

Alternative Securities Markets in Poland and the United Kingdom

Submitted: 15.10.15 | Accepted: 21.10.16

Joanna Małecka*

Designed for smaller, dynamically growing and innovative companies, the NewConnect market offers not only an opportunity to raise capital for development, but also prospects for a company to emerge on the public market. In terms of the number of listed companies, it is the second largest European alternative market, just after the UK AIM. Considering its total capitalization, however, it ranks ninth. This article attempts to present the development of both markets, comparing the initial nine years of operation of each of them in order to show the position and determine the future development of the Polish capital market, in particular NewConnect, established for small and medium-sized enterprises, the number of which in Poland corresponds to half the EU average.

Keywords: NewConnect, AIM, SME, listed companies, admissions, alternative market.

Alternatywne rynki obrotu papierami wartościowymi w Polsce i Wielkiej Brytanii

Nadesłany: 15.10.15 | Zaakceptowany do druku: 21.10.16

Rynek NewConnect – stworzony dla spółek mniejszych, rozwijających się dynamicznie i odznaczających innowacyjnością – daje nie tylko możliwość pozyskania kapitału na rozwój, lecz także w perspektywie możliwość zaistnienia na rynku publicznym. Pod względem liczby notowanych spółek zajmuje wśród rynków alternatywnych w Europie drugą pozycję, zaraz po brytyjskim rynku AIM. Natomiast pod względem łącznej kapitalizacji już pozycję dziewiątą. W artykule podjęto próbę przedstawienia rozwoju obu rynków, porównując dziewięć początkowych lat działalności każdego z nich, aby zobrazować miejsce i określić perspektywy rozwoju polskiego rynku kapitałowego, a zwłaszcza NewConnect, stworzonego na potrzeby małych i średnich przedsiębiorstw, których w porównaniu ze średnią unijną jest w Polsce o połowę mniej niż w krajach UE.

Słowa kluczowe: NewConnect, AIM, MSP, liczba notowanych spółek, debiuty, rynek alternatywny.

JEL: G19, G20, G29

* **Joanna Małecka** – M.Sc., Ph.D. student at the Faculty of Engineering Management of the Poznań University of Technology.

Correspondence address: Faculty of Engineering Management, Poznań University of Technology, Plac Marii Skłodowskiej-Curie 5, 60-965 Poznań; e-mail: joanna.malecka@put.poznan.pl.



1. Introduction

The issue of raising capital for development is discussed both in relevant literature and in any company that wants to grow and meet the challenges of a constantly changing economic reality (see: Modigliani and Miller, 1958; Quinn and Cameron, 1983; Churchill and Lewis, 1983; Dębski, 2014). The structures existing on competitive market conditions are affected by the changes not only at the local, but also the global level (see: Płókarz, 2013). Micro-, small and medium-sized enterprises make a decisive contribution to the world economy, *inter alia*, by setting a framework for socio-economic development (see: Bass, 2006) and influencing basic macroeconomic indicators (see: Grzywacz, 2012; Jaworski, 2010). Capital recipients prefer long-term capital (Płókarz, 2013, p. 131) while the owners of small and medium-sized companies tend to choose internal sources of financing (Łuczka, 2001, p. 52; Myers, 1984, pp. 575–592, Brealey, 1999, p. 688). Among other reasons, this is due to persistent credit discrimination in acquiring capital for development (see: Łuczka, 2013; Bielawska, 2005, Małecka, 2016a, pp. 418–431).

Markets for small and medium-sized enterprises may function as separate trading floors operated by stock exchanges, parts of a stock market, or even independent stock exchanges. In practice, independent SME stock markets are rare, with most dedicated trading floors being managed by stock exchanges. In Poland, the Warsaw Stock Exchange¹ supervises the proper meeting of obligations by NewConnect issuers,² while providing a potential source of financing for small and medium-sized enterprises (Małecka, 2015, pp. 496–507). NewConnect has been functioning since August 30, 2007. It was established specially for those SMEs that are developing very dynamically and are active in the more innovative sectors that are far less likely to be financed by the banking sector (new.connect.pl, October 12, 2015, see also: Kordela, 2013; Małecka, 2016b, pp. 91–122). In practice, the industry in which a company operates is less important as companies active in sectors regarded as traditional are also listed, as are representatives of new technologies, life sciences, IT, and eco-energy. Yet, such companies have several features in common: They are identified as well-functioning businesses able to exploit their growth potential even in difficult economic situations. Since the beginning of its existence, the NewConnect ATS has seen 538 admissions, with 431 companies listed at the end of 2014 and thirty-five having relocated to the WSE Main Market (WSE, 2015).

The best performing alternative market in Europe, both in terms of listed companies and their capitalization, is the London Alternative Investment Market (AIM), which has been operating much longer – i.e. since June 19, 1995. It is dedicated to small businesses representing any sector that have high growth potential. In October of 2004 it began to operate as an

MTF, which has had significant impact on its current performance. Since its birth, the shares of 3,622 companies have been admitted for trading. At the end of 2014, 1,104 companies (including 353 foreign ones) were listed, where seventy-seven had moved to the Main Market. Given its strong leading position among European stock exchanges, it was this market that was selected in order to compare it in detail with the achievements of the very young Polish alternative market and describe the direction of its development. Here, a considerable role is played by the history of stock exchanges. The same is true of existing regulations and transaction security³ (see: Bień, 2008; Czapkiewicz and Wojtowicz, 2014; Flores and Szafarz, 1997; Nawrocki and Jabłoński, 2011; Perz, 2007; Małecka, 2017, pp. 34–43; britannica.com, 12 October 2015).

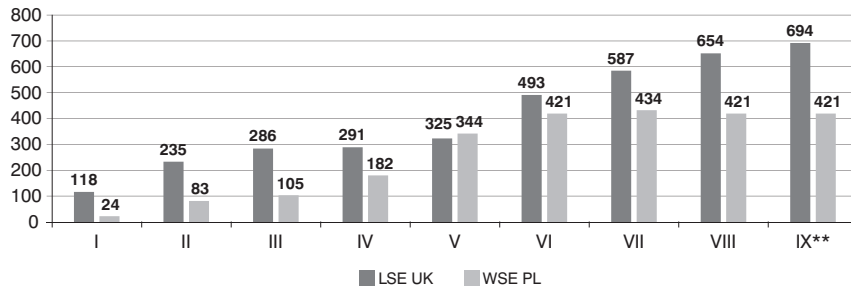
2. Characteristics of Companies on NewConnect and AIM

The Polish economy has a thriving SME sector with 1.8 million active businesses. Among them in 2012, private individuals accounted for 91.7% and legal entities for 8.29% (see: Małecka, 2015). As a result of an open policy and less restrictive regulations on listing, issuance costs and reporting frequency, 431 companies (including ten foreign ones) with a total capitalization of PLN 9.22 billion were listed on NewConnect in 2014.

In comparison with the best alternative market, that is the UK Alternative Investment Market (AIM), and its initial years of operation, far less dynamic growth in the number of companies, especially foreign ones, was observed (Fig. 1 and 2).

The fifth year of NewConnect existence, when the number of companies in Poland exceeded the number of those listed on the AIM in the fifth year of its activity, was particularly attractive and promised even better performance. The number was so large that NewConnect, even with foreign companies taken into consideration, listed more companies (LSE: 347, WSE: 351). The actual situation in 2011 was that NewConnect reached 30.71% of the number of companies listed on the AIM, with foreign ones accounting for 3.11% of the number of those listed on the LSE and domestic companies representing 37.47%. Data after 2006 clearly show that the share of AIM-listed companies is quite consistent with the Pareto principle,⁴ which cannot be said for the Polish market. The current proportion of NewConnect-listed foreign companies does not match up to their share, even in the first year of AIM operations (Poland: 2.32%, the lowest share of foreign companies, at the end of 2014; AIM: 2.48%) (Tab. 1).

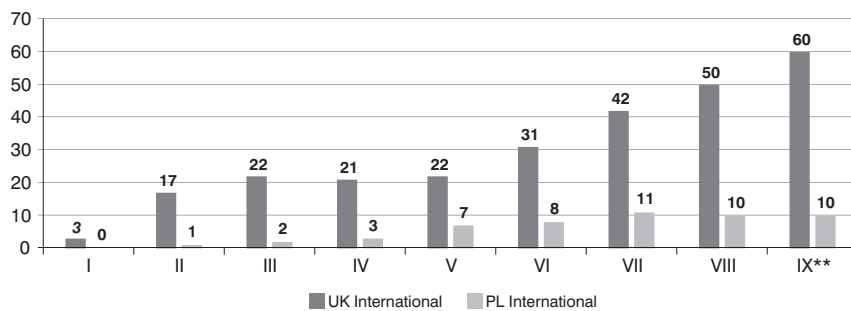
In analysing the number of listed companies at the end of 2014, attention should be paid to the fact that Poland ranked second with respect to this criterion (431 listed companies), just before Euronext and the stock



* AIM launch: 1995, NewConnect: 2007.

** The ninth year of NewConnect ATS operation shows data up to August 2015.

Fig. 1. Number of domestic companies on the AIM and NewConnect markets in the initial nine years of their operation*. Source: Prepared by the author on the basis of LSE and WSE reports.



* AIM launch: 1995, NewConnect: 2007.

** The ninth year of the NewConnect ATS operation shows data up to August 2015.

Fig. 2. Number of foreign companies on the AIM and NewConnect markets in the initial nine years of their operation*. Source: Prepared by the author on the basis of LSE and WSE reports.

exchanges in Germany, Luxembourg, and even the US Nasdaq (191, 169, 166, 161 listed companies, respectively). At that time, the AIM listed 1,104 companies. NewConnect performance was noticed and appreciated by the World Bank Group, which indicated NewConnect as a successful example of a small business market in its January 2015 report (see: Harwood and Konidaris, 2015). The present figures, however, leave no doubt. They show that the Polish market is still lagging far behind the British leader, which has gained in evident popularity since October 2004, starting its operation as an MTF.

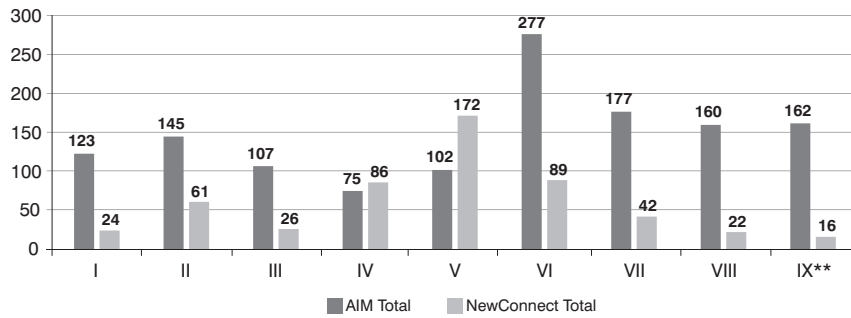
Year	Domestic and foreign companies as a percentage of total listings			
	AIM		NewConnect	
1995	97.52	2.48		
1996	93.25	6.75		
1997	92.86	7.14		
1998	93.27	6.73		
1999	93.66	6.34		
2000	94.08	5.92		
2001	93.32	6.68		
2002	92.90	7.10		
2003	92.04	7.96		
2004	88.64	11.36		
2005	84.27	15.73		
2006	81.40	18.60		
2007	79.52	20.48	100.00	0.00
2008	79.55	20.45	98.81	1.19
2009	81.36	18.64	98.13	1.87
2010	80.92	19.08	98.38	1.62
2011	80.31	19.69	98.01	1.99
2012	79.38	20.62	98.14	1.86
2013	79.21	20.79	97.53	2.47
2014	80.16	19.84	97.68	2.32
August 2015	80.58	19.42	97.68	2.32

Tab. 1. Domestic and foreign companies as a percentage of the total number of companies listed on AIM and NewConnect in 1995–2015. Source: Prepared by the author on the basis of LSE and WSE reports.

3. Admissions and Delistings on NewConnect and AIM

Among others, the credibility of a market, its popularity, assessment of transaction security, and prospects for development associated with the possibility of raising development capital are witnessed by the number of new issuers wishing to cooperate with it. The NewConnect market recorded the highest number of admissions in 2011 (172 companies). However, subsequent years saw a sharp decline in the quantity of new issuers caused by many mounting problems mainly concerning the WSE's reputation, including allegations regarding the use of confidential information in trading and the number of failed companies, leading to a significant decrease in both trading volume and the number of offers on the alternative market⁵ (WSE, 2015, p. 50). So far, since the fourth year of Polish alternative market

operation, its performance has been satisfactory and even better than that of the AIM by a factor of two.



* AIM launch: 1995, NewConnect: 2007.

** The ninth year of the NewConnect ATS operation shows data up to August 2015.

Fig. 3. Number of the AIM and NewConnect admissions over the consecutive nine years after their launch.* Source: Prepared by the author on the basis of LSE and WSE reports.

No accurate reflection of the 20/80 rule was found while analysing the statistics concerning the quantity of new issues and proportions of domestic companies in relation to foreign ones in total AIM admissions. Yet, the statistics clearly demonstrate efforts to make the LSE's quantitative result remain close to it (Tab. 2).

Year	Domestic and foreign companies as a percentage of total admissions			
	AIM		NewConnect*	
1995	97.56	2.44		
1996	90.34	9.66		
1997	93.46	6.54		
1998	90.67	9.33		
1999	94.12	5.88		
2000	95.67	4.33		
2001	91.53	8.47		
2002	91.88	8.13		
2003	90.12	9.88		
2004	82.82	17.18		
2005	76.88	23.12		
2006	73.16	26.84		
2007	69.37	30.63	95.83	4.17
2008	76.32	23.68	100.0	0.00
2009	83.33	16.67	96.15	3.85

Tab. 2 cont.

Year	Domestic and foreign companies as a percentage of total admissions			
	AIM		NewConnect*	
2010	74.51	25.49	100.0	0.00
2011	74.44	25.56	98.26	1.74
2012	66.20	33.80	96.63	3.37
2013	77.78	22.22	92.86	7.14
2014	80.51	19.49	95.45	4.55
August 2015	77.27	22.73	n/a	n/a

* When this article was submitted for publication, the WSE had not confirmed the exact number of foreign company admissions.

Tab. 2. Domestic and foreign companies as a percentage of total AIM and NewConnect admissions in the years 1995–2015. Source: Prepared by the author on the basis of LSE and WSE reports.

As there are no data on AIM delistings in the years 1995–1998, it is impossible to accurately calculate statistics and depict trends in the initial years of its operation. NewConnect has seen delistings since its launch. At the same time, it is worth emphasizing that the percentage of delistings on the UK market is much higher than on the Polish alternative market, although they have been systematically increasing on NewConnect since 2011.

Year	1995	1996	1997	1998	1999	2000	2001
AIM	n/a	n/a	n/a	n/a	19.31	19.27	11.45
NewConnect	–	–	–	–	–	–	–
Year	2002	2003	2004	2005	2006	2007	2008
AIM	12.07	14.85	8.62	10.08	13.89	13.22	16.57
NewConnect	–	–	–	–	–	0.00	1.19
Year	2009	2010	2011	2012	2013	2014	2015*
AIM	22.66	16.57	12.42	10.95	8.92	9.60	7.60
NewConnect	2.80	4.32	1.71	2.56	5.84	8.35	3.71

* Data up to August 2015.

Tab. 3. Percentage of AIM and NC companies delisted in the years 1995–2015*. Source: Prepared by the author on the basis of LSE and WSE reports.

4. NewConnect and AIM Transactions

The first WSE sessions took place once a week and share prices were determined on the basis of orders received on scraps of paper that were counted with calculators. It was only in 2000 that a new computer system – Warset – was introduced, also serving as a tool for NewConnect, which

commenced its operation in 2007. The breakthrough did not come, however, until April 15, 2013, when transactions started to be concluded on the basis of the Universal Trading Platform (UTP) system. This upgrade was chiefly designed to encourage large global investment firms employing algorithmic trading techniques to invest on the Polish market. The UTP meets the highest world standards. It is scalable, efficient, and fast, as well as with a much higher capacity. The new system is capable of processing 20,000 orders per second, whereas Waset handled slightly more than 300 orders within the same time. The introduction of this new technology also added value to the market image because by launching it in Warsaw, the WSE joined other stock exchanges in the world that use this system, including New York, Paris, Lisbon, and Amsterdam, thereby meeting the requirements for the most modern global capital markets (WSE, 2013).

Analysis of statistical data reveals that despite the systemic market disadvantages that set the framework for the NewConnect launch, compared with the initial years of the UK AIM operation more transactions were usually concluded in Poland (the exception was only the sixth year of NewConnect operation, but a decline occurred after the 2011 peak number of 1,082,130 transactions) (Tab. 4).

Consecutive years of operation	Number of transactions		Number of transactions	
	AIM		NewConnect	
	All	Per session	All	Per session
I	29,009	212	59,674	719
II	187,975	746	247,576	980
III	217,426	863	323,729	1,285
IV	225,494	895	877,947	3,470
V	845,556	3,355	1 082,130	4,311
VI	2,013,584	7,990	773,343	3,016
VII	706,582	2,793	720,219	2,916
VIII	449,876	1,785	865,067	3,474
IX**	823,948	3,257	544,665	4,359

* AIM launch: 1995, NewConnect: 2007.

** The ninth year of the NewConnect ATS operation shows data up to August 2015.

Tab. 4. Number of AIM and NewConnect transactions in the initial nine years of their operation. Source: Prepared by the author on the basis of LSE and WSE reports.*

An actual comparison of performance over consecutive years reveals that the number of NewConnect transactions represents only several per cent of AIM transactions and the identified trend is totally ambiguous (Fig. 4).

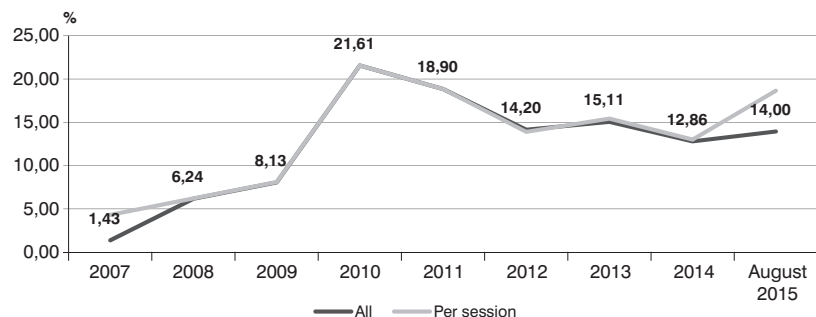


Fig. 4. NewConnect transactions as a percentage of AIM transactions in the years 2007–2015. Source: Prepared by the author on the basis of LSE and WSE reports.

5. Summary of Key Indicators for Alternative Markets During NewConnect Operation

Markets for small and medium-sized enterprises are most often characterized by the number of companies listed on them, with admissions playing a substantial role, by the capitalization value, but also by the turnover value of shares of new issuers. These markets are expected to be incubators of public market listings. This is because their requirements, which are limited to a minimum, encourage cooperation with the stock exchange. Issuers that achieve adequate growth and liquidity are likely to change their market, consolidating, through practice, their corporate governance, thus gaining even more credibility.

Considering the 2014 performance, the Polish alternative market is the second largest in terms of the number of listed companies, far ahead of other European stock exchanges. As regards other indicators, it usually ranks among the top ten markets. Taking listing numbers, capitalization value, and share turnover into account, the undeniable leader is the UK AIM. The only coefficient that puts London's alternative market in fourth position is the trading liquidity ratio⁶ (Tab. 5).

All statistics indicate strong commitment as well as the efficiency of NewConnect as reflected by the numbers of listed companies and concluded transactions. It ranks lower when both market capitalization and share turnover values are analysed. Definitely, this is due to Poland's currency, as most markets presented in this article use EUR⁷ and GBP (AIM).⁸ The period and years of the individual stock exchange operation are also meaningful. The position of NewConnect in terms of capitalization and share turnover is explained by the profile of the market for microenterprises resulting from the specificity of the Polish economy.

Value	Market	Year							
		2007	2008	2009	2010	2011	2012	2013	2014
Capitalization (EUR million)	AIM	133,035	39,614	63,768	92,268	74,479	75,662	91,074	91,686
	Ireland	3,083	964	1,613	2,147	37,913	29,138	63,306	47,390
	Germany		7,584	8,417	12,985	11,560	9,563	54,894	32,015
	Euronext*	5,738	3,247	4,180	5,020	5,518	6,184	8,325	8,506
	Turkey				3,090	3,407	3,992	5,927	8,484
	Austria	1,560	1,536	1,040	1,014	558	1,003	1,271	2,076
	Italy			474	357	326	475	1,183	2,052
	NewConnect	329	345	622	1,384	1,950	2,724	2,649	2,029
	Norway			1,949	1,911	2,131	2,085	2,405	1,948
	Spain				286	426	518	1,678	1,800
Share turnover (EUR million)	AIM	109,641	61,845	37,792	38,138	44,484	46,937	34,898	53,170
	Turkey				1,937	11,748	11,850	11,320	8,203
	Euronext*	451	744	1,092	1,105	1,875	1,338	2,451	5,359
	Germany	5,155	2,518	816	1,753	1,334	714	930	2,373
	Norway		156	238	640	1,407	1,063	1,158	1,185
	Ireland	1,623	578	309	321	367	235	444	1,047
	Hungary					4	23	13	816
	NewConnect	41	120	137	461	482	340	293	338
	Italy			11	52	27	38	140	326
	Austria	53	337	87	28	47	18	9	17
Trading liquidity ratio (%)	Turkey				63	345	297	191	97
	Euronext*	8	23	26	22	34	22	29	63
	Norway			12	33	66	51	48	61
	AIM	82	156	59	41	60	62	38	58
	NewConnect	13	35	22	33	25	12	11	17
	Italy			2	15	8	8	12	16
	Germany		33	10	14	12	7	2	7
	Luxembourg			2	3	6	3	4	2
	Ireland	53	60	19	15	1	1	1	2
	Austria	3	22	8	3	8	2	1	1

* Euronext was established on 20 July 2000 by the stock exchanges in Paris, Amsterdam, and Brussels. Lisbon joined in 2002. On 1 June 2006, the New York Stock Exchange announced the take-over of Euronext.

Tab. 5. Comparison of capitalization, share turnover, and trading liquidity ratios on selected alternative markets in the years 2007–2014. Source: WSE, 2015, pp. 10–11.

6. Conclusion

Stock exchanges in emerging market economies have to face many challenges, primarily including the small scale of issues and number of issuers, but also limited knowledge about national capital markets among entrepreneurs active on those markets. NewConnect and AIM are dedicated to the SME sector, which is considered promising, prone to develop, and worth striving to cooperate with both in Poland and the UK. Polish entrepreneurs are not yet as willing to seek financing on public capital markets as those in the UK. This may stem from the fact that the SME sector is dominated by microenterprises.

The WSE is regarded as the most dynamically growing capital market in Central and Eastern Europe. NewConnect is perceived by institutions such as the World Bank, FESE, the European Issuers, and the European Private Equity and Venture Capital Association as a good example allowing small and medium-sized enterprises to raise capital for development. Its performance has not been as spectacular as that of the AIM so far, but it allows for optimistic forecasts. It is also worth noting that the Polish NewConnect fits into the concept of the Capital Markets Union, whereby a single capital market could be created for SMEs in twenty-eight EU countries in order to ensure access to financing for small and medium-sized enterprises.

The “Innovative Economy” Operational Programme was implemented from the launch of NewConnect up to 2013. This provided an opportunity for co-financing the purchase of advisory services in order to prepare the necessary documentation and analyses that made it possible to attract external equity investors. According to Polish Agency for Enterprise Development (PARP) data, sixty NewConnect-listed companies benefited from the programme. Over subsequent years, the “Smart Development,” “Eastern Poland,” and Regional Operational Programmes were implemented. PARP began implementing the first one in 2014, where its duration is envisaged until 2020. The total allocation of funds under this programme will be about EUR 10.1 billion. Innovative SME activity will be financed using venture capital, including support for small and medium-sized enterprises in accessing the 4STOCK capital market. The measures aimed at supporting enterprises in the preparation by qualified entities of necessary documentation to find external sources of equity and debt financing on alternative markets such as NewConnect are to involve co-financing of up to 50% of the costs incurred in drawing up the required documentation to enter the WSE. These efforts are undertaken by PARP in close cooperation with the WSE, which is expected to promote the stock exchange and improve its performance as of January 2016. They should affect the number of admissions that, unfortunately, has been falling systematically on NewConnect since 2011.

Endnotes

- ¹ The Warsaw Stock Exchange (WSE) has been in operation since 16 April 1991 – the date of the first listing. Its history dates back to 1817, however. It was then that a decree of the vice-regent established the Royal Mercantile Exchange, whose sessions were held until the outbreak of World War II. The first attempt to reactivate it was made in 1945, but the centrally managed economic system functioning in Poland at that time prevented it from operating effectively. It was only on 4 December 1991 that the founding act was signed, and the first listing was recorded in the building of the former Central Committee of the Polish United Workers' Party. Currently, the WSE, a joint-stock company, is located at No. 4 Książęca Street in Warsaw.
- ² Under the EU Market Abuse Regulation (MAR), which will change as of 3 July 2016.
- ³ The 17th century is considered to be the period of financial exchange development in Europe. The Industrial Revolution is regarded as the most dynamic period of its expansion.
- ⁴ A universal law concerning the allocation of resources (80/20), whereby 20% of the objects studied are related to 80% of certain resources.
- ⁵ As a result, starting with 1 June 2013, the requirements for companies wishing to enter NewConnect and the strictly regulated sector of Authorized Advisers have been enhanced in order to make the market more attractive for investors, shifting the focus from the number of admissions to the quality of issuers.
- ⁶ Calculated as the ratio of the annual turnover to the capitalization of companies listed on a given market.
- ⁷ Countries using EUR: Ireland, Germany, Austria, Italy, Spain, Luxembourg, France, the Netherlands, and Belgium.
- ⁸ The average exchange rate is 4.2451 for EUR, 5.7643 for GBP, pursuant to the NBP average exchange rates as on 2 October 2015, at <http://www.nbp.pl>.

References

- Bass, H.H. (2006). *KMU in der Deutschen Volkswirtschaft: Vergangenheit, Gegenwart, Bremen. Zukunft, 101*.
- Bielawska, A. (2005). Wyjaśnienie trudności nowo powstających przedsiębiorstw w dostępie do kredytów jako przejaw realizacji teorii asymetrii informacji [Explaining the difficulties of newly emerging companies in access to credit as an indication of implementation of the theory of information asymmetry]. In A. Bielawska (ed.), *Uwarunkowania rynkowe rozwoju mikro i małych przedsiębiorstw* [Market conditions for the development of micro and small enterprises]. Szczecin: University of Szczecin.
- Bień, W. (2008). *Rynek Papierów Wartościowych* [The securities market]. Warsaw: Difin.
- Brealey, R.A. (1999). *Podstawy finansowania przedsiębiorstw* [The basis for financing companies]. Warsaw: PWN.
- Churchill, N.C. and Lewis, V.L. (1983). The Five Stages of Small Business Growth. *Harvard Business Review*, 63(3). Retrieved from: <https://hbr.org/1983/05/the-five-stages-of-small-business-growth>.
- Czapkiewicz, A. and Wojtowicz, T. (2014). The Four-Factor Asset Pricing Model on Polish Stock Market. *Economic Research – Ekonomska Istraživanja*, <http://dx.doi.org/10.1080/1331677X.2014.975518>.
- Dębski, W. (2014). *Rynek finansowy i jego mechanizmy* [The financial market and its mechanisms]. Warsaw: PWN.

- Flores, R. and Szafarz, A. (1997). Testing the Information Structure of Eastern European Markets: The Warsaw Stock Exchange. *Economics of Planning*, 30(2–3), <http://dx.soi.org/10.1023/A:1003055524004>.
- Grzywacz, J. (2012). *Kapitał w przedsiębiorstwie i jego struktura* [Capital in the company and its structure]. Warsaw: Warsaw School of Economics Publishing House.
- Harwood, A. and Konidaris, T. (2015). *SME Exchange in Emerging Market Economies: A Stocking of Development Practices*. World Bank.
- Jaworski, J. (2010). *Teoria i praktyka zarządzania finansami przedsiębiorstw* [The theory and practice of managing company finances]. Warsaw: CeDeWu.pl.
- Kordela, D. (2013). *NewConnect – rynek giełdowy dla małych i średnich przedsiębiorstw* [NewConnect: A stock-market for small and medium enterprises]. Warsaw: CeDeWu.pl.
- Łuczka, T. (2001). *Kapitał obcy w małych i średnich przedsiębiorstwach. Wybrane aspekty mikro i makroekonomiczne* [Foreign capital in small and medium enterprises: Selected micro- and macro-economic aspects]. Warsaw–Poznań: PWN.
- Łuczka, T. (2013). *Makro i mikroekonomiczne determinanty struktury kapitału w małych i średnich przedsiębiorstwach* [The macro- and micro-determinants of the structure of capital in small and medium enterprises]. Poznań: Poznań University of Technology Press.
- Małecka, J. (2015). Giełda Papierów Wartościowych w Warszawie jako potencjalne źródło finansowania małych i średnich przedsiębiorstw [The Warsaw Stock Exchange as a potential source of financing for small and medium enterprises]. In: A. Bielawska (ed.), *Uwarunkowania rynkowe rozwoju mikro, małych i średnich przedsiębiorstw; Mikrofirma 2015* [Market conditions for the development of micro, small, and medium enterprises: Micro-company 2015]. Szczecin: University of Szczecin Scientific Press.
- Małecka, J. (2016a). Zatrudnienie i wartość dodana w małych i średnich przedsiębiorstwach w Polsce i Unii Europejskiej [Employment and added value in small and medium enterprises in Poland and the European Union]. *E-Marketing i Zarządzanie* [E-Marketing and Management], 2(43), <http://dx.doi.org/10.18276/miz.2016.43-10>.
- Małecka, J. (2016b). Revenues, Expenses, Profitability and Investments of Potential Contenders for the Status of a Listed Company in Poland. *Oeconomia Copernicana*, 6(4), 91–122, <http://dx.doi.org/10.12775/OeC.2015.031>.
- Małecka, J. (2017). Regulation of the Warsaw Stock Exchange: History and Operating Rules. *Journal of Economics World*, 5(1), 34–43, <http://dx.doi.org/10.17265/2328-7144/2017.01.004>.
- Modigliani, F. and Miller, M.H. (1958). The Cost of Capital Corporation Finance and the Theory of Investment. *American Economic Review*, 48(3), <http://dx.doi.org/10.2307/1809766>.
- Myers, S.C. (1984). The Capital Structure Puzzle. *Journal of Finance*, 39(3).
- Nawrocki, T. and Jabłoński, B. (2011). *Inwestowanie na rynku akcji* [Investing in the stock market]. Warsaw: CeDeWu.pl.
- Perz, P. (2008). *Sztuka inwestowania na GPW* [The art of investing on the Warsaw Stock Exchange]. Warsaw: K.E. LIBER Publishers.
- Piórkarz, R. (2013). *Globalne rynki finansowe* [Global financial markets]. Warsaw: PWN.
- Quinn, R.E. and Cameron, K. (1983). Organizational Life Cycle and Shifting Criteria of Effectiveness: Some Preliminary Evidence. *Management Science*, 29(1). Retrieved from: <http://www.jstor.org/stable/2631164>.
- WSE. (2013). *WSE Goes Global with UTP*. Warsaw: WSE.
- WSE. (2015). *Raport o rynku NewConnect 2015 rok* [Report on the NewConnect market for 2015]. Warsaw: WSE.

Websites

<http://www.bankofengland.pl>

<http://www.britannica.com>

<http://www.euroclear.com>

<http://www.fse.gov.ukgpw.pl>
<http://www.gpw.pl>
<http://www.kdpw.pl>
<http://www.kir.pl>
<http://www.lchclearnet.com>
<http://www.londonstockexchange.com>
<http://www.nbp.pl>
<http://www.newconnect.pl>
<http://www.publications.europa.eu/code/pl/pl-5000500.htm#UK>