sq. 4, 130 67 Prague 3, Czech Republic – Professor; Institute of Economic Studies, Faculty of Social Sciences, Charles University, Prague, Opletalova 26, 110 00 Prague 1, Czech Republic – Affiliate Fellow; CERGE-EI, Prague, Politických vězňů, 111 21 Praha 1, Czech Republic; <Karel-Janda@seznam.cz>.

[**] Gordon Rausser – Robert Gordon Sproul Distinguished Professor; Department of Agricultural & Resource Economics, College of Natural Resources, University of California, Berkeley, 207 Giannini Hall, California 94720-3310, United States of America; <rausser@berkeley.edu>.

core of the paper is the critical comparison of the Dodd-Frank Wall Street Reform and Consumer Protection Act and the European Market Infrastructure Regulation.

The regulation of OTC derivatives is a subject of a number of recent studies by consulting firms and institutions, for example Clifford Chance (2010), EC (2010), Financial Stability Board (2010), Green and Jennings-Mares (2011), and Sherman and Sterling (2010), and by academic authors Culp (2009), Duffie and Zhu (2010), de Meijer and Wilson (2010), Pirrong (2009), and Rausser, Balson, and Stevens (2010).

Culp (2009) and de Meijer and Wilson (2010) explore the regulatory, operational, and economic aspects of the US regulation dealing with OTC derivatives clearing. Pirrong (2009) and Duffie and Zhu (2010) express some reservations, based on economic and financial theory, about particular aspects of the proposed OTC derivatives regulation. Pirrong (2009) argues that a comparative economic analysis of the costs and benefits of alternative default risk sharing mechanisms casts considerable doubt on the advisability of central clearing of credit derivatives since these products are likely to be subject to severe information asymmetry problems regarding their value, risk, and the creditworthiness of those who trade them. Such information asymmetries are likely to be less severe in bilateral markets than in centrally cleared systems. He also argues that although regulators have argued that clearing would reduce systemic risk, a more complete analysis demonstrates that clearing could actually increase risks to the broader financial system. Duffie and Zhu (2010) show in their model that it is more efficient to have one (or a low number) of central clearing counterparties (CCPs) than to allow for high number of independent CCPs. Rausser, Balson, and Stevens (2010) analyze a market microstructure necessary for successful operation of CCP and they outline a detailed framework for clearing of all OTC derivatives. Their approach is based on utilizing public-private partnerships to counter the potential concentration of risk and a default of a CCP, using the analytical framework developed by Rausser and Stevens (2009).

Given the above background, the balance of this paper is structured as follows. The next section provides a brief introduction to the OTC derivatives and outlines major issues in the OTC derivatives market which have to be dealt with in the proposed regulatory frameworks. That section also introduces basic terminology which is used in the core

section of this paper to highlight the key similarities and differences in US and EU approaches to OTC derivatives market regulation. The final section concludes by summarizing the main results of the paper and suggestions for further research.

2 OTC Derivatives and their Clearing

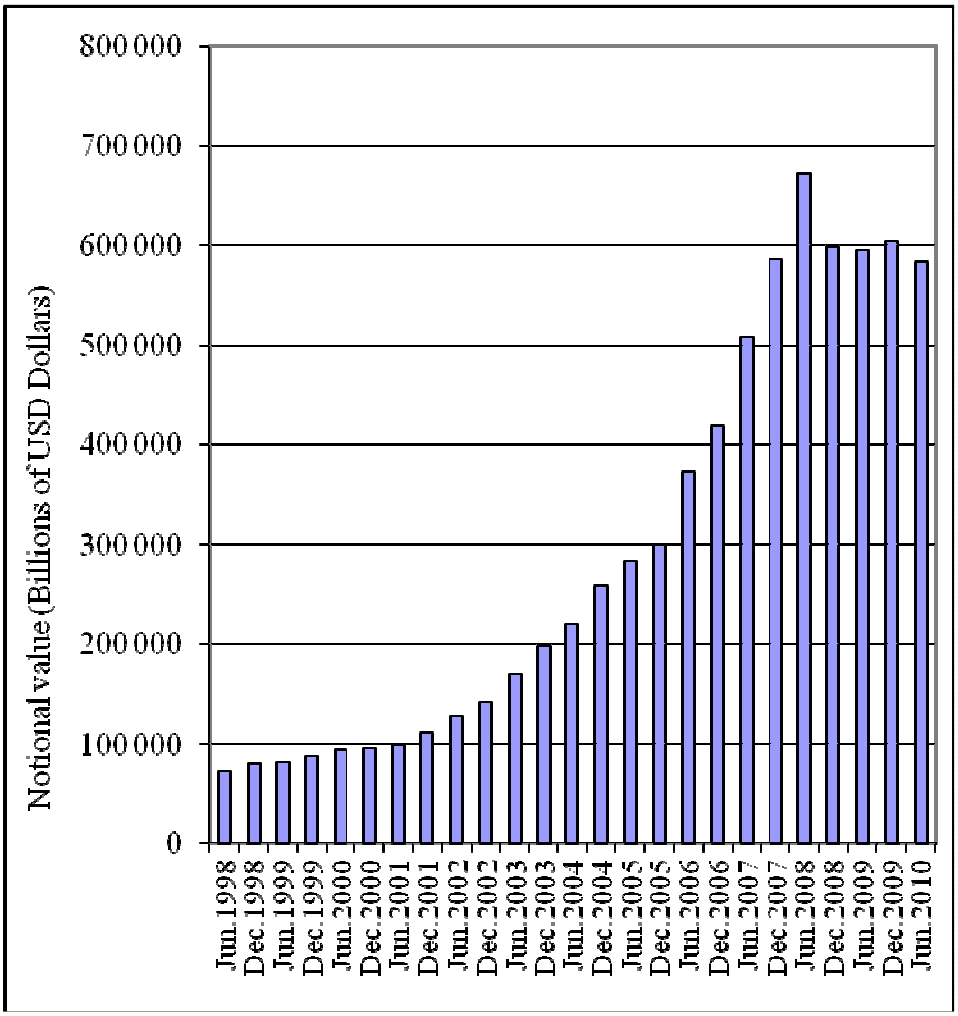
OTC derivatives include the following five broad classes of derivative securities: foreign exchange derivatives, interest rate derivatives, equity derivatives, commodity derivatives and credit derivatives. The most important class of contracts in the credit derivatives category is credit default swaps. Out of these five segments of the OTC derivative market, the interest rate derivatives are clearly the largest one, the next largest being foreign exchange derivatives and credit derivatives. Fig. 1 reports the notational value of the stock of outstanding OTC derivatives from 1998 through June 2010.

The derivative contract among two counterparties is a contractual relation which is in force over the whole duration period of the contract. This duration may range from a few days to a very long contract over several decades. During the lifetime of the contract, counterparties build up claims against each other, as the rights and obligations covered by the contract evolve as a function of its underlying assets. This leads to the possibility of counterparty credit risk, which is the risk that a counterparty may not fulfill its duties under the contract when they become due. Ineffective management of counterparty risk is one of the three main problems in the functioning of OTC derivatives market, the others being the lack of transparency on positions and exposures and ineffective mitigation of operational as well as systemic risk when one counterparty defaults cascading in defaults of other parties.

The counterparty risk may be managed over time through clearing. This may be performed centrally, for example through a central clearing counterparty, or bilaterally. While both types of clearing are utilized for OTC derivatives, the bilateral clearing is the most used form. The most frequently used method of management of counterparty credit risk is the provision of collateral on the basis of a bilateral collateral agreement. Collateral serves as an effective insurance against excessive credit exposure if notational values are calculated frequently and accurately, if the collateral is effectively exchanged in a timely manner, if it offers a

comprehensive coverage against overall potential counterparty credit risk exposure, and if it is legally enforceable in the event of the counterparty's default. The majority of bilateral collateral arrangements provide only for the exchange of variation margin (covering fluctuations in the value of the contract), but not of initial margin (covering the potential cost of replacing the contract in case the original counterparty defaults).

Fig. 1: Global Amounts Outstanding of OTC Derivatives



Source: BIS (2010)

With respect to operational risk management, it is important to realize that an OTC derivative trade goes through many processing steps from

the initial trading agreement of the parties thorough the confirmation of the transaction and further management of the OTC contract. The processes that have been developed to manage these steps are often quite complex and interconnected. Since the OTC derivative markets allow for a high level of flexibility in defining the economic and legal terms of derivatives contracts, there are a number of highly individualized and complex contracts in the market that still require significant manual intervention during their processing. The low level of standardization of OTC derivatives contracts and low automation of processes leads to high operational risk, i.e., the risk of loss resulting from inadequate or failed internal processes and systems.

OTC derivatives are privately negotiated contracts and consequently any information concerning the contract and any of the counterparties is usually only available to the contracting parties. One mechanism for changing the informationally opaque nature of the OTC derivatives markets is the establishment of trade repositories to which the information about the trades would be reported. An example of the well-established trade repository is the Warehouse Trust, which contains information on almost all outstanding credit default swaps (CDS).

3 EU and US Comparison

Both EU and US approaches to the regulation of OTC derivatives markets should be viewed in the light of the agreement of the G-20 leaders expressed during their Pittsburgh meeting in September 2009. This agreement specifies that all standardized OTC derivative contracts should be traded on exchanges or electronic trading platforms, where appropriate, and cleared through central counterparties. The G-20 leaders also agreed that OTC derivative contracts should be reported to trade repositories.

The Dodd-Frank Act and the European Market Infrastructure Regulation (EMIR) have essentially the same scope. Both include very general definitions allowing for most derivatives. In the US, foreign exchange swaps and forwards may be exempted by regulation.

With respect to regulatory responsibilities, derivative trading in the EU continues to be regulated by relevant national regulators, and CCPs in the EU will come under the supervision of them too. The European Securities and Market Authority (ESMA) will have an important role

including development of technical standards and overseeing non-EU CCPs. In the US, the Dodd-Frank Act allows for the distribution of regulatory responsibilities between the Commodity Futures Trading Commission (CFTC) which is concerned with swaps and Securities and Exchange Commission (SEC) which is concerned with security based swaps.

As far as the timing of the introduction of both regulations is concerned, most provisions of the Dodd-Frank Act and relevant rules take effect by July 2011. The EU regulation is intended to be in force by 2012, and EU technical standards are due to be completed by ESMA by the end of June 2012.

While the US and EU regulations are very similar, there exist some important differences between both approaches. These major differences are concerned with restrictions on bank proprietary trading, the separation of derivatives business from banking, mandatory exchange trading, and clearing organization ownership rules. In the following paragraphs we outline these differences in a more detail.

From the point of view of operations of commercial banks, the EU approach does not introduce any equivalent to the Dodd-Frank "push out" rule which restricts the derivatives trading activities of banks. Similarly there is no EU equivalent to the "Volckerrule" which restricts the proprietary trading operations of bank groups. As opposed to the US, there is also no provision which would allow regulators to restrict bank ownership of CCPs in the EU.

The US "push out" rule means that as a condition for receiving certain governmental assistance, including access to the Federal Reserve's discount (lending) window, banks will be required to move certain derivatives into a separately capitalized affiliate. There are limited exceptions available for US FDIC-insured banks for hedging activities and derivatives involving certain permitted assets for banks (such as interest rate and currency derivatives). These exemptions are not currently available for uninsured US branches of non-US banks.

The "Volcker Rule" prohibits proprietary trading in many derivative instruments by some regulated financial institutions and affiliates. The proprietary trading includes engaging as principal for the trading account of the banking entity in any transaction to purchase or sell or otherwise

acquire or dispose of securities, derivatives, contracts for sale of a commodity for future delivery or engage in option trading. The following permitted trading-related activities are allowed as exceptions to the "Volcker Rule". Banking entities may engage in proprietary trading of obligations of the US or any agency, Ginnie Mae, Fannie Mae, a Federal Home Loan Bank, Freddie Mac, Farmer Mac, a Farm Credit System institution, and municipal obligations. They may also engage in underwriting and market-making-related activities in securities that otherwise are prohibited for proprietary trading, but they may acquire inventory only to the extent necessary to meet the "reasonably expected near term demands" of customers. Other exceptions are hedging or similar risk mitigation activities that are designed to reduce the specific risks arising from or related to covered instruments. The banks are allowed to purchase or sell covered instruments on behalf of customers. The banking entities are allowed investments in certain small business companies and other investments to promote the public welfare. They may undertake investments in covered instruments by an insurance company and its affiliates for the company's general account. Banking entities may engage in proprietary trading by non-US entities outside of the US. Banking entities may sell or securitize (but not buy) loans.

Of all these exceptions, the market making exception seems to be one of the major loopholes of the Volcker Rule. The Volcker Rule also prohibits banking entities from sponsoring or investing in hedge funds and private equity funds. This restriction is again subject to a number of exceptions. Sponsoring in the context of the Volcker Rule means serving as a general partner, managing member or trustee; controlling a fund through the power to elect a majority of directors, trustees or management; or sharing the name or a variant of the same name with the fund.

A very important institutional difference between the two regulatory approaches is that the Dodd-Frank Act requires that transactions that are subject to the clearing requirement are also subject to the mandatory exchange trading requirement. They have to be executed on a regulated exchange or a registered swap execution facility (SEF), which is a new category of regulated multilateral trading facility. The trading requirement does not apply if the transaction is exempt from the clearing requirement or if no exchange or SEF makes the swap available for trading. The EU does not currently propose to have an exchange trading requirement for

derivatives, but such a provision may be considered in the framework of the EU Markets in Financial Instruments Directive (MiFID) review.

The last major area of differences between US and EU approaches are the clearing organization ownership rules. In the US, the CFTC and SEC have proposed rules under the Dodd-Frank Act that would limit the ownership of voting equity on clearing organizations by clearing members and other financial entities. Under this proposal, a CCP would have to comply with one of two alternative limits. One limit is that no member may own more than 20 percent of the voting equity, and specialized financial entities (whether members or not) may not own more than 40 percent of the voting equity in the aggregate. The alternative limit is that no specified financial entity (whether or not a member) may own more than 5 percent of the voting equity. In the EU approach, holders of significant shareholdings, direct or indirect, must be notified to the regulator, which may refuse authorization of the CCP if it does not consider such shareholders to be suitable (taking into account the need to ensure the sound and prudent management of the CCP). There are no specific rules in the EU on holdings by members and none are included in the proposed European Market Infrastructure Regulation (EMIR). While the EU has not proposed numerical ownership limits on clearing organizations, in practice it may apply similar standards as in the US.

Both US and EU regulations impose central counterparties clearing and trade repositories on a broadly defined class of OTC derivatives, with some differences and exemptions. They both leave the final decision whether the clearing obligation applies for a particular class of OTC to the assigned regulator.

The EU clearing obligations are potentially easier on end-users than under US legislation. In the EU, all financial counterparties who deal with other financial counterparties are subject to clearing. Non-financial counterparties have to satisfy the clearing requirements only when their positions (excluding certain hedges) are higher than a clearing threshold. This is a less restrictive approach than in the US, where everyone who trades an eligible contract has to clear the contract. The only exception under US legislation is when non-financial subjects engage in some hedging transactions.

Similarly, the EU approach is easier on end-users with respect to collateralisation of the uncleared contracts. Under the EU legislation only

financial counterparties and non-financial counterparties who are under clearing obligation have to ensure an appropriately segregated exchange of collateral or an appropriate and proportionate holding of capital for uncleared transactions. Under the US legislation, all dealers and major swap participants engaged in uncleared transactions are subject to margin requirements. There is no explicit exemption for transactions with end-users under the US legislation. Nevertheless US legislators have indicated that the margins will not be required from the end-users, many of which will be engaged in hedging transactions.

Some of the problems of OTC markets in the EU are covered not by a recently proposed EU regulation but by the current review of EU Markets in Financial Instruments Directive (MiFID). So while the US approach requires the execution of OTC derivatives subject to the clearing obligation on a swap execution facility or designated contract market, real time post-trade transparency for cleared derivatives trades and position limits, in the EU these issues are covered separately in the framework of the MiFID review.

Both EU and US approaches include registration and conduct of business rules for dealers (the EU actually already had these rules under MiFID directive). The US approach extends registration, conduct of business and margin/capital rules to “major swap participants”. The EU approach only imposes limited rules (but including margin/capital requirements) on non-financial counterparties which are subject to the clearing obligation.

Both the US and EU approaches facilitate cross-border clearing since they include recognition/exemption of non-domestic CCPs. With respect to repositories, both the US and EU are less favorable in their cross-border provisions. The US requires from repositories compliance with full US requirements. EU will provide recognition of non-EU repositories conditional on conclusion of a treaty.

Finally, because of different legal cultures in the EU and US, the US approach provides regulators with greater flexibility in dealing with unintended consequences through rule-making and other powers.

4 Conclusions

When fully effective, the European and American derivatives regulations, EMIR and the Dodd-Frank Act, will introduce important changes to both the regulation and structure of the OTC derivatives markets in the US and Europe. While the overall approach both in the US and the EU is very similar, there are certain differences in the regulatory approach taken in these two jurisdictions. These differences may lead to the possibility of regulatory arbitrage and in some cases they may lead to conflicting or inconsistent requirements due to their extraterritorial impacts. Nevertheless the final shape of the new OTC derivatives markets will depend on implementing rules and regulations. Therefore the regulatory authorities will be important players in this stage of the broad regulatory game, and they will have wide scope and authority to interpret key provisions of the underlying legislation.

The major similarities between EMIR and the Dodd-Frank Act are in the mandatory clearing for standardized contracts, in the scope of the derivatives covered, in exemptions from clearing for end-users and in the reporting of cleared and uncleared (OTC) derivative transactions by nearly all financial counterparties. The major differences are the restrictions on bank proprietary trading, the separation of derivative trading activities from commercial banking activities, CCP ownership rules, and the establishment of a mandatory exchange trading requirement.

At this stage we have only reviewed the institutional description of the differences and similarities in US and EU approaches to the regulation of OTC derivatives both of which move in the direction of G-20 consensus to provide higher stability and transparency for OTC derivatives trading. A possible extension of this paper would be an inclusion of other important countries into this comparison. The obvious candidates for this extension would be Japan, Singapore and China (Hong Kong). In Japan, a new law amending the Financial Instruments and Exchange Act was passed in May 2010 making CCP clearing compulsory for a wide class of OTC derivatives. The initiative to establish a local CCP for derivatives has been launched in Hong Kong, and the Singapore Exchange Derivative Clearing Limited is in the process of introducing a new trade registration system for the registration of interest rate swaps and Asian foreign exchange forwards. Another extension would be to investigate the connections between OTC derivatives regulation and global regulatory

standards on bank capital adequacy and liquidity under the Basel III framework. The connection between OTC derivatives regulation and banking regulation is potentially interesting given the current major difference between EMIR and the Dodd-Frank Act in the area of proprietary trading of banks and banking groups.

References

[1] BIS (2010): *Semiannual OTC Derivatives Statistics at End-June 2011. Amounts Outstanding of Over-the-counter (OTC) Derivatives by Risk Category and Instrument.* [on-line], Basel, Bank for International Settlements, c2010, [cit. 3rd May, 2011], <http://www.bis.org/statistics/otcder/dt1920a.csv>

[2] Clifford Chance (2010): *Regulation of OTC Derivatives Markets. A Comparison of EU and US Initiatives.* [on-line], London, Clifford Chance, c2010, [cit. 3rd May, 2011], <http://www.cliffordchance.com/content/dam/cliffordchance/PDF/Regulation_of_OTC_Derivatives_Markets_-_EU_and_US_comparison_LORES.pdf >.

[3] Culp, C. L. (2009): *The Treasury Department's Proposed Regulation of OTC Derivatives Clearing and Settlement*. Chicago, University of Chicago Booth School of Business Research Paper no. 09-30, 2009.

[4] De Meijer, C. R. W. – Wilson, J. (2010): *New OTC Derivatives Regulation and the Future of the Derivatives Industry*. Journal of Securities Operations and Custody, 2010, vol. 3, no. 3, pp. 241-251.

[5] Duffie, D. – Zhu, H. (2010): *Does a central clearing counterparty reduce counterparty risk?* [on-line], Stanford, Stanford University Graduate School of Business, Research Paper 2022, c2010, [cit 3rd May, 2011], <http://www.stanford.edu/~duffie/DuffieZhu.pdf>.

[6] EC (2010): *Impact Assessment for Regulation of the European Parliament and of the Council on OTC Derivatives, Central Counterparties and Trade Repositories*. [on-line], Brussels, European Commission, c2010, [cit. 3rd May, 2011], <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=SEC:2010:1055:FIN:EN:PDF>.

[7] Financial Stability Board (2010): *Implementing OTC Derivatives Market Reform*. [on-line], Basel, Financial Stability Board, c2010, [cit 3rd May, 2011], <http://www.financialstabilityboard.org/publications/r_101025.pdf>.

[8] Green, P. – Jennings-Mares, J. (2011): *Draft EU Regulation on OTC Derivatives*. [on-line], San Francisco, Morrison and Foerster, c2011, [cit. 3rd May, 2011], <http://www.cba.uh.edu/spirrong/clearing_organization.pdf>.

[9] Pirrong, C. (2009): *The Economics of Clearing in Derivatives Markets: Netting, Asymmetric Information, and the Sharing of Default Risks through a Central Counterparty*. [on-line], Houston, University of Houston, c2009, [cit 3rd May, 2011], <http://www.cba.uh.edu/spirrong/clearing_organization.pdf>.

[10] Rausser, G. – Balson, W. – Stevens, R. (2010): *Centralized Clearing for Over-the-counter Derivatives*. Journal of Financial Economic Policy, 2010, vol. 2, no. 4, pp. 346–359.

[11] Rausser, G. – Stevens, R. (2009): *Public-private Partnerships: Goods and the Structure of Contracts*. Annual Review of Resource Economics, 2009, vol. 1, no. 1, pp. 75–98.

[12] Sherman & Sterling (2010): *Proposed US and EU Derivatives Regulations: How they compare*. [on-line], London, Sherman & Sterling, c2010, [cit 3rd May, 2011], <http://www.shearman.com/files/Publication/84c83ccc-2a2d-4e20-880c-45c31c6059ea/Presentation/PublicationAttachment/a13fc03b-2189-413c-9ce1-0b066c5d27f1/FIA-111010-Proposed-US-and-EU-Derivatives-Regulations.pdf>.

European Financial and Accounting Journal, 2011, vol. 6, no. 4, pp. 7-19.

Comparing American and European Regulation of Over-the-Counter Derivative Securities

Karel JANDA – Gordon RAUSSER

ABSTRACT

This paper describes the major issues in the clearing of over-the-counter (OTC) derivatives and the current regulative initiatives aimed at removing the market opaqueness. The core of the paper is the comparison of the US Dodd-Frank Wall Street Reform and Consumer Protection Act and the European Market Infrastructure Regulation (EMIR). The similarities and the major differences of these two regulative approaches are emphasized. The major similarities between EMIR and the Dodd-Frank Act relate to the mandatory clearing for standardized contracts, the scope of the derivatives covered, the exemptions from clearing for end-users and the reporting of cleared and uncleared derivative transactions by nearly all financial counterparties. The major differences arise with the restrictions on bank proprietary trading, with separation of derivative trading activities from commercial banking activities, with central counterparties (CCP) ownership rules and with the establishment of mandatory exchange trading requirement.

Key words: OTC Derivatives; Centralized Clearing; Regulation; EMIR; Dodd-Frank.

JEL classification: G01, G28.