

Urszula Banaszczak-Soroka

University of Wrocław

POSITION OF THE WARSAW STOCK EXCHANGE COMPARED TO THE LSE GROUP AND CEESEG (THE FIRST DECADE OF THE 21ST CENTURY – SELECTED PARAMETERS)

Abstract: The beginning of the 21st century was a time of significant changes, which had an effect on stock exchanges in all regions of the world. Investors were under the influence of two slumps (2001 and 2007) on the one hand, and on the other they were optimistic because of the 2003-2007 bull market. Another characteristic trend were the numerous alliances and acquisitions of stock exchanges, including the creation of the CEESEG – a strong group of exchanges gathered around the Vienna Stock Exchange, which was the direct competitor of the WSE. The fusion of the stock exchanges in Vienna, Ljubljana, Prague and Budapest made the WSE's struggle for supremacy in the region even harder. The analysis of parameters such as capitalization, value of turnover, liquidity ratio and concentration shows that the WSE is still behind the CEESEG.

Keywords: capitalization, turnover, liquidity, stock exchange.

1. Introduction

There were plenty of events in the first decade of the twenty-first century which had a significant impact on the global stock market. This market was affected by two slumps. The first one happened in 2001 and is known as the period when the Internet bubble burst. The second one took place in 2007 and caused the subprime crisis. While the first slump transformed into a bull market quite quickly (the 2003-2007 boom), the second one continues to produce a deeper or shallower turbulence.

Another characteristic trend of the past decade was the numerous local alliances and acquisitions both within the European markets, and transatlantically. In 2000 the stock exchanges in Paris, Amsterdam and Brussels formed Euronext (in 2002 the stock exchange in Lisbon joined this group), which merged with the New York Stock Exchange in 2007. In 2003, seven stock exchanges in northern Europe and the Baltic countries formed the OMX group, which became part of the U.S. NASDAQ in 2008. In Europe the LSE and Borsa Italiana in 2007 formed a capital group (London Stock Exchange Group), whilst the Vienna stock exchange, by buying over several years,

the leading stock exchanges' shares in Prague, Budapest and Ljubljana had built the Central and Eastern Europe Stock Exchange Group (CEESEG) .

The purpose of this article is to assess the position of the Polish stock exchange compared to the stock exchanges which are members of the Associated Federation of European Securities Exchanges (FESE). Emphasis is put on its relation with the London Stock Exchange and the CESSEG. This will be analyzed in the context of the above circumstances, connected on the one hand with periods of enthusiasm and pessimism present on stock markets, on the other with increasing globalization. Taking into account the fact that the exchange in Vienna, works as CEESEG and LSE with Borsa Italiana, created a capital group, we will examine the position of the WSE throughout the entire decade in relation to the existing balance of power nowadays.

The study will use three measures which are usually used for the evaluation of the development of the stock market. These measures are: liquidity, market capitalization to GDP and market concentration. Analyses were made using descriptive statistics based on materials published by Eurostat, FESE and the World Federation of Exchanges.

2. Market liquidity of domestic companies market¹

Market liquidity is one of the determinants of a market's security. Other attributes include: providing a concentration of turnover, easy and simultaneous access to information, good organization of the market and many others [Sławiński 2006, p. 22; Gruszczyńska-Broźbar 2010, pp. 137-149]. The most important feature of 'liquid markets' is 'marketability', which means the ability to quickly enter or exit from an investment in the capital market (the quick sale or purchase of quoted financial instrument).

Stock market liquidity is measured by many parameters². Two of them are considered the most important in determining the importance of exchange for the economy and its position in relation to other operators on the market: **market value and liquidity ratio.**

2.1. The value of turnover

The highest turnover of domestic companies shares³ in European exchanges in total was recorded in bull markets in the year 2000 (6.2 trillion euros) and in 2007 (14.3

¹ The study included the stock market whereas shares are a financial instrument powering, through exchanges, joint-stock companies in the capital. Other markets are not included for two reasons: participation of other securities market in the Polish stock exchange turnover is marginal, and the derivatives market is speculative, and therefore has no impact on economic development.

² List of parameters listed by WSE: turnover, number of purchases and sales and other www.gpw.pl/mierniki_plynosci.

³ Because FESE statistics shows only the capitalization of markets including only domestic companies, to estimate liquidity parameter we will use a session's turnover of domestic companies. The turnover of foreign companies shares are only a few per cent of all the FESE stock exchanges taken together.

trillion euros). The lowest was recorded during the slumps in 2003 (4.6 trillion euros) and in 2009 (6.3 trillion euros). The latter meant a return to the level of turnover from almost 10 years before. The same tendency happened on all markets. This had a reflection in appropriate statistics (Figure 1).

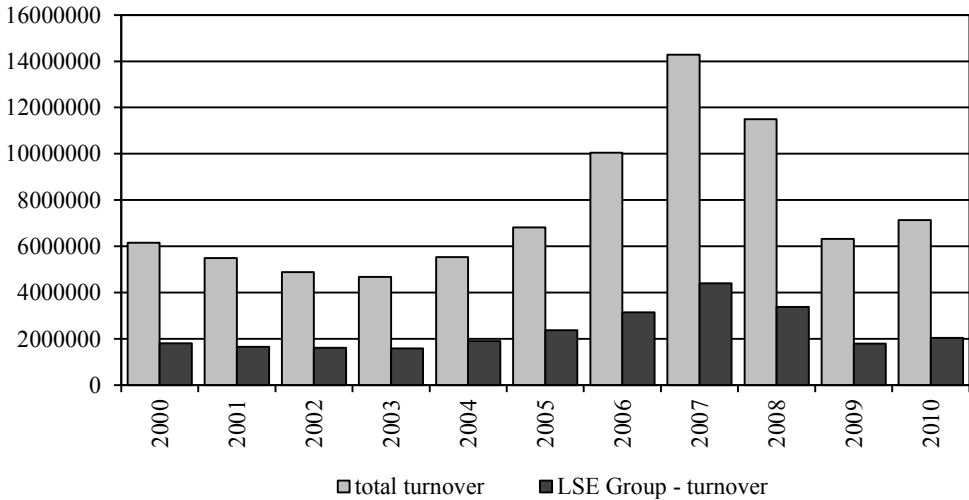


Figure 1. Turnover of Stock Exchanges gathered in FSE and turnover of the LSE Group (2000-2010 in millions of Euros)

Source: own calculations based on FESE (Federation of European Securities Exchanges) www.fese.be/en/?inc=cat&id=5 (Accessed on 15.10.2011).

When it comes to turnover, the largest stock exchange was the London Stock Exchange Group. Its share in turnover was over 30% by 2007. The years of post-crisis struck the London stock exchange particularly hard, where sales in 2009 fell by nearly 60% compared to 2007. This was a much worse outcome than in many other stock exchanges, including the Warsaw Stock Exchange and CEESEG. This undesired decline in turnover on the LSE had an influence on its position among the European exchanges. The LSE finished 2009 with a share of 15% in turnover of the European stock exchanges, despite that fact it was still queen of the European stock exchanges.

The CEESEG Exchange and the Warsaw Stock Exchange, compared to other European stock exchanges and the LSE, have had a much higher rate of turnover growth. (Figure 2) In the CEESEG group in 2002-2007, turnover increased eleven times (in Poland nine times). The position of the Polish stock exchange and Europe, taking into account the analyzed parameter became stronger. In 2000 the Warsaw Stock Exchange occupied 13th place (CESSEG Vienna – 14th), and at the top of the boom 11th position (CESSEG Vienna⁴ – 10th), and at the end of 2010, 9th place (CESSEG Vienna – 10th).

⁴ Vienna Stock Exchange individually. As a CEESEG group it was ahead of the WSE.

This increase of turnover meant that with the participation in the Warsaw Stock Exchange, the LSE turnover grew rapidly. In 2000 the share of the Warsaw Stock Exchange in trading on the LSE was 0.007%, and ten years later it was 2.5%. Despite the incredible growth compared to the London stock exchange, the WSE remains the minor player. (Figure 2).

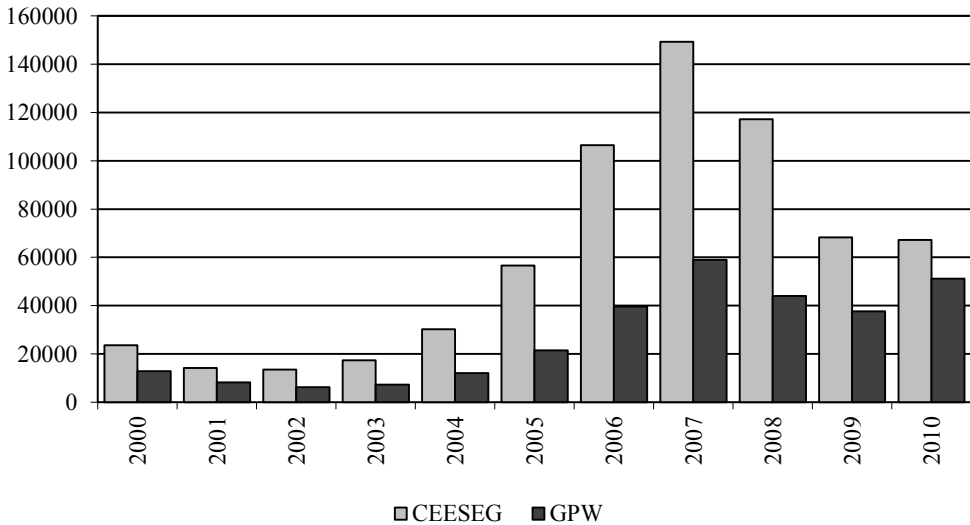


Figure 2. Value of turnover in the WSE and CESEEG in millions of Euros (2001-2010)

Source: own calculations based on FESE *ibidem*.

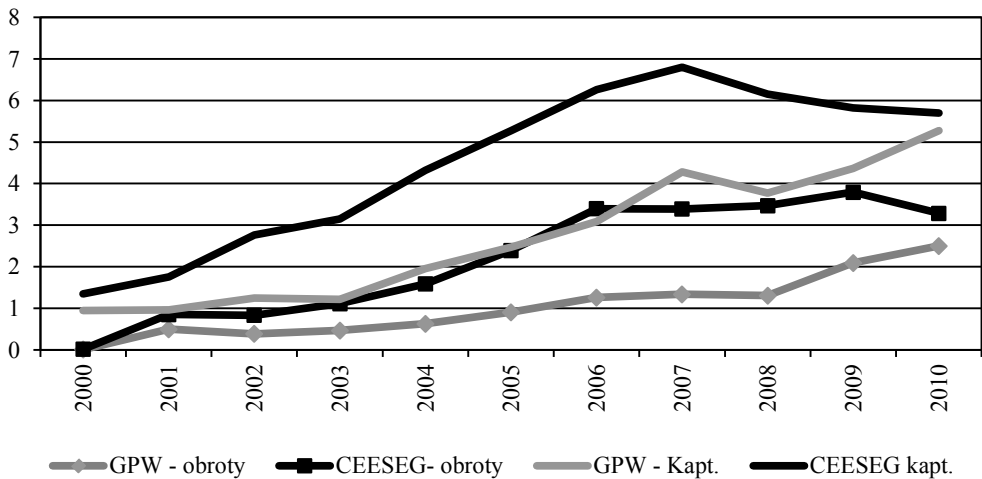


Figure 3. The WSE and CESEEG's share in turnover and capitalization of the LSE (in %, 2001-2010)

Source: own calculations based on FESE *op.cit.*

The absolute values of CEESEG's turnover until 2009 were nearly 60% higher than the WSE's, which meant that the share of the Vienna Stock Exchange in LSE trading was also higher. In the last two years CESSEG turnover decreased by one third, with a simultaneous increase in turnover on the Warsaw Stock Exchange, which gave the latter a stronger position compared to the group gathered around the Vienna stock exchange (Figure 3). Both the Polish and CEESEG exchanges (as a group) are leaving behind the other stock exchanges in the region.

2.2. Capitalization

Level of the capitalization is strongly bound to the economic situation in the stock exchanges. On the one hand a bull market causes high interest in quoted securities, and on the other hand comes with a growth of new issuers who are aware of the possibilities for obtaining capital fast and in a reliable way. This situation causes an increase of stock prices, which directly influences the increase of capitalization. A slump worries clients. They are trying to change quickly the structure of the portfolio, often selling off shares even below their value. Issuers are withdrawing open bids realizing the difficulty of issuing in such conditions. This results in lower prices and, consequently, a decrease of capitalization. This trend has happened on all the stock exchanges. There had been a strong correlation of market behavior. In the period 2001-2002 and 2008 there was strong decrease, and in 2004-2007, strong growth. The years 2009 and 2010 were times of constant struggle with the effects of the crisis, which affected the behavior of stock investors who were receiving strong signals from their environment (Figure 4).

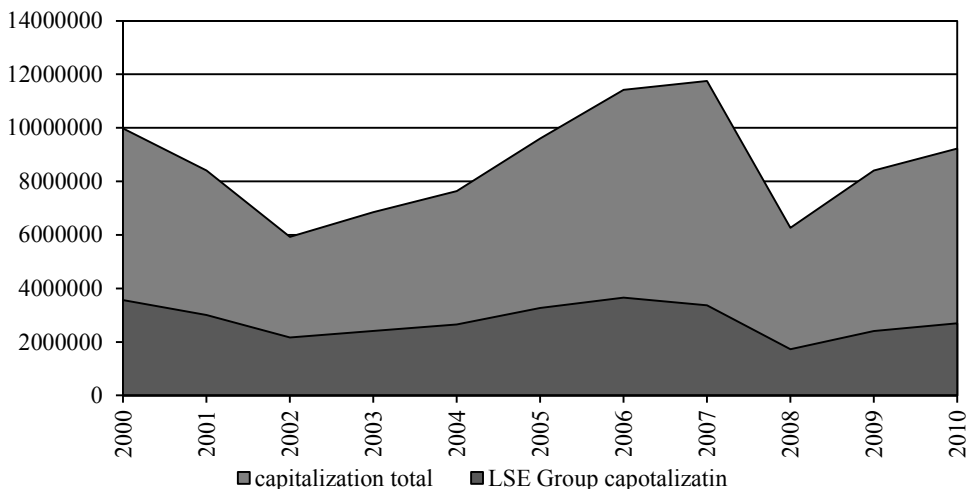


Figure 4. Participation of LSE's Group in capitalization of European stock exchanges in millions of Euros (2001-2010)

Source: own calculations based on FESE data.

Europe's stock market capitalization (domestic companies) in 2007 was highest during the analyzed period and reached 11.7 billion euros. Shortly after the beginning of the financial crisis this was reduced by over 50%. The biggest stock exchange, with the largest share in the capitalization of stock markets in Europe, is the LSE Group, although its share decreased from 36% in 2001 to 29% at the end of 2010.

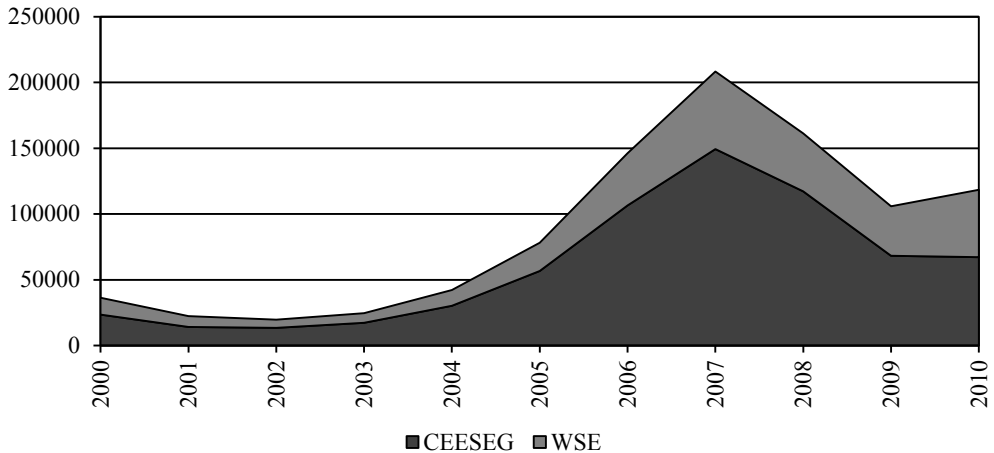


Figure 5. Capitalization of the WSE and CESEEG in millions of Euros (2001-2010)

Source: own calculations based on FESE *Ibidem*.

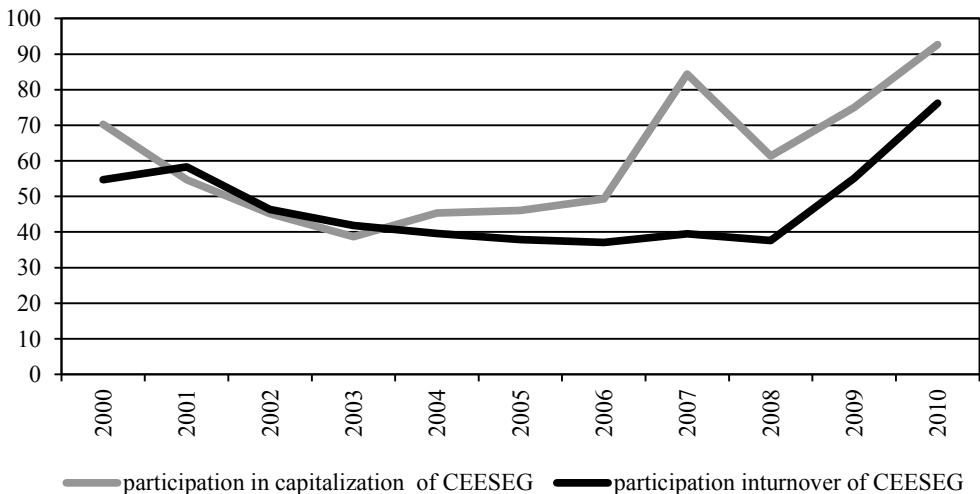


Figure 6. The WSE's participation in capitalization and turnover of the CESEEG (in %, 2001-2010)

Source: own calculations based on FESE *ibidem*.

The capitalization of the WSE and the CEESEG had grown systematically until 2007. The WSE reached the highest capitalization in 2007 – 144 billion euros. This placed the WSE in 11th place among the analyzed stock exchanges (compared to 14th place in 2000). At the end of 2010 the position of the Polish stock exchange position was strengthened. When it comes to capitalization, the WSE is in 9th place in Europe. One of the most important reasons for this increase is the constant issuer's interest in quotations on both WSE markets. At the end of 2010 the Warsaw Stock Exchange quoted 585 companies, which gave the WSE a share of 6.5% in the number of stock exchange companies of Europe. At the same time the CEESEG quoted only about half of the subjects, but with a higher capitalization.

It is worth noting the WSE's capitalization growth in recent years. Capitalization of the WSE increased twice between 2008 and 2010. Meanwhile the capitalization of the CEESEG grew by only about 20%, and in Europe by about one third (Figure 5). The stronger position of the Warsaw Stock Exchange from the point of view of its capitalization makes the share of the Polish stock market increase in relation to both the LSE and the CEESEG. The capitalization of the WSE makes it possible to get close to the CEESEG. In comparison to the LSE, the WSE still remains very small (Figure 4).

2.3. Liquidity ratio

Liquidity ratio is calculated as the quotient of the turnover and capitalization of stock exchanges. It shows the speed of capital movements and indirectly indicates the maturity of the market (when it is over 60%).

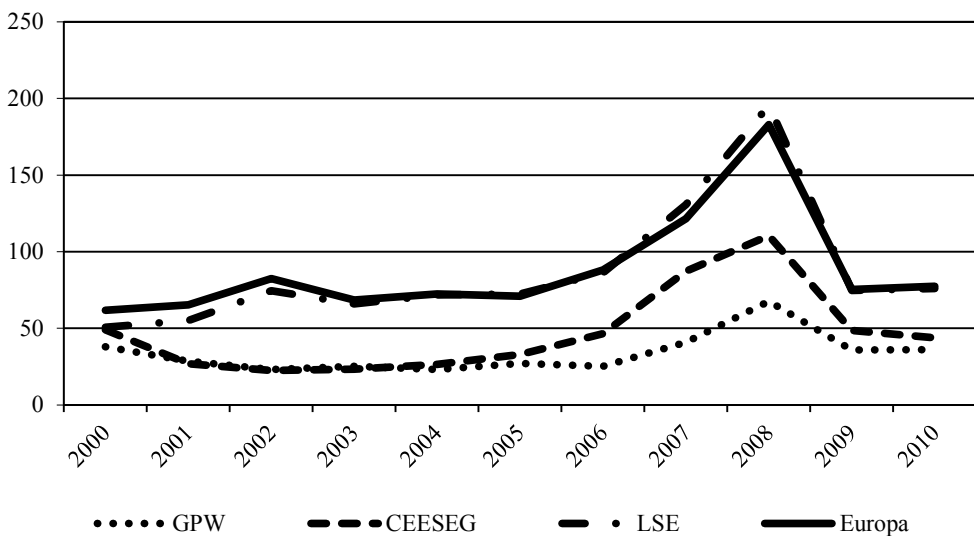


Figure 7. Liquidity ratio (in%, 2001-2010)

Source: own calculations based on FESE *ibidem*.

From the point of view of stock market liquidity ratio, in Europe we can divide stock exchanges into three groups. Exchanges with high liquidity ratio, which include the LSE (during the whole analyzed period its liquidity ratio was exceeding 50% and in 2008 reached nearly 200%), the Luxembourg Stock Exchange and the NYSE Euronext. These are the stock markets with a long history, recognized not only in Europe. The second substantial group are the other stock exchanges of the “old” EU with different ratios of liquidity (within 50 - 80%). And finally the third group, the stock markets of the “new” EU, young markets, struggling for their place among the other operators.

During the analyzed period the Warsaw Stock Exchange’s liquidity ratio exceeded 50% (in 2008 – 67%) only once. This result was influenced by the value of turnover caused by the escape of investors at a significantly reduced capitalization (the stock price decrease was caused by the immaturity of investors which were led by the herd instinct as well as the relatively strong fundamental foundations of companies in Poland). In other years the liquidity ratio of the WSE, even during the bull market in 2000 and 2007, did not reach such a level. This disqualifies the Polish stock market as mature. The CEESEG exceeded 50% twice, in 2007 and 2008, this good trend was broken because of the global financial crisis which affected all of the stock exchanges (Figure 7).

3. Capitalization to Gross Domestic Product (GDP) – the structural level of the stock exchange development

The second parameter important for placing the stock market in the economy is **market capitalization** (the value of quoted shares of domestic companies in all markets) in relation to **the value of Gross Domestic Product** [Sławiński 2006, p. 26].

In 2000, Finland (capitalization to GDP at 214%), the United Kingdom and Luxembourg (170%) had the highest level of structural development of stock markets. Poland was 20th out of the 27 analyzed countries (a result of 18.3%). At the peak of the bull market, in 2007, despite the index reaching the level of 48.7% (the highest ever), Poland was still behind the “new” EU countries such as Slovenia and Bulgaria. At the same time in many countries of the ‘old’ union, this parameter exceeded 150%. In 2008, the capitalization to GDP parameter in the countries of the “old” EU dropped sharply, in some countries (Greece, Ireland, Italy and others) even by up to 60%. It was the same for other markets, including the Polish one. In Poland, the capitalization to GDP ratio had returned in 2007 to the level close to that of 2002.

The last two years reflect complex economic situation in Europe. In 2007 the growth of the parameter examined ceased in all EU countries. In some countries like Spain, Italy, Ireland, Portugal and Greece, in which the analyzed parameter exceeded 50%, it fell because of the crisis to a level lower than in Poland. Low, or even negative economic growth also affected other countries considered as economic powers such as Germany and France. Poland, with its small economic growth, managed to

Table 1. Stock market capitalization in relation to GDP (%) in 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Finland	241,1	152,3	102,6	103,5	97,3	107,1	127,8	150,2	57,2	38,3	49,5
United Kingdom	174,4	147,2	115,6	132,2	127,9	134,1	155,5	137,9	69,6	128,6	138,3
Luxembourg	167,8	117,7	109,5	128,0	147,1	136,1	185,6	323,9	115,3	201,3	183,5
Netherlands	166,3	114,4	91,7	90,8	88,3	92,9	115,0	122,9	44,4	68,5	84,4
Sweden	133,7	105,0	72,1	93,2	104,1	109,0	143,6	132,4	51,8	106,5	126,9
France	108,9	87,7	66,4	75,3	75,6	81,9	107,2	106,8	52,3	74,4	75,3
Greece	88,3	66,0	46,6	55,2	54,3	59,7	78,9	85,5	25,8	16,6	23,8
Spain	86,8	76,9	67,8	82,2	90,1	84,9	107,2	124,9	59,3	88,8	83,2
Ireland	84,8	71,9	49,3	54,1	61,6	56,6	73,7	55,5	18,5	13,2	16,5
Belgium	78,7	71,6	50,6	56,0	75,7	76,6	99,3	84,3	33,2	55,8	57,6
Italy	70,0	47,2	39,4	40,8	45,7	44,9	55,1	50,7	22,7	15,0	15,5
Denmark	67,3	55,1	44,2	57,2	61,8	69,1	84,2	89,4	38,6	60,4	74,7
Germany	66,8	56,7	34,3	44,2	43,5	43,8	56,2	63,4	30,3	38,8	43,2
Portugal	53,9	40,0	33,6	37,3	39,3	36,1	53,4	59,3	28,2	43,3	35,9
Malta	52,6	35,7	32,6	36,6	50,7	69,2	70,4	75,6	42,5	24,8	b.d.
Cyprus	46,7	63,9	47,3	36,1	30,8	38,7	86,3	137,4	31,9	19,9	b.d.
Estonia	32,5	23,8	33,2	38,5	51,6	25,1	35,9	28,2	8,3	13,9	12,1
Hungary	25,1	19,5	19,7	19,8	28,1	29,6	37,1	34,3	12,0	21,9	21,2
Czech Republic	19,4	15,1	21,1	19,3	28,2	30,8	34,1	42,1	22,6	27,7	22,4
Poland	18,3	13,7	14,5	17,1	28,1	30,9	43,6	48,7	17,1	31,5	40,6
Austria	15,7	12,9	15,5	21,9	29,9	41,1	59,5	61,7	17,5	13,9	18,0
Lithuania	13,9	9,9	10,3	18,9	28,7	31,5	33,9	25,9	7,7	12,0	
Slovenia	12,8	13,9	20,0	24,6	28,7	22,1	39,0	61,2	21,6	24,3	19,7
Latvia	7,2	8,4	7,7	10,2	12,0	15,8	13,6	10,8	4,8	7,0	5,2
Bulgaria	4,9	3,7	4,7	8,8	11,4	18,7	32,6	55,1	17,7	15,1	15,2
Slovakia	4,2	5,1	5,5	6,1	7,9	7,2	8,1	8,3	5,2	5,3	4,7
Romania	2,9	5,3	10,0	9,4	15,6	20,8	26,7	26,5	10,0	18,8	20,0

Source: own calculations based on <http://data.worldbank.org/indicator/CM.MKT.LCAP.GD.ZS> (accessed on 20.09.2011).

overtake at the end of 2010 not only all the countries of the 'new' EU (including all CEESEG stock exchanges), but also all countries with low economic growth.

We can conclude that during the analyzed period, in 2006, 2007 and 2010, the WSE had an important impact on Polish economic development (the ratio exceeds 40%) despite the fact that the capitalization to GDP ratio in Poland did not reach 60%. This prohibits including Poland in the group of countries with mature capital markets [Przybylska-Kapuścińska 2008, p. 196].

4. Concentration of turnover

Concentration of turnover informs about the share in turnover of trading on the main Market five quoted companies that generate the highest turnover. The high concentration ratio indicates that the turnover in the market has been unequal, focusing on a small group of the largest issuers. A low concentration ratio indicates access for stock exchange investors to a wide range of domestic and foreign companies, and different sectors and branches in which they are interested in.

Two stock exchanges in Europe have the lowest turnover rates of concentration: the LSE and the NYSE Euronext Paris. Throughout all the analyzed period the ratio was in the range of 18-30%. There has been a regular decreasing trend since 2000. This is because of the systematic growth of number of the quoted companies.

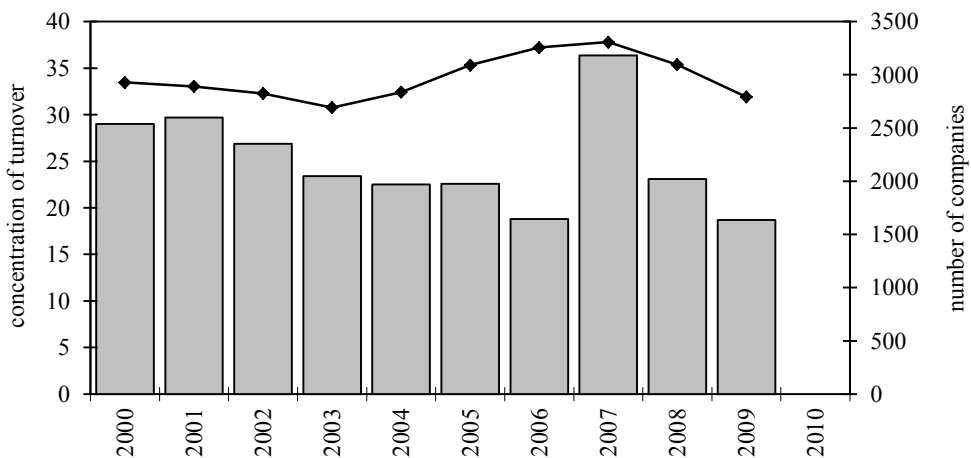


Figure 8. Concentration of turnover in % and the number of companies quoted on the LSE

Source: own calculations based on FESE data.

The concentration ratio of turnover on the Warsaw Stock Exchange is steadily decreasing. Its highest value was recorded in 2002, while the lowest 67.4% in 2006 – 34.34%. At the end of the analyzed period (December 2010) it reached 48.35% (Fig. 9). In the set of five companies with the highest turnover there is some regularity. The composition of the portfolio: PKO BP, Pekao SA, TPSA and KGHM, PKN ORLEN, is the groundwork of stock turnover. However, there is also another interesting trend. At the beginning of the decade, distribution in the turnover structure was unequal because the share of two companies was much bigger than of the others. In the past few years this disproportion has been getting smaller.

In 2002, the concentration ratio of the Warsaw Stock Exchange resulted in 14th place out of the 25 stock exchanges affiliated in the FESE. In 2006, the lowest rate in history resulted in a very high 4th place (from among 30 stock exchanges). The

WSE was behind the LSE, NYSE Euronext Paris and Deutsche Borse. In 2010 the WSE had a concentration index at the level of 48.35% (6th place in Europe after the stock exchanges mentioned earlier and the Oslo Borse, NASDAQ OMX Stockholm and the Stock Exchange of Vienna, which is the WSE direct competitor).

In the stock exchanges of central Europe which are not members of CEESEG (Bratislava, Bucharest, Bulgarian, Lithuanian, etc.) and those associated in it, the

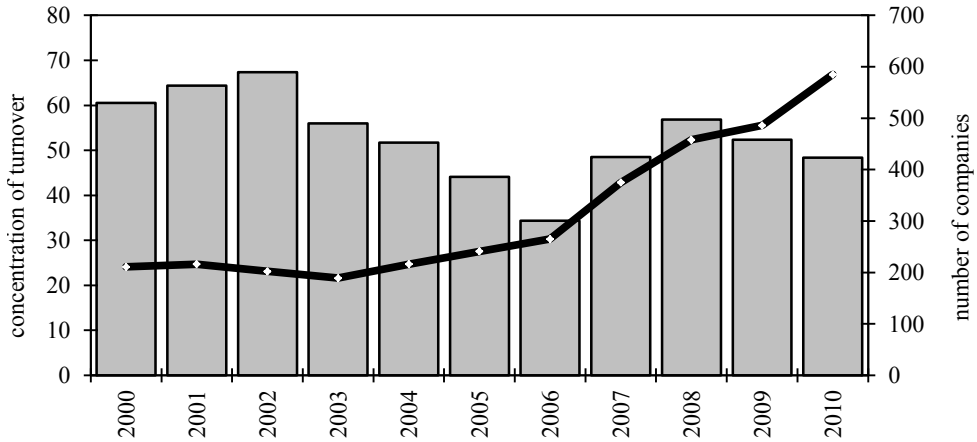


Figure 9. Number of companies quoted in the WSE and the concentration of turnover (in %, 2001-2010)

Source: own calculations based on FESE *op. cit.*

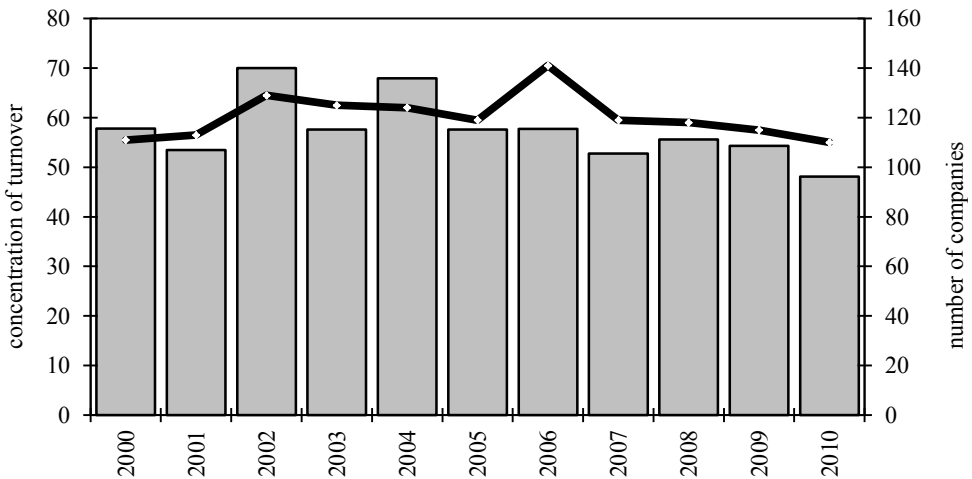


Figure 10. Number of companies quoted on the CEESEG and concentration of turnover (in %, 2001-2010)

Source: own calculations based on FESE *Ibidem.*

concentration ratio remained at a very high level exceeding 80% (in many cases even 90%) of turnover. Only the Vienna Stock Exchange has this parameter similar to the WSE. In the period 2002-2007 the WSE had a lower (better) concentration ratio of turnover than the Vienna Stock Exchange. In the past three years Vienna has been slightly ahead of the WSE. However, if we compare the WSE to the CEESEG group, the first position of the Polish stock exchange in the region remains beyond doubt.

5. Conclusions

Since its creation in 1991, the WSE's management has consistently attempted to create in Warsaw the financial center for central and eastern Europe. This goal will be difficult to achieve because of the numerous mergers that have taken place among the stock exchanges in Europe. The WSE no longer competes with the various stock exchanges in central and eastern Europe, but with groups of stock exchanges. This has greatly aggravated the conditions of competition. Given the fundamental factors examined, the WSE is still in the middle zone of the exchanges, which are the members of the FESE, but its share is still rather symbolic.

The WSE perceived Stock Exchange in Vienna as its primary competitor, but after the latter entering into the group of stock exchanges of Budapest, Prague and Ljubljana it has become even more difficult partner. The WSE turnover is rising, but still has not managed to exceed the CEESEG turnover. The share of the Warsaw Stock Exchange in trading on the 'Queen of European stock exchanges' is also increasing, but has not exceeded 3%. The same problem is with the capitalization. The number of companies in the WSE is still growing, but generally these are small companies with low capitalization, and they are related primarily to the alternative market. The concentration of turnover is better (48% in 2010), but it is still far from the level represented by the most dynamic stock exchanges (concentration of around 20%). The situation of the WSE is best described by the capitalization the WSE to GDP. This parameter is much better in Poland than in the stock markets of the "new" EU and in some of the "old" EU countries, especially those in which crisis strongly touched their economic basis (Italy, Ireland, Greece).

Despite this, the Polish capital market was registered on September 20, 2011 on the watch list⁵ with the possibility of advancement to the group of countries with developed markets. This means that many challenges still await the capital market. These are for example gaining new large-capitalization companies (Polish and foreign), increasing the free float, improvement of companies' quality elements, attracting new investors, etc.

⁵ Such an evaluation is made by the FTSE, which takes into account many elements such as: current regulations, quality of capital market, development of derivatives market etc. A decision on Poland's qualification to the group of developed markets will happen in September 2012 after a year of observation.

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POZYCJA GPW NA TLE LSE GROUP ORAZ CEESEG (PIERWSZA DEKADA XXI WIEKU – WYBRANE PARAMETRY)

Streszczenie: Początek XX wieku to czas zmian mających znaczący wpływ na giełdy wszystkich regionów świata. Inwestorów dotknęły dwie bessy – w 2001 i 2007 r., natomiast optymizmem natchnęła hossa z lat 2003-2007. Innym charakterystycznym trendem minionej dekady były liczne sojusze i przejęcia giełd, w tym powstanie Central and Eastern Europe Stock Exchange Group (CEESEG), silnej grupy giełd skupionych wokół Wiednia, który zawsze był bezpośrednim konkurentem polskiej giełdy. Połączenie giełd z Wiednia, Pragi, Budapesztu i Ljubljany utrudniło batalię WSE o palmę pierwszeństwa w tej części Europy. Biorąc pod uwagę kilka mierników, jak kapitalizacja, wartość obrotów, wskaźnik płynności i koncentracja, należy stwierdzić, że pozycja WSE wobec CEESEG w badanym okresie nie uległa zasadniczej zmianie – giełda w Warszawie pozostaje w jej lekkim cieniu.

Słowa kluczowe: kapitalizacja, wartość obrotów, wskaźnik płynności, giełda papierów wartościowych.