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Contemporary Nature of Stock Exchange in View of the Process of Demutualization

JEL classification: *G10; L2; L3*

Keywords: *demutualization; stock exchange; company; government; society*

Abstract: *As part of the demutualization process, stock exchanges are transformed into the traditional membership structure (mutual) for entrepreneurial structure.*

The aim of the article is to analyze changes in the functioning of the stock exchanges due to the organizational and legal form and the consequences of these changes. As a research hypothesis, it is assumed that the process of demutualization determined the changes in the rules of functioning of the stock exchanges and created threats from point of view of socio-economic functions. In order to verify the hypothesis, we use: analysis of causes, logical analysis and analysis of statistical data about the 57 stock exchanges- members of WFE.

The conducted analysis allows to verify the hypothesis that demutualization process determined the changes in the rules of functioning of stock exchanges, as well as created a threat from the point of view of socio-economic functions. The contribution (value added) of this article is the conducted analysis verifying the essence of stock exchanges from the perspective of the processes of demutualization.

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Introduction

In classical terms, the stock exchange is defined as "any organization, association, or group of persons, whether incorporated or unincorporated, which constitutes, maintains, or provides a market place or facilities for bringing together purchasers and sellers of securities or for otherwise performing with respect to securities the functions commonly performed by a stock exchange as that term is generally understood, and includes the market place and the market facilities maintained by such exchange" (Di Noia, 1999, p. 17, quote from: American Securities Exchange Act). Stock exchange aims to provide centralization securities trading, as well as determines the flow of information, disseminating and triggering competition among the participants in the stock market.

Historically, stock markets were institutions for non-profit organizations, organized as a cooperative, or functioning as state institutions. Their activity was carried out in the interest of public life through the implementation of macro-economic functions: allocation, valuation of securities, and control. As a result of electronisation of trading and transformation of organizational and legal form of stock exchanges, so-called demutualization, there has been a change in the rules of their functioning. Currently, most stock markets operate as commercial enterprises, for profit. In view of the described phenomena, there is the problem of the essence of modern stock exchanges and threats associated with the change of their organizational and legal structures. The activities of stock exchanges is seen in part as a public good, even if they are privately managed. However, an increase efficiency of stock exchanges does not necessarily translate into an increase in the quality of their socio-economic functions, and short-term pursuit for profit may pose a threat to the functioning of the economy and society.The research problem worth taking is whether the stock exchange due to changes in organizational structures and legal risks associated with these changes, realize their socio-economic functions.

Research Methodology

The aim of the article is to analyze changes in the functioning of the stock exchanges due to the organizational and legal form and the consequences of these changes. The research hypothesis assumes that the process of demutualization determined the changes in the rules of functioning of the stock exchanges and created threats from point of view of socio-economic functions.

In order to verify the hypothesis, we use literature studies that allowed to present the key theoretical issues and demonstrate the essence of the phenomenon of demutualization, as well as threats associated with the processes transformation of the legal form of stock exchanges. In the article, we use the analysis of causes and effects in order to present the process of transformation of the organizational-legal form of stock exchanges and its effects, and the logical analysis involving the search of the logical relationship between the causes and consequences of these changes. In addition, basing on the data published by the World Federation of Exchanges (WFE), we use the analysis of statistical data about the stock exchanges and their financial results. The data refers to 57 stock exchanges- members of WFE.

Changes in the Ownership Structure of Stock Exchanges – Process Demutualization

According to the Anglo-Saxon model, the traditional organization structure of stock exchange is a cooperative, created by members of the stock exchange. In contrast, the continental model (European) is a stock exchange operating on the basis of law, under control the State (Ramos, 2003, p. 13). In the cooperative structure, members are usually financial institutions that are intermediaries in trading of securities- representing the interests of investors (brokers) or their own (dealers). This form of exchange was a result of the fact that stock market, on which an efficient trading of securities should take place, must be located in a specific place, and function at fixed times, according to the established rules of reporting and implementation of contracts, and with a guarantee of settlement of transactions (cash and delivery securities). In order to meet the presented conditions and to prevent overflow on the floor, it should be selected brokers who represent the interests of all concerned trade. Rationing access to the exchange was through the sale of "places", so by membership fees – high initial and lower annual (Steil, 2002, p. 2). In contrast, non-members wishing to use opportunities offered by the concentration of capital in one place, paid the members of stock exchanges for representing their interests. In this way, the members of the stock exchange have become intermediaries (brokers) for transactions realized by investors.

Technological factors and the liberalization of regulations on the movement and circulation of capital, forced changes in the form of operation of stock exchanges and thus determined the process of demutualization. The previously used open outcry system was replaced with electronic trade, in which investors alone make investments in securities (Gorham, 2011, p. 3). Computerization of trading eliminated the intermediary role of brokers, which was associated with the process of disintermediation. The liberalization of regulations on the movement of capital and trade led to the gradual expansion of opportunities, and in some regions- even freedom in the framework of activity of investment institution.

Demutualization is a process to move away from the traditional cooperative structure (mutual) stock exchanges (Steil, 2002, p. 6). The basis of demutualization is separation of property rights and membership of stock exchange. In this process, the owners become third parties who are not members of the stock exchange. It should be noted that full demutualization of the stock exchange is a complex process. One can not specify a single event that causes an immediate demutualization. Generally, this process consists of four steps (Jacquillat, 2006, p. 155). The first stage, is considered to be an exchange organization in the cooperative form. The second stage is the process of transformation of stock exchanges in for-profit organizations, but whose owners and supervisors are members of the stock exchange. The next step is to change the legal and organizational structure for the joint-stock company, in which the owners of the stock exchange, in addition to its members, are external entities. The fourth step is to issue its own shares. At this stage, the owners are individual stock market investors and institutional investors. Shareholders becomes more diffuse.

Literature enumerates two basic reasons for demutualization. The basic reason is to reduce the control of exchange members (especially local, national) as strategic owners. Stock exchanges operating in a competitive financial market, in order to be competitive, must reduce costs for the issuers of securities and increase investment portfolios for investors. In contrast, members of stock exchanges, seeking to maximize their own profits from brokering, do not always care about improving the competitiveness of the exchanges. The main justification is the belief that private structure enables faster response to new environmental challenges (Jacquillat, 2006, p. 159).

Another reason of demutualization is raising capital – by selling shares-necessary for expansion and investment in technology. Studies show that an increase of capital in relation to the demutualization is a secondary goal (Steil, 2002, p. 6). In most stock exchanges which have undergone demutualization, there was no urgent need to raise new capital. Moreover, in the case of scarcity of capital, the increase may be from membership payments without having to join external owners.

Demutualization implies a departure from the traditional cooperative structure of the stock exchanges. At the same time, bourses acquire new owners, non-members of the stock exchange. Due to the different contribution of external owners, the exchanges may be different. World Federation of Exchange proposed a classification of stock exchanges consisting of five categories. The first category are private, limited companies. These are stocks of exchange registered as private companies, generally with a paid up share capital. In these bourses, intermediaries are usually the sole owners of the exchange, and their ownership and intermediations rights and activities are strongly linked. The second category are private, limited companies after demutualization, but not listed. The demutualization of bourse is a process by which a not-profit member-owner organization is transformed into a for-profit shareholder corporation. Ownership is more open. The third category are the publicly listed bourses. The stock exchange goes public when its shares are listed on an exchange and are freely negotiable. The fourth category includes exchanges registered as associations, or mutuals. These member cooperatives generally have no share capital. Access to membership is restricted. The last category regroups bourses with an „other" legal status. The example are exchanges which have a government or semi-government agency structure, and belong to the state (Devai & Naacke, 2012, p. 38).

Characteristics Functioning of the Stock Exchanges after Demutualization Process

Changing the organization of stock exchanges results in the fact that bourses are an example of an entrepreneurial rather than a mutualized management structure. Assuming the formula of companies, their aim of activities becomes to maximize profit. The group of stakeholders who are interested in the financial result generated by exchanges are not already members, but new owners- shareholders.

Stock exchanges after the process of demutualization assume the form of commercial business entities engaged in service activities. They provide services in the areas of issuers, trading financial instruments (cash market and derivatives), information dissemination, and other, which may include clearing and settlement services, sales of software to trading analysis, training etc. (Gorczyńska, 2012, pp. 33-35). Each of the presented areas generates revenues and costs. Bourses that want to be leaders must function effectively, diversifying their activity among the areas that provide the greatest opportunities for growth, and thus revenue, and simultaneously resign from providing services that are not competitive. Therefore, they open new trading markets, e.g. for innovative small and medium-sized businesses, create new products, as well as acquire functions from value chain that previously were served by separate institutions. In addition, the exchanges target their efforts on using ever newer and more efficient information technology and telecommunications and sales new products. These activities are aimed at attracting as many clients- issuers and investors, and simultaneously optimizing costs.

Stock exchanges expand their business within the internal development or the external development – consolidation. Diversification of product in the framework of external development takes the form of horizontal consolidation. Exchanges can connect on the basis of a similar profile of activity (e.g. exchanges of derivatives), as exemplified by the CME Group, formed by the consolidation of exchanges: the Chicago Mercantile Exchange (CME), Chicago Board of Trade (CBOT), the New York Mercantile Exchange (NYMEX), COMEX and the Kansas City Board of Trade. Exchanges can also connect despite having different product profiles, such derivatives exchanges and cash exchanges, e.g. Deutsche Börse Group, in which Deutsche Börse merged with Eurex. Today, connections dominate between exchanges in different countries, resulting in the formation transnational exchanges (e.g. NYSE Euronext, NASDAQ OMX). This leads to the phenomenon known as nationalizing international stock exchanges or exchanges of integration (Chesini, 2007, p. 151).

Stock exchanges also "absorb" an activity that has not included it in value chain. They do this by vertical mergers. This type of consolidation usually involves a combination of stock exchanges (quotation system, trading) with clearing and depository institutions, i.e. post-trade integration. Vertical integration between the stock exchange, clearing and deposit took place at the Deutsche Börse (DB), Amsterdam and Brussels.

Both horizontal and vertical consolidation are aimed at reducing costs, but also attracting more and more business entities involved in the stock market transactions, thus increasing the competitiveness of the merging exchanges.

The Threats Associated with the Activities of the Stock Exchanges after Processes Demutualization – Outline of the Problem

Demutualization leads to fundamental changes in the management and ownership of stock exchanges. In the area of property is connected with the increasing role of external owners, including institutional ones from financial sphere. These investors are associated with the so-called impatient capital, looking for opportunities to obtain windfall profits in the short term

(Ratajczak, 2012, p. 283). The growing relevance of the owners and changes in the structure of exchanges aimed at profit can be hazardous in the execution of socio-economic functions.

Generally, executing classic function of exchanges allocation is in the framework of the cash market, in which capital is transformed between holders and demand notifying for it. After the demutualization processes, bourses target their actions to the short-term profitable business spheres. This is the sphere of the derivatives market. Derivatives in its original destiny were supposed to hedge risks of (including exchange risk) financial transactions carried out by operators internationally, but have become a form of rapid, profitable, but risky, profits. Analyzing the global volume of trade of options and futures (single) calculated by the amount of contracts in million, in 1996-2010 it increased more than 10-fold, reaching a record in 2007 year 43 6785 502 option contracts and 1 058 862 743 futures contracts (http://www.world-exchanges.org/statistics/annual/derivativ e-mark ets/derivatives). Thus, in the framework of presented phenomena:

> „ (...) more and more resources are invested in financial activity rather than the production of goods and services, that generate high private returns disproportionate to its social utility". (Tobin, 1984, p. 14).

The activities of stock exchanges focused on short-term earnings can be connected with danger of underfunding the countries or sectors of the economy. The owners from the financial sphere often treat their participation in the real economy as one of periodic and alternative forms of investment of capital but not as a real long-term commitment within the property with the intention of developing the organization (Ratajaczak, 2012, p. 283). Therefore, as a result of the rapid momentum toward earning money, instead of allocating capital in developing industries of the economy, it will get to the most profitable projects, and not necessarily relevant to the development of the country's economy. This phenomenon in internationall scale may lead to a capital outflow from the countries perceived as weak from the point of view of investments (short-term). Through an investment opportunity, and therefore the allocation of capital globally, excessive concentration of capital flows may occur in some countries, and the lack of access to them in others. Moreover, a large inflow of foreign capital to the relatively illiquid financial markets, may lead to losing an influence on the national markets in these countries (Kowalak, 2006, p. 49).

The dynamic development of derivatives markets is a threat to individual investors. Derivatives are profitable in the short term, but also risky speculative instruments. Their multi-storey structure, concerning profit depending on the price of another asset, has blurred picture of the risks

(Gorczyńska, 2011, p. 83). Their complexity is so high that even those who, like the rating agencies, on behalf of other market participants should assess the risk involved, are also victims of asymmetric information. This has resulted in the violation of fundamental rules of trust between sellers (e.g. new financial products) and the buyers. Currently, the old Latin maxim *caveat emptor* ("let the buyer beware") takes on a new special significance (Freeman, 2010, p. 165).

The development of the derivatives markets can also lead to pathological phenomena concerning long-term investment. In general, for cash equities, there is a relationship between ownership and direct realization of managerial functions or ownership by ceding management functions to hired managers. In the case of derivatives, it is possible ownership without the awareness of being a co-owner and ownership, which generally is not accompanied by any of the rights and obligations. Owner of derivatives can be downright interested in the bankruptcy of the entity whose activity is the source of creation of a derivative, or more often is interested in significant variability of events affecting the valuation of held derivatives, and the possibility of implementing a pension, than stability speculative development (Wigan, 2009, p. 165).

The pursuit of short-term profit can lead to actions that threaten the security of trading on the stock market. Competition between exchanges and between exchanges and OTC markets (ATS-s) may result in lowering the requirements for listed securities or business entities (institutional) allowed for direct trade. Indeed, stock exchanges, in order to attract new investors and increase turnover, are able to minimize the regulations defining access to the stock market. This was the case in the US, where some exchanges such as the NYSE, prevented the trading of securities listed outside the stock exchanges, whereas NASDAQ market did not impose such restrictions on its participants (Stoll, 2008, p. 17).

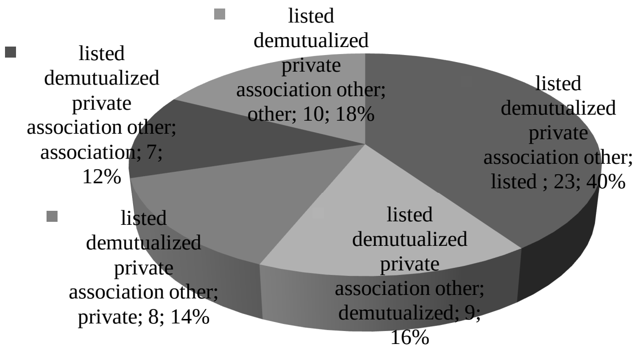
Contemporary industry of stock exchanges is characterized by competition. It is obvious that in the long perspective ineffective bourses will lose its market share. It should be clear that stock exchange cannot only be seen as a commercial institution focused on increasing its efficiency. Stock exchanges are business entities providing "specific goods". According to the traditional approach, these services are public goods, even if the exchange is private (Di Noia, 1999, pp. 18-19). Through services of trading, issuers, listing, they execute the function of allocation, valuation of securities and control – functions of socio-economic character.

Characteristics of the Activity of Stock Exchanges by Organizational and Legal Form in Numbers

With the aim of verification the considerations presented in theoretical part, we have analyzed the data on selected aspects of the functioning of the stock exchanges. First, we have examined the extent to which stock markets have been exposed to the processes of demutualization. So, we have analyzed the quantity and the structure of bourses due to organizational and legal form.

The largest group in terms of legal form are listed exchanges (23 stock exchanges), i.e. 41%. They are dominated by NYSE Euronext, NASDAQ OMX Group, CME Group and Deutsche Boerse, which represented 57% of the total revenues of this group in 2012 year. The next part (19%) has the legal status of the stock exchange defined as "other". They are represented by, among others, Abu Dhabi Securities Exchange, Moscow Exchange, The Egyptian Exchange. 14% are demutualized stock exchanges (9 bourses). The demutualized group is dominated by China Financial Futures Exchange, Korea Exchange, National Stock Exchange of India and Taiwan Stock Exchange that accounted for 80% of the revenues.

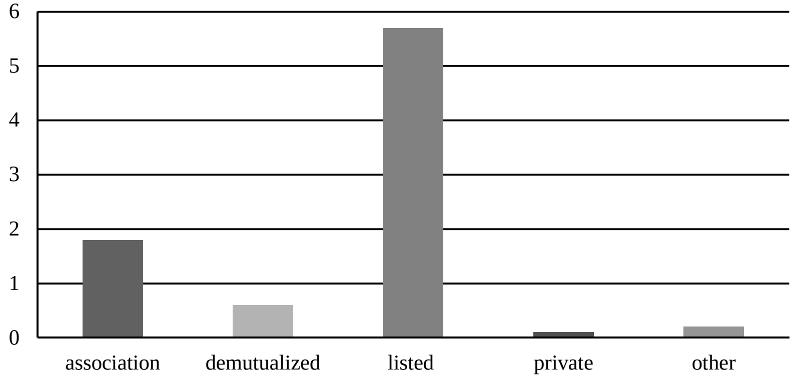
Figure 1. Breakdown exchanges by legal status (members World Federation of Exchange) in 2012



Source: Devai & Naacke (2012, p. 8).

The private exchanges consist of 8 bourses. They are dominated by SIX Swiss Exchange and Taiwan Futures Exchange. The smallest group consist of association/mutual bourses (7 members). It is represented by 5 exchanges in Mainland China (Dalian Commodity Exchange, Shanghai Stock Exchange, Shanghai Future Exchange, Shenzhen Stock Exchange and Zhengzhou Commodity Exchange) that accounted for 99% revenues of associations in 2012. In summary, the dominant part of the stock exchanges has been exposed to demutualization process. 74% of exchanges are for profit, but only 26% are not-for-profit organizations. As many as 40% of are listed exchanges- exchanges that are at the highest stage of demutualization.

Figure 2. Net income of stock exchanges by legal status in 2012 (USD billion)



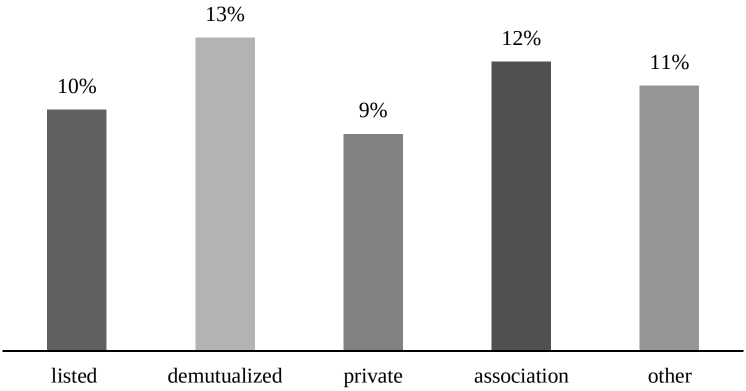
Source: Devai & Naacke (2012, p. 18).

Analyzing the stock exchanges by legal status, it is worth comparing the economic and financial results of each form of bourses. It should be noted that the financial results, in addition to the legal form, influenced by other factors. The comparison was made according to annual net income and return on equity capital (ROE) of exchanges by legal status.

In accordance with Figure 2, the largest net income is generated by the listed exchanges. In 2012 it amounted to approx. 6 billion USD. Following group exchanges (in terms of net income) were association exchanges (less than 2 billion USD). Other exchanges generated a net income of less than US $ 1 billion. Such a high net income generated by the listed exchanges related to the fact that these exchanges constitute the largest percentage of operating exchanges and has the largest equity (at about 70 billion USD). In addition, in the framework of these exchanges operate the world's largest stock exchanges: NYSE Euronext, NASDAQ OMX Group, CME Group and Deutsche Boerse. The global distribution of costs and revenues among each legal status reflects the weight of listed Exchange, which accounted for 80% of revenues in 2012 (to be compared with 40% of the membership).

Apart from net income, it is worth looking at other financial data. Figure 3 shows the ROE (return on equity capital) of stock exchanges by legal status.

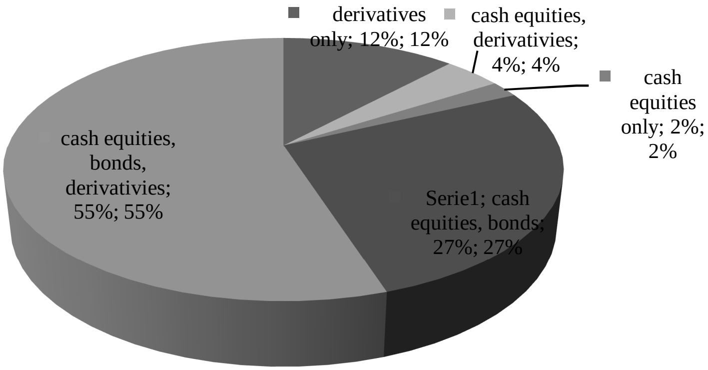
Figure 3. ROE of stock exchanges by legal status in 2012



Source: Devai & Naacke (2012, p. 25).

Analyzing ROE for individual exchanges, we can see no significant differences in the level of this indicator. It is at a comparable level of approx. 10% for each type of exchange, with the highest 13% for demutualized exchanges. The listed exchanges received one of the lowest ROE, although their net income was the highest. This level of the indicator is connected with the fact that these exchanges have the highest level of equity capital. What may be interesting is the fact that there are no significant differences in ROE between exchanges non-profit and for-profit. As a matter of fact, non-profit exchanges received even a higher ROE (11%) than for-profit (9%) (Dévai & Naacke, 2012, p. 25). Thus, the presented data do not allow to draw the conclusion that the stock exchange after demutualization process and the issue of own shares operate more efficiently than the stock market were exposed to these processes.

Figure 4. Breakdown of exchanges by products in 2012



Source: Devai & Naacke (2012, p. 10).

Apart from financial data, we should also examine the structure of the products offered by the stock exchanges. Among the analyzed members of the WFE (Figure 4), most stock markets had to offer a wide range of products. 55% of the stock exchanges offered three classes of assets, i.e. cash equities, bonds, derivatives; 27% within the classes of assets: cash equities, bonds and 4% within the cash equities and derivatives. Only 14% were stock exchanges with one product, which offer only derivatives, and only 2% cash equities.

Stock exchanges, in addition to product diversification, expand their range of services. Apart from classic services of listing and trading, they run post-trade activities. Out of all the members of the WFE, 77% are exchanges performing the functions of clearing, settlement and depositary services. The remaining 23% are non-active exchanges in post-trade services, but have a stake in a company providing the post-trade services. One such example is The Central Counterparty Austria (CCP.A), which offers all clearing services for the Wiener Boerse (Wiener Boerse is with OEKB (Oesterreichische Kontrollbank) joint-owners if CCP.A. Also Johannesburg Stock Exchanege owns 44,55% of the Central Securities Depositary.

So, the stock exchanges, as a result of process demutualization and electronisation trading, have transformed from institutions offering cash market products to organizations offering a wide range of products and services beyond the classical listing and trading.

To sum up, analyzed statistical data confirm that the dominant part (two-thirds) stock exchanges was exposed to demutualization, and as many as 40% ones are listed exchanges- exchange at the highest stage of demutualization. One cannot conclude that bourses after demutualization process and the issue of own shares operate more efficiently than the stock exchange not exposed to these processes. But, analyzing the structure of the product of stock exchanges, you can see that most of the exchanges have a diversified range of services.

Conclusions

The conducted analysis lets to verify the hypothesis that demutualization process determined changes in the rules of functioning of stock exchanges, as well as created a threat from point of view of socio-economic functions.

Stock exchanges make changes in their legal and organizational structure, and diversify their activities to meet the needs of the market. It should be noted, however, that the activity of stock exchanges is partly seen as a public good, even if they are privately managed. In contrast, an increase in the efficiency of stock markets does not necessarily translate into an increase of quality of their socio-economic functions, and short-term pursuit for profit may pose a threat to functioning of economy and society. General social problems are usually solved by the system of public oversight of the stock market (Switzer, 2013, p. 104). Hence important role of the state, so that in the framework of creating structures of stock exchanges, there is a system of public oversight taking care of interests of society and economy.

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