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Polish Multinationals: Expanding and seeking innovation abroad

Report dated June 5, 2013

Warsaw and New York, June 5, 2013:

The Institute for Market, Consumption and Business Cycles Research (IBRKK), Poland, and the Vale Columbia Center on Sustainable International Investment (VCC), a joint center of the Columbia Law School and the Earth Institute at Columbia University in New York, are today releasing the results of a survey on outward investors.[1] The survey is part of the Emerging Market Global Players (EMGP) Project focused on the rapid global expansion of multinational enterprises (MNEs) from emerging markets. The present survey, conducted in 2012, covers the period of 2009-2011. The report also contains a special section focusing on Polish MNEs' innovation activities from the beginning of their foreign expansion up to 2013.

Highlights

The 30 leading Polish non-financial MNEs ranked by foreign assets (Table 1) had a combined total of more than US$ 12 billion in foreign assets, US$ 21 billion in foreign sales[2] and more than 24,000 employees[3] abroad. Similar to the findings revealed in our previous report, the three top-ranked Polish MNEs in the survey (PKN Orlen, PGNiG, and Asseco Group) together held 72% of foreign assets, with PKN Orlen alone holding roughly 50%. PKN Orlen also dominates the ranking in terms of foreign sales, with its approximately US$ 16 billion in foreign sales accounting for 76% of the foreign sales of the 30 ranked firms (Annex Table 1). Following rather far behind in second and third place, respectively, are the Asseco Group (ranked third in terms of foreign assets) and Synthos (fourth in terms of assets). The top firm in the list in terms of foreign employment is Asseco Group, with more than 10,000 employees abroad.

The value of the Transnationality Index (TNI) varies significantly among the top 30[4] (see column headed "TNI" in Annex Table 1). Although the average TNI (29%) was still modest, several companies such as Ferro and Asseco Group did further expand their overseas operations compared to our last survey in 2010. Five MNEs achieved a TNI of greater than 50% in 2011 compared to only three in the previous year.

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[1] This report was prepared by Ewa Kaliszuk, Head of the European Integration Department at IBRKK and Agata Wancio, Research Fellow at the IBRKK. The authors wish to thank Marzenna Błaszczuk-Zawiła for data mining and analysis, Jan Piotrowski and Janusz Chojna for their helpful comments, Dariusz Sielski for copyediting, and Aleksander Czernij for research assistance.
[2] For several firms, total foreign sales include exports. It has not proved possible to estimate the share of exports in the *total* value of the foreign sales of the top 30.
[3] The data on employment were available for only 20 out of the 30 ranked companies.
[4] As not all companies contacted responded to the survey, the 30 multinationals ranked in Table 1 below cannot be said to be the largest Polish multinationals in terms of foreign assets. Nonetheless, they are certainly *among* the largest and, as is customary in this project, are referred to in the report as the "top 30".

Table 1. Poland: The top 30 non-financial outward investors, 2011 (US$ million)[a]

Rank	Company	Core industry	Status (% of state ownership)	Foreign assets
1	Polski Koncern Naftowy Orlen (PKN Orlen)	Exploration, refining and distribution of oil-based products	Listed (27.52%)	5,977
2	Polskie Górnictwo Naftowe i Gazownictwo (PGNiG)	Exploration, exploitation, storage and distribution of natural gas	Listed (72.41%)	1,559
3	Asseco Group	Software and IT services	Listed	1,424
4	Synthos	Chemicals	Listed	800
5	LOTOS	Exploitation, refining and distribution of oil-based products	Listed (53.19%)	785
6	Ciech	Chemicals	Listed (38.72%)	432
7	BIOTON	Pharmaceuticals	Listed	287
8	Polimex-Mostostal	Construction and manufacture of machinery and equipment	Listed[c]	169
9	Kopex	Machinery and equipment, services for mining	Listed	153
10	Koelner	Building materials (fixings for construction and industry sectors)	Listed	132
11	Selena FM	Building materials	Listed	110
12	AB[b]	Wholesale trade (computers, consumer electronics) and IT services	Listed	101
13	KGHM Polska Miedź	Mining of non-ferrous metal ores and production of metals	Listed (31.79%)	96
14	Cognor (former Złomrex)	Metallurgy	Listed	82
15	Ferro	Building materials (sanitary and installation equipment)	Listed	81
16	Comarch	Software and IT services	Listed	71
17	PZ Cormay	Pharmaceuticals	Listed	28
18	Decora	Building materials	Listed	24
19	Grupa Kęty	Metal products	Listed	23
20	Fabryki Sprzętu i Narzędzi Górniczych GK "Fasing"	Machinery and equipment (for mining, quarrying and construction)	Listed	20
21	LPP	Wearing apparel	Listed	18
22	Wielton	Transport (trailers and semi-trailers)	Listed	16
23	Apator	Electrical and measuring equipment	Listed	10
24	TOYA	Wholesale trade (hand and power tools)	Listed	9
25	TelForceOne	Wholesale trade and consumer electronics	Listed	41
26	Fabryka Farb i Lakierów Śnieżka	Building materials (paints and varnishes)	Listed	5
27	Redan	Wearing apparel	Listed	4
28	Relpol	Electromagnetic products	Listed	4
29	Aplisens	Testing and measurement equipment	Listed	4
30	Bakalland[b]	Food products (nuts and dried fruit)	Listed	2
Total				**12,429**

Source: IBRKK-VCC research on leading Polish multinationals, 2012.

[a] The exchange rate used is the rate reported by the IMF as of December 31, 2011: US$ 1 = PLN 3.4174.

[b] In the case of AB and Bakalland, data cover a period from July 1, 2011 to June 30, 2012, corresponding to the companies' financial year. Their foreign assets are thus reported as of June 30, 2012.

[c] The state has become a main shareholder of the company at the beginning of 2013 acquiring 22.48% of its stake.

The ranking includes some state-controlled firms but is dominated by private ones. All enterprises are listed on the Warsaw Stock Exchange and a few of them additionally on foreign stock markets (Table 1 and Annex Table 3). Most of the members on executive boards and the supervisory boards are Polish nationals. These governance bodies are predominantly served by men, and chaired by women in only seven of the surveyed companies.

The top 30 MNEs all together controlled nearly 500 foreign affiliates in more than 60 countries, most of which were in Europe. Their interest in other regions, particularly East Asia and the Pacific, however, has been gradually rising. In terms of industrial distribution, their overseas investments primarily went into the mining, exploration and refining industries, then into chemicals and pharmaceuticals, followed by software and information technology (IT) services. Other major industries represented by the top 30 included building materials, metals and metal products as well as machinery and equipment. This year, for the first time, companies from the apparel industry appear in the ranking, based on their activities in 2011. In turn, food and beverage as well as wood and furniture industries are underrepresented in the ranking due to the lack of sufficient data on Polish MNEs operating in those industries.

As reported in our section focusing on innovation activities, the most innovative Polish multinationals in terms of both total R&D spending and R&D intensity were IT companies (Annex Figure 8). They belonged to a small group of companies with extensive R&D operations abroad. Other industries with relatively high R&D intensity were chemicals and pharmaceuticals, followed by machinery and equipment. The latter industries also led the list of holders of international patents, whereas companies from the IT industry did not protect their intellectual property rights in this way. On average, our research reveals that Polish multinationals had a low propensity to file for patents abroad. The majority of their international patents protected inventions that had been developed by foreign subsidiaries before they were acquired by Polish companies. Consistent with these findings, a few Polish multinationals tended to target companies that already held some patents and inventions at an advanced stage of development. Finally, there was no evident relationship between the companies' propensity to innovate and their level of internationalization, although some innovation spillovers from foreign subsidiaries to the parent company appeared (Annex Table 6).

Profile of the top 30

- **Changes in the list.** The ranking for 2011 reveals some changes compared to the 2010 ranking.[5] Morpol, the world's leading processor of salmon, is no longer in the list after being acquired in 2012 by Marine Harvest ASA, a Norwegian company from the same industry, for US$ 167 million.[6] Two other Polish MNEs, Boryszew and Stomil Sanok,

[5] The previous survey was carried out in 2011 and covered the period 2008−2010. IBRKK-VCC, "Polish multinationals go beyond Europe" (June 14, 2012), available at: http://www.vcc.columbia.edu/files/vale/documents/EMGP-Poland-Report-2012-_FINAL_0.pdf and http://ibrkk.pl/id/109/Projekt_Emerging_Market_Global_Players (each site last visited April 20, 2013).

[6] Marine Harvest acquires 48.5% of Morpol (December 17, 2012), available at: http://www.marineharvest.com/en/Investor1/Press-releases/2012/Marine-Harvest-acquires-485-of-Morpol/ (last visited April 20, 2013); *Morpol to review announced offer from Marine Harvest – CEO will resign Q1 2013* (December 17, 2012), available at:http://hugin.info/143208/R/1665493/540376.pdf (last visited April 20, 2013).

present in the previous ranking are not included in the 2011 ranking because they did not respond to the survey and there is insufficient publicly available information to be able to determine where they might fall if included. At the same time, eight new companies joined the list. In regard to the rest of the companies, some of them improved their standings whereas others slipped down. The largest drop came from Cognor, formerly known as Złomrex; it had withdrawn most of its overseas operations in an attempt to avoid the imminent danger of bankruptcy. The value of its foreign assets shrank threefold within 2011 and the company fell by five places in the ranking. Correspondingly, in 2011 Ferro moved up in the ranking to 15th place from its 2010 position as 20th.

- **Major drivers.** According to our survey, the most salient motive that explains the globalization of Polish MNEs is market seeking. The majority of the surveyed companies attributed their internationalization to the following market-related factors: access to the local and/or regional market, the size of the target market and its growth prospects. For some of these companies, undertaking FDI projects abroad was a way to circumvent tariff barriers (tariff-jumping investment). Access to natural resources continued to be a key strategic driving force for investment in mining and exploration industries; however, according to one of the companies from this sector (KGHM), a reduction in production costs of copper and other metals was an equally important determinant. While several companies from other industries also paid attention to cost-related factors, only a few of them reported that the need for cutting production (wage and non-wage) costs played a vital role in their investment strategy. The efficiency-seeking strategy could be assigned mainly to multinationals operating in China or in some Commonwealth of Independence States (CIS) countries. Apart from the market-seeking motive, the Polish multinationals also cited their global expansion as being motivated by such factors as following their contractor(s) abroad and beneficial tax regulations, although the companies described these more frequently as supporting rather than decisive factors. Other drivers such as access to technology and/or talents were also noted as being factors of secondary importance to the majority of the surveyed outward investors. Nevertheless, a couple of projects oriented to acquiring strategic assets had been undertaken, for instance the acquisition of companies with experienced R&D staff and registered patents (PZ Cormay in Ireland, BIOTON in Italy), start-ups with technologically advanced solutions (Asseco Poland in Turkey), widely-developed distribution channels (PZ Cormay in Switzerland), and internationally or domestically established brands (Selena in Italy, Ferro in the Czech Republic).

- **Concentration.** The largest company in Central Europe, PKN Orlen, led the top 30 list and accounted for 48% of total foreign assets; the assets of the second- and third MNEs together accounted for another 24%. The largest three Polish MNEs therefore controlled more than 70% of foreign assets. Given the significantly smaller size of the majority of Polish multinationals outside the top three, we expect that this pattern of concentration may continue. Nevertheless one firm, KGHM, a Polish copper and silver mining company, showed strong progress in foreign operations and is likely to rise up the ranking to be a leading MNE: the acquisition made by the company in 2012 was one of the largest cross-border deals ever completed by Polish companies (further details are discussed later in this report).

- **TNI.** According to the average TNI (29%), nearly a third of activities by the top 30 MNEs in 2011 were carried out abroad (Annex Table 1). However, the TNI could be properly calculated for only 20 of the top 30 because the data on foreign employment were unavailable for 10 Polish multinationals. As the latter group is, on average, less internationalized (in terms of assets and sales) compared to the former group of 20, its absence in the calculation of the TNI affected the results. Therefore, it seems reasonable to assume that the TNI for the top 30 is actually lower by a few percentage points (somewhere between 20% and 25%). An additional fact to note is that calculation of foreign sales includes in some cases exports passing through foreign affiliates, thus the TNI value for some of them may be overstated. The most internationalized company was Ferro, a manufacturer of sanitary fittings that located 80% of its assets and employees abroad, and obtained 54% of its sales from foreign affiliates. Like Ferro, four other companies (Asseco, BIOTON, Selena FM and PZ Cormay) were also more active abroad than in Poland, with their TNIs falling between 64% and 54%. Six multinationals had TNI values ranging between 40% and 50%; whereas for the rest of the companies the TNI levels were lower than 40% and varied widely across the group.

- **Location of head offices.** All 30 companies have their headquarters in Poland. In contrast to patterns evidenced in many other emerging markets (e.g. Russia,[7] Chile,[8] or Turkey[9]), however, the headquarters of Polish multinationals are widely spread across the country. The two most popular locations are the capital, Warsaw, where six MNEs have their headquarters (HQs), and Wrocław, a southern city relatively close to the borders with Germany and the Czech Republic, where five MNEs have their HQs. Head offices of the remaining 19 companies are located in other regions, especially in central, southern and western voivodships.[10] The eastern and northeastern regions, which are mainly rural areas, do not feature as HQ locations.

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[7] See The Institute of World Economy and International Relations (IMEMO) of the Russian Academy of Sciences and VCC, "Global Expansion of Russian Multinationals after the Crisis: Results of 2011", Moscow and New York (April 16, 2013), available at: http://www.vcc.columbia.edu/files/vale/content/EMGP_Russia_Report_-_FINAL_-_April_16_2013.pdf (last visited April 19, 2013).

[8] See United Nations Economic Commission for Latin America and the Caribbean (ECLAC) and VCC, "The top 20 multinationals from Chile in 2010: Retail, forestry and transport lead international expansion," Santiago and New York (October 6, 2011), available at: http://www.vcc.columbia.edu/files/vale/documents/EMGP-Chile-Report-2011-Final_2.pdf (last visited April 19, 2013).

[9] See Kadir Has University (KHU), KPMG-Turkey (KPMG-T), Foreign Economic Relations Board (DEIK), and VCC, "Turkish MNEs steady on their course despite crisis, survey finds," Istanbul and New York (January 31, 2011), available at: http://www.vcc.columbia.edu/files/vale/documents/EMGP-Turkey-Report-2011.pdf (last visited April 19, 2013).

[10] The voivodship is the largest unit of territorial division in Poland having a legal status on the basis of the Act of July 24, 1998 on Implementing of a New Fundamental Three-tier Territorial Division of the Country (Polish Journal of Laws No. 96, item 603).

- **Ownership and status.** The state is the main shareholder in five[11] out of the 30 companies, and holds majority stakes in two of them (PGNiG and LOTOS). With the exception of Ciech, which operates in the chemical industry, all state-owned MNEs operate in mining, exploration and refining of natural resources (Table 1). All of the surveyed Polish multinationals are listed on the Warsaw Stock Exchange (WSE); and only a few of them (Asseco, BIOTON, Cognor, Comarch, KGHM) are on foreign stock exchanges (Annex Table 3). PKN Orlen has recently withdrawn from trading on the London Stock Exchange (LSE).[12]

- **Official language.** In all of the 30 companies the official language is Polish. However, some firms also prepare their financial reports, presentations and other materials in English, mainly for two reasons. Firstly, they have some foreign shareholders; and secondly, they follow language recommendations contained in the Best Practices of WSE Listed Companies.[13]

- **Corporate governance.** All members of the executive boards of the top 30 and the majority of the members of the supervisory boards were Polish nationals. The governing bodies of the companies in our ranking predominantly consisted of men and none of the Polish multinationals have so far implemented a policy to promote women in executive posts. The share of women on executive boards and supervisory boards constituted only 6% (7 out of 109) and 14% (24 out of 185), respectively. There were two female chief executive officers (CEOs) and five women chairpersons on the supervisory boards.

- **Corporate social responsibility (CSR).** The approach to CSR greatly varies among the Polish multinationals. Five of them (Apator, KGHM Polska Miedź, LOTOS, PGNiG and PKN Orlen) lead the field (being covered by a special index of socially responsible

[11] In 2012, a year not covered by this year's survey, the state also became a strategic shareholder of Polimex-Mostostal, a construction company that had run into financial trouble along with other Polish companies from the same industry. The company was rescued from bankruptcy in two ways. First, the state acquired 22.48% of shares in Polimex-Mostostal through a wholly state-owned private equity firm, the Industrial Development Agency. One of the agency's main tasks is to support Polish companies of special importance by providing them reimbursable aid. Second, Polimex-Mostostal received strong support from a state-controlled bank, PKO BP, which participated in the preparation of a restructuring program and persuaded other creditors of the company to temporarily refrain from the enforcement of the company's liabilities. See: Industrial Development Agencies, *ARP S.A. akcjonariuszem Polimeksu-Mostostal S.A. [ARP S.A. has become Polimex-Mostostal's shareholder]* (January 24, 2013), available at: http://www.arp.com.pl/o_agencji/Aktualnosci/ARP_SA_akcjonariuszem_PolimeksuMostostal_SA.aspx and Cydejko C., Kowalik F., *Jak ratują Polimex [How they rescue Polimex]*, "Forbes" (December 19, 2012), available at: http://www.forbes.pl/jak-panstwo-ratuje-polimex,artykuly,136005,1,1.html (last visited April 9, 2013).

[12] PKN ORLEN shares were listed from 1999 in the form of Global Depositary Receipts (GDRs) on the London Stock Exchange and also traded in the USA on the OTC market from 2001. However, due to investors' decreasing interest in these securities, it decided to terminate the deposit receipts program in 2012. Finally, the GDRs were removed from trading on the LSE as of 27 February 2013 and the trading of ADRs was terminated on 4 March 2013, Regulatory announcement No. 78/2013 and Regulatory announcement No. 88/2013, available at: http://www.orlen.pl/EN/InvestorRelations/RegulatoryAnnouncements/Pages/Regulatory-announcement-no-782013.aspx and http://www.orlen.pl/EN/InvestorRelations/RegulatoryAnnouncements/Pages/Regulatory-announcement-no-882013.aspx (last visited April 10, 2013).

[13] *Code of Best Practice for WSE Listed Companies* (effective from 1.01.2012), Appendix to Resolution No. 20/1287/2011 of the [Warsaw Stock] Exchange Supervisory Board dated October 19, 2011, available at: http://www.corp-gov.gpw.pl/assets/library/english/regulacje/bestpractices%2019_10_2011_en.pdf (last visited April 9, 2013).

companies[14], among other things) and communicate their CSR activities through various information channels (regular reports on progress in fulfilling CSR requirements, participation in national CSR contests etc.). The remaining companies are engaged in select aspects of CSR (e.g. they incorporate CSR issues into their codes of ethics, sponsor social events or charity, devote resources to employee training and development, and invest in environmental protection). Although the Polish multinationals, on average, do not meet international standards of responsible business conduct[15], they have recently made visible progress in that field and continue to make efforts to catch up.

- **Principal industries**. As in the previous ranking, the mining, exploration and refining industries represent the majority (68%) of foreign assets of the top 30. IT services as well as chemicals and pharmaceuticals come next, each of which has a share of 12% in the foreign assets of the top 30. Multinationals from the building materials industry, although strongly represented in the ranking (five companies), together hold only 3% of the total assets. A similar situation relates to companies from the machinery and equipment industry. In addition, it is worth remarking that the latter group is largely diversified as the companies operate in various segments. In this group we find the manufacturers of various products: trailers and semi-trailers (Wielton), equipment for mining (Kopex), control and measurement instruments (Apator, Aplisens), and electromagnetic relays and relay sockets (Relpol). None of the remaining industries exceeded 1% in terms of the share in foreign assets. Wholesale trade and the manufacturing of metals and metal products are each represented by three companies, wearing apparel by two companies, and construction and the food industry each by one. With only one firm ranked, the food and beverage industry is, however, underrepresented in the top 30. There are a number of Polish firms that are well established in European markets (e.g. Mokate and Maspex Wadowice), but due to the lack of publicly available or survey data on these multinationals, they are not included in the list. For the same reason the ranking does not cover any companies from the wood and furniture industry, some of which have significant overseas operations.[16]

  Although only five companies in the top list represent the services sector, we identified a few more Polish multinationals operating in other non-financial service sectors such as IMPEL and KRUK. With the majority of its foreign operations in Eastern Europe, the

[14] The so-called "RESPECT Index" comprises listed companies operating in compliance with best corporate governance, information governance and investor relations standards and also in adherence to certain environmental, social and personnel criteria. For the company evaluation criteria see: Warsaw Stock Exchange, About RESPECT Index – Company Evaluation Criteria, available at http://odpowiedzialni.gpw.pl/company_evaluation_criteria (last visited February 26, 2013).

[15] For more details on this see the 2011 report: IBRKK-VCC, "Polish multinationals go beyond Europe" (June 14, 2012), available at: http://www.vcc.columbia.edu/files/vale/documents/EMGP-Poland-Report-2012- FINAL 0.pdf and http://ibrkk.pl/id/109/Projekt_Emerging_Market_Global_Players (each site last visited April 20, 2013).

[16] For more information on this matter see our first report on Polish multinationals, "Survey on Polish multinationals finds geographic concentration and industrial diversity" (March 31, 2011), available at: http://www.vcc.columbia.edu/files/vale/documents/Poland_3_2011_4.pdf and http://ibrkk.pl/id/109/Projekt_Emerging_Market_Global_Players (each site last visited April 20, 2013). Additionally, it is worth mentioning that the number of Polish food MNEs declined since the 2011 report was published. Three of them (Morpol, Mispol, and Kamis) were acquired by foreign MNEs (by Norwegian Marine Harvest ASA, Lithuanian UAB NDX Energija, and American McCormic & Company, respectively).

former, IMPEL, offers a range of business services: maintenance solutions (e.g. cleaning services, facility furnishings), safety solutions (e.g. monitoring, cash handling), business solutions (e.g. accounting, personnel and IT services), and delivery solutions (e.g. laundry service, catering). The latter one, KRUK, offers services in debt management.[17] In 2011, nearly 40% of the total revenues of the latter company came from foreign operations, largely from new EU member states such as the Czech Republic, Romania, and Slovakia.

- **First foreign affiliate.** The Polish multinationals started investing abroad relatively late. More than 20 of the top 30 MNEs set up their first foreign affiliate in 2000 or later, establishing most of those entities as sales subsidiaries. Further, most of these early affiliates were established in European countries. Only four out of the 30 firms' first affiliates were established outside Europe, mainly in China (Annex Figure 2a).

- **Foreign affiliates and geographic distribution.** At the end of 2011, the top 30 carried out investments in 66 countries through 491 affiliates, most of which (above 60%) were located in Europe (Annex Figure 2). On average, each of the top 30 Polish MNEs held 16 foreign affiliates; however, the figure differed greatly for each company. Leading the list is the third largest Polish MNE, Asseco Group, which held about one third, or 161, of all the foreign affiliates by the top 30. Following Asseco Group is Comarch, which held 35 affiliates abroad. While two others companies reached numbers similar to Comarch, the numbers for the remaining companies varied from 2 to 25 affiliates. Most of the foreign affiliates are located in the European region, suggesting that most Polish MNEs are still regional rather than global players. Their interest in expanding to more distant regions remains low, though appears to be growing. In terms of location, Israel became the top host location for affiliates of the top 30 (82 entities); although all except one belonged to the same Polish company, Asseco. By the end of 2011, approximately half of the Polish multinationals had not established any affiliate outside Europe.

  A significant number of Polish affiliates in Europe (34 out of 336) have been recognized as the so-called special purpose entities (SPEs), which solely focus on tax avoidance and fundraising without any other strategic operations such as sales in the host country (see more in the "big picture" section). Removing these SPEs, the most popular locations for Polish multinationals continued to be neighboring countries: the Czech Republic (45 affiliates), Germany (42), Ukraine (31), Russia (20), Slovakia (17), and Lithuania (16). The Regionality Index showed the highest value, 56%, in Western and Central Europe (referred to as "Other Europe" in Annex Table 2). The concentration of affiliates in Eastern Europe and Central Asia was also high (12%), but lower than in the Middle East and North Africa (20%), due to a strong presence of Asseco on the Israeli market. The average value for the remaining regions did not exceed 4%; however, the number of foreign affiliates slightly increased in North America as well as in East Asia and the Pacific compared to the previous year. While their interest in the United States as a host market has been rising, primarily in the service sectors, Polish MNEs see China as the

[17] KRUK is not monitored by the Polish Financial Supervision Authority. Therefore, we classify its business as non- financial services.

main distant destination for manufacturing plants. Indeed, some of the top 30 set up their only or key manufacturing facilities in China (e.g. Ferro, Fasing and Selena).

- **Top mergers and acquisitions.** Seven out of the 10 top cross-border transactions of Polish multinationals were undertaken by companies ranked in the top 30 list (Annex Table 4). The largest investment was KGHM Polska Miedź's acquisition of Canadian-based Quadra FNX Mining Ltd. for nearly US$ 3 billion; the hope was to gain access to new copper mines located in Canada, the US and Chile. It has been the largest cross-border deal undertaken by a Polish company since PKN Orlen took over the Lithuanian refinery Mozhejki in 2006 for a similar amount. According to KGHM's estimation, the acquisition will allow the company to cut the cost of exploitation by 20% and increase its production capacity by 50%.[18] The other M&As were considerably smaller, with an average value of only US$ 84 million. When it comes to the number of transactions, the most active investor was Asseco. The company took over three IT companies: the largest was based in Israel with operations in multiple continents; the other two were anchored primarily in European markets. Multinationals from knowledge-intensive industries such as pharmaceuticals and biotechnology, Polpharma, Pelion and PZ Cormay, also deserve special attention. Polpharma took over the largest Kazakhstani pharmaceutical manufacturer Chimpharm, which controlled a 50% share in the local market.[19] Pelion bought a Lithuanian company operating a chain of 65 pharmacies[20]. PZ Cormay acquired 50% of shares of an Italian manufacturer of immunological tests and analyzers.[21] Over the last three years the PZ Cormay also completed two other deals in the field of medical diagnostics, but they were excluded from the top list because the deal values were below the threshold for the top ten M&As.

- **Top greenfield announcements**. In the period of 2010-2012, greenfield investments were relatively less popular among Polish multinationals compared to M&As – only a few of them were announced. The expected amount of investment was to exceed US$ 100 million only in the case of KGHM Polska Miedź, planning to build a copper mine in Canada. For others, it varied between US$ 10 and 100 million. The values of the five remaining greenfield projects listed in Annex Table 5 have not been disclosed. It is worth noting that the projects are widely distributed in terms of both sectors and geography. Details of most of those announcements were discussed in the previous report.

[18] KGHM Polska Miedź, *Budowa silnej globalnej firmy górniczej wraz z Quadra FNX [Building a strong global mining company with Quadra FNX]* (December 6, 2011), Presentation for Investors, available at: http://www.kghm.pl/kanada/KGHM_Prezentacja_inwestorska_PL.pdf (last visited April 20, 2013).

[19] *Polpharma took over the largest drug manufacturer in Kazakhstan* (September 21, 2011), http://www.polpharma.pl/en/news/archive/archive-2011/go:11/art117,polpharma-took-over-the-largest-drug-manufacturer-in-kazakhstan.html (last visited April 20, 2013).

[20] Pelion, *Current Report No. 78/2011* (July 2011), available at: http://www.pelion.eu/en/current_reports/0/10762.html (last visited April 20, 2013).

[21] *Przychody Grupy Cormay już 9-cyfrowe, rekordowe są też zyski [The revenues of the Cormay Group are already 9-digit figures, profits are record-breaking as well]* (March 4, 2013), available at: http://ir.pzcormay.pl/userfiles/file/Informacje%20prasowe/04_03_2013_CRM_wyniki.pdf (last visited April 20, 2013).

Box 1. The mode of FDI entry

Polish multinationals strongly prefer controlling to equal or minority equity ownership and other non-equity cooperation. Only 32 out of 400 foreign affiliates were in any forms of joint ventures or non-equity cooperation with foreign partners. Less than half of these 32 were 50–50 joint ventures, whereas in others the Polish share in the joint project ranged between 20% and 50%, the so-called associate companies. Some Polish multinationals began with a minority share in a target company and later made a follow-up investment to increase their stake to over 50%. In only one joint-venture project established abroad by the top 30 did the Polish multinational take a majority stake, that is, the Afton Ajax project launched by Polish KGHM and Canadian Abacus Mining & Exploration in 2010 in order to explore and exploit copper and gold in the region of central South of British Columbia in Canada. Additionally, at the beginning of 2012 the Polish company increased its share in the undertaking from 51% to 80%.[22]

Similar results were found in another survey[23] based on a larger sample of Polish MNEs. It reported that over 80% of those sample MNEs ran an affiliate or a branch abroad independently. The remaining companies, i.e. less than 20%, operated in cooperation with another company, usually with a local partner through a joint venture. However, it is difficult to determine what part of all joint ventures resulted from the willingness to cooperate in order to obtain higher value added, and what number of them were driven by the need to comply with host-country regulations or the desire to better navigate the intricacies of the local business environment.

Establishing cooperation in the form of a joint venture is particularly beneficial in countries that are culturally and politically distant. It significantly reduces the potential investment risk and increases the chances of business success. When it comes to Polish companies expanding abroad, such investment could be found in the Asian markets, especially in China. Admittedly, Chinese law, after adjustments to the WTO requirements, allows establishment of wholly foreign-owned enterprises (WFOE) in manufacturing, trade or services sectors, which can provide a number of advantages as compared to joint ventures.[24] Yet entering the Chinese market in the form of a joint venture is still quite popular among foreign investors, including Polish multinationals. The latter, being aware of the great importance of cultural, social and institutional differences, seek local business partners and negotiate conditions of cooperation within a joint venture company before making a capital commitment in a target country (Ferro, Fasing and Konspol can serve as examples). The ability to find the right partner is one of the decisive factors for the viability of a project, especially for companies with very limited global experience like the Polish ones. For instance, Azoty Tarnów, a Polish company from the chemical industry, is close to abandoning its investment plan to build a factory of fertilizers in China as it has not found a strategic local partner. Kenya seems to be another location considered by the company.[25]

[22] Raport nr 17/2012: Wykonanie opcji zakupu dodatkowych 29% udziałów w spółce KGHM Ajax Mining Inc. *[Report No. 17/2012: Exercise of stock options to purchase a further 29% stake in KGHM Ajax Mining Inc.]*, (April 2, 2012), available at: http://www.kghm.pl/index.dhtml?module=articles&id=4680 (last visited April 20, 2013).

[23] Jaworek M., *Oczekiwania polskich przedsiębiorstw związane z bezpośrednimi inwestycjami zagranicznymi i stopień ich spełnienia [Expectations of Polish enterprises associated with foreign direct investment and their fulfillment]*, Unpublished data presented at the conference "Polskie inwestycje za granicą – stan i wyzwania" [Polish investment abroad – the status and challenges], Polish Ministry of Economy and PAIiIZ, Warsaw, December 6, 2012.

[24] *China Business Handbook: A Resource Guide for Doing Business in the People's Republic of China*, InterChina, and Dezan Shira and Associates, and US Commercial Service (US Department of Commerce), vol. 2, May 2011.

[25] *Grupa Azoty wejdzie do Afryki? Koncern rozważa inwestycje w Kenii [Will the Azoty Group enter Africa? The company is considering investment in Kenya]* (January 4, 2013), available at:

- **Changes in foreign assets, sales and employment**. Table 2 shows that foreign and total assets and sales increased substantially over the period of 2009-2011. However, the calculations based on the figures delivered in US dollars and Polish zlotys differ much as the exchange rate was subject to large fluctuations during the financial crisis and depreciated steeply afterwards (20% over the three years).[26] Such differences must have affected the value of Polish MNEs' assets and sales expressed in US dollars and thus the growth rate of both of them. Between 2009 and 2011, the percentage change in foreign assets measured in US dollars (14%) was less than half of that based on the Polish zloty (37%). A similar situation took place in the case of foreign sales (21% and 45% respectively).

Table 2. Snapshot of the top 30 Polish multinationals, 2009-2011 (US$ million, PLN million and number of employees)

Variable	2009	2010	2011	% change, 2011/2010	% change, 2011/2009
Assets, in US$					
Foreign	10,733	11,904	12,429	4.4	14.1
Total	48,326	52,746	54,750	3.8	10.9
Assets, in PLN					
Foreign	30,592	35,686	42,474	19.0	36.8
Total	137,745	158,129	187,101	18.3	33.0
Share of foreign in total (%)	22.2	22.6	22.7		
Sales, in US$					
Foreign	17,468	19,871	21,183	6.6	21.3
Total	49,545	57,338	64,104	11.8	29.4
Sales, in PLN					
Foreign	49,790	59,572	72,391	21.5	45.4
Total	141,219	171,893	219,070	27.4	55.1
Share of foreign in total (%)	35.3	34.7	33.0		
Employment[b]					
Foreign	17,476	24,099	24,401	1.3	39.6
Total	125,983	134,762	135,347	0.4	7.4
Share of foreign in total (%)	13.9	17.9	18.0		

Source: IBRKK-VCC research on leading Polish multinationals, 2012.

[a] These figures were calculated excluding data on Kopex's and PZ Cormay's assets as those were unavailable for 2009.
[b] Data on employment cover 20 companies as for the remaining enterprises data were unavailable. See Annex Table 1 for details.

Although the snapshot suggests continued growth of Polish multinationals, the situation within the group varied widely. Cognor, whose assets abroad declined to a third of their previous total over the course of 2011, was an apparent outlier. Its withdrawal from foreign operations was the company's response to the financial problems stemming to a large extent from a sharp decline in demand for steel and other metal products during the global financial crisis. Kopex and FFiL Śnieżka likewise experienced decreases in assets, although not as rapid as in the case of Congor.

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http://forsal.pl/artykuly/671873,grupa_azoty_wejdzie_do_afryki_koncern_rozwaza_inwestycje_w_kenii.html# (last visited April 20, 2013).

[26] Poland's national currency is one of the most sensitive currencies in the European emerging markets. It reacts very strongly to turbulences on global financial markets, even if the economic situation in Poland is relatively good.

Overall, the share of foreign assets in the total assets for the top 30 remained steady over the three years.

When it comes to sales, all the firms but one (LOTOS) increased their sales over the period in question. However, since the growth rate of foreign sales was lower as compared to overall sales, the ratio of foreign-to-total sales decreased by two percentage points. Sales remained the most internationalized category among all three, but to some extent that conclusion stems from the fact that for a few companies the value of foreign sales also includes exports from Poland.

Foreign employment rose by nearly 40%, mainly due to a considerable increase in 2010 compared to 2009. The largest contribution to this growth was made by Asseco Group, which increased the number of employees abroad by nearly 6,000 within 2010. This was mainly due to its acquisition of Formula Systems, an Israeli IT group that operates in several continents. Other companies that multiplied their foreign employment over the three-year period were PGNiG, LOTOS, Ferro, and Apator. At the same time, some companies reduced their foreign employment (Kopex to the largest extent).

Enhancing innovation capabilities through internationalization

Innovation of the Polish multinationals at a glance

The Polish MNEs' spending on research and development (R&D) amounted to US$ 155 million in 2011 and was rather modest for most of the top 30 companies. Seven of them did not report any R&D expenses in 2011 and the same number spent less than US$ 1 million for this purpose. Only five among the top 30 spent more than US$ 10 million in R&D. The share of R&D spending in total sales (the R&D intensity) varied significantly from company to company. The most innovative multinational in this respect was Comarch with R&D spending exceeding US$ 30 million, accounting for 13% of sales revenues. The only company from our ranking that recorded larger R&D expenditure than Comarch was Asseco Group. Both multinationals operate in the IT industry and are among the most innovative Polish companies.[27] Their R&D expenditure combined counted for 50% of total R&D spending by the top 30 multinationals (Annex Figure 8). The other industry with a relatively high R&D spending was healthcare represented by PZ Cormay (close to 13% of sales) and BIOTON (nearly 3%). The other three top R&D spenders, Kopex, Relpol, and Aplisens, are active in the machinery and equipment industry, although from quite different segments. As R&D expenditure of the remaining companies did not exceed 1% of their sales, the average R&D intensity for all outward investors was slightly above 2%. This is not a bad result given that the average for the 1,000 most innovative companies worldwide ranged from 3% to 4% over the period of 2010-2011.[28] Most of the Polish multinationals that did not record any R&D spending operate in low-technology intensive industries such as wholesale trade or clothing. Although their innovations, mainly in

[27] *Lista 2000: Ranking firm innowacyjnych [The top 2000: the ranking of the most innovative companies]*, "Rzeczpospolita", October 24, 2012, p. 53.
[28] Booz & Company, available at: http://www.booz.com/global/home/what-we-think/global-innovation-1000/rd-intensity-vs-spend (last visited April 20, 2013).

marketing and distribution, rarely involve technology-related R&D spending (in contrast to product and process innovations), those companies can still be innovative and thus successful in terms of foreign expansion.

R&D activities at home and abroad

Among the top 30 firms, there is no clear relationship between the companies' propensity to invest in R&D and their level of internationalization. Among the largest R&D spenders there are both companies with a strong global presence and those with a small fraction of their operations overseas. Similarly, the most internationalized companies (with the TNI above 40%) have different R&D intensities, from 0% to 13%. Moreover, only a few Polish multinationals have engaged in M&A deals that are likely to entail technological assets. Although the knowledge-seeking view of emerging market MNEs is rising, it is still not as popular among Polish multinationals as it is among investors from other emerging markets.[29] Having said that, there are a few notable examples showing Polish MNEs' efforts to acquire well-established foreign R&D divisions and other intangible assets. These are Asseco Group's acquisition of Israeli Formula Systems in 2010; BIOTON's acquisition of Singaporean Scigen in 2006, Swiss BioPartners in 2007, and Italian Fisiopharma in 2007; and PZ Cormay's acquisition of Swiss Orphee in 2010, Irish Innovation Enterprises in 2011and Italian Diesse Group in 2013. After acquiring Formula Systems, Asseco now develops its software and IT solutions in several countries, primarily Israel. In 2011, more than half of its R&D investment was made in foreign subsidiaries. BIOTON, the second company mentioned above and the largest Polish biotechnological enterprise, took over foreign businesses to obtain access to both innovative biotechnological products at advanced development stages (e.g. sustained release growth hormone) and unique know-how regarding the development of such products, along with experience in the registration processes of developed products. Through these acquisitions, it has thus accelerated its global expansion in the pharmaceutical market. Currently, BIOTON develops its innovative products in several countries such as Switzerland, Italy, Finland, China, and India. It also, however, is expanding its R&D operations at home, taking advantage of public financial support (EU funds) and highly qualified local human resources. In 2010, it launched in Poland a project aimed at creating a R&D center with capacity for development of advanced biotechnological products, particularly recombinant human insulin and orally taken anti-diabetic medicines. A similar strategy was adopted by the last of the three companies noted above, PZ Cormay, which has acquired three innovative companies, each with its own R&D activities, since 2010. Owing to its latest deal, which closed at the beginning of 2013, the company took control of a technically advanced manufacturer of analyzers and assays in the field of immunology, microbiology and ESR with experienced R&D staff and dozens of patents. Yet like BIOTON, PZ Cormay has expanded its R&D activities primarily at home. Moreover, the company is planning to focus its development of innovations in the parent company in Poland, while its foreign affiliates operating as the Orphee Group will take over all production and distribution activities.

[29] For example, Pradhan J. P., *Strategic asset-seeking activities of emerging multinationals*, "Organizations and Markets in Emerging Economies", 1 (2), 2010, p. 9-31.

Apart from those three Polish multinationals, a few other companies carried out R&D activities abroad: Comarch (Germany, Austria, Switzerland, France), PKN Orlen (the Czech Republic, Lithuania), Selena FM (Spain, Turkey, China), Koelner (the United Kingdom), and Apator and Synthos (the Czech Republic) (Annex Table 6). The size and importance of foreign R&D activities among these firms varied. For instance, due to its acquisition of the Czech Unipetrol Group, PKN Orlen, has taken control over the research unit, Polymer Institute Brno s.r.o. Through cooperation with the Institute, PKN Orlen has recently extended its market offer to a new polyethylene used in the production of insulation for cables. R&D activities also included research on the block copolymers as well as experimental production of polyethylene's black version. R&D activity in the area of monomers, such as research on the use of a new type of raw material on the POX (partial oxidation) plant, was conducted in cooperation with another Czech subsidiary (Vyzkumny ustav anorganicke chemie A.S., known as VUAnCh). At the same time, while the foreign R&D activities of Synthos and Apator are carried out by the teams of 20 employed by each in their Czech subsidiaries, their core R&D departments operated in Poland.

Patents and utility models

At the end of 2012 the surveyed Polish multinationals owned 174 patents abroad that protected about 50 inventions. All of them belonged to nine companies: PKN Orlen, Asseco, Ciech, BIOTON, Kopex, Koelner, Fasing, Kety Group and Apator (Annex Table 6). The remaining 21 companies did not have any patents abroad, but several of them registered some patents at home. Additionally, utility models were owned by four companies: Decora (in Germany), Apator (in Germany and in the Czech Republic), Fasing (in Germany), and Selena (in Turkey). It is also worth noting that the propensity of Polish companies to patent abroad has increased recently. Several dozens of applications are currently in progress in different patent offices. Kopex, which filed 10 patent applications in China in 2012, is an example. However, a few other Polish multinationals (e.g. BIOTON and PZ Cormay) chose to purchase foreign inventions that had already been protected or were under examination (pending applications).

Companies in the chemical and pharmaceutical industries as well as building materials, notably BIOTON and Koelner, have been granted the largest share of foreign patents (Annex Figure 8). Those two companies held together 65% of all patents, most of which were granted under the Patent Cooperation Treaty (PCT), which enables filing one application to protect inventions in each of the contracting states. For example, BIOTON's inventions protected on the basis of that unified procedure are ribavirin granulate for producing coated tablets and injectable pharmaceutical nimesulide solutions. Both of those patents had been granted to its foreign affiliates before BIOTON purchased them. In terms of geographical coverage, the most patents were granted in European countries such as Germany, the Czech Republic, France, Sweden and Switzerland, but also in more distant countries, including Australia, New Zealand, the United States and Japan.

Trademarks

As of December 2012, about 680 trademarks registered by Polish multinationals (including all their subsidiaries) were active in at least one foreign country. A third of them were international trademarks granted under the Madrid Protocol. The average number of valid trademarks totaled 23, but the propensity of Polish companies to protect their brands as well as the geographical scope of that protection varied greatly. The overall number of trademarks held by the top 30 ranged from 0 to 77. The only company without any trademark registered abroad was AB, whereas the most active companies in this matter were LOTOS, Selena FM, Asseco, and PKN Orlen. The geographical portfolio of these trademarks, however, differed significantly. Whereas the majority of LOTOS's trademarks were the so-called international trademarks that simultaneously cover sets of countries (some of them up to 80 countries), Selena and Asseco had registered their trademarks mostly in the national patent offices of select countries. Several companies, mostly those focused on the European market, preferred to register the so-called Community Trade Marks, or CTMs (24% of all trademarks), which apply to the single European market (to all EU countries at the same time). The largest number of trademarks (besides CTMs) had been registered in the Czech Republic, Ukraine, Russia, Belarus, Romania, Slovakia, Lithuania, Serbia, and Hungary (above 50 trademarks in each country). Outside Europe the most popular countries were China, Australia, Morocco, Australia, the United States and Egypt.

Table 3. Number of trademarks registered abroad and active by the end of 2012

Madrid Protocol		Community Trade Mark		Individual countries' PO		Total	
LOTOS	61	Synthos	24	Selena FM	66	LOTOS	77
FFiL Śnieżka	32	LPP	17	Asseco Group	54	Selena FM	76
LPP	23	Orlen	16	Ciech	31	Asseco Group	62
Decora	19	Koelner	16	Orlen	28	Orlen	57
Orlen	13	Comarch	14	BIOTON	26	LPP	41
Comarch	9	Toya	13	Comarch	16	Comarch	39
TelForceOne	7	Decora	11	Redan	16	Synthos	37
Redan	7	Redan	7	LOTOS	15	Decora	35
BIOTON	7	Apator	7	Koelner	13	BIOTON	35
Synthos	7	Grupa Kęty	6	Synthos	6	Koelner	34
Top-10	185	Top-10	131	Top-10	271	Top-10	493
Total	**225**	**Total**	**164**	**Total**	**289**	**Total**	**678**

Source: Own calculations based on data derived from WIPO and OHIM databases, available at: http://www.wipo.int/romarin, http://www.wipo.int/branddb/en/index.jsp, and http://oami.europa.eu/ows/rw/pages/QPLUS/databases/searchCTM.en.do respectively (last visited April 20, 2013).

Other FDI-innovation linkages

The number of patents, usually considered part of the pre-commercialized innovation inputs, is only one of many key indicators of innovation capabilities, and does not guarantee the commercial success of innovation. The know-how and professional knowledge of employees are other major factors impacting an enterprise's innovation, especially in services sectors. Therefore, through the rich know-how embodied in its employees, a target company without any granted or pending patents could still influence the innovation potential of the acquiring company. Most of the Polish multinationals stated that foreign expansion had a positive impact on the overall innovation of their business despite the low share of deals targeted at companies technologically more advanced than the acquiring company. Although the transfer of technology and knowledge more frequently flowed from the parent company to foreign subsidiaries than in the reverse direction, many Polish MNEs responded that they benefited from reverse spillover effects. More specifically, many companies indicated that both foreign clients and supply chain partners such as contractors and suppliers were important sources of knowledge, and the cross-border acquisitions of companies with well-developed distribution chains could facilitate knowledge transfer. Further, about half of the surveyed companies reported that FDI enabled their access to highly qualified employees in the fields they wanted to develop. Some of them also revealed the importance of new work organization systems used in foreign subsidiaries to increasing innovation in the group.

The big picture

From 2010 to 2011, the scale and character of Polish outward investment has not changed much. The revised data[30] show a significant increase in the value of FDI outflows in 2010 compared to the pre-crisis period and a very modest change in 2011. However, the preliminary data for 2012 has suggested some substantial and unexpected changes (Annex Figure 5). They indicate that the value of divestures abroad surpassed the value of investment made abroad. Such a turning point is highly incomprehensible, given the empirical observations of Polish multinationals based on the companies' statements and information from the media. Indeed, the activity of Polish multinationals in undertaking new investments weakened in 2012 and some of them abandoned their foreign operations, but not on the scale suggested by the data. We suppose that this peculiar situation is attributable to the so-called capital in transit, the phenomenon that we mentioned above in this report. Considerable involvement of special purpose entities (SPEs) in FDI flows has been reported in Poland since 2006, but it is difficult to capture or explain this phenomenon in more detail due to a lack of comprehensive data. It is worth noting that because these entities are set up solely for tax avoidance or other financing purposes, without any production or sales activities they could seriously distort the real picture of FDI and thus make its economic interpretation complicated. The problem has been partly addressed by some developed countries that publish double statistics (including and excluding SPEs), but that is not the case for Poland. Although the National Bank of Poland reports certain general figures for SPEs' share in FDI stock (Annex Figure 6), our estimations suggest that those numbers are likely underestimated.[31]

Additionally, there is no reference to capital in transit in more detailed statistics on FDI, which makes geographical and industrial analyses particularly difficult. Data on FDI stock show a strong predominance of the EU countries as the recipients of Polish investment abroad. Their share in total FDI stock from Poland reached 75% at the end of 2011. This geographical pattern,

[30] If not stated otherwise, data on FDI flow and stock come from statistics published by the National Bank of Poland, available at: http://nbp.pl/home.aspx?f=/publikacje/raporty_i_analizy.html (last visited April 24, 2013).

[31] At the end of 2010, the value of assets located by Polish entities in countries hosting a large number of SPEs, that is Cyprus, Luxemburg, the Netherlands, and Switzerland, exceeded PLN 17 billion, whereas the total value of SPEs' assets abroad reported by the NBP accounted for PLN 11 billion. Among different arguments that enable to classify outward investment in countries mentioned above as purely financial undertakings, the most convincing one seems to be data on number of workers employed in foreign affiliates of Polish MNEs. While the share of those four countries in outward FDI exceeded 30% in 2010, Polish affiliates established in those countries employed only 0.2% of all workers abroad. Additionally, a lion's share of outward FDI located in other countries (the UK is the best example) might be also associated with SPEs' activities. However, it is difficult to provide precise figures on this because Polish MNEs in such locations also conducted a substantial number of traditional FDI projects. The calculations are based on data from the National Bank of Poland and the Central Statistical Office, available at: http://www.nbp.pl/home.aspx?f=/publikacje/pib/pib.html and http://www.stat.gov.pl/cps/rde/xbcr/gus/pgwf_dzialalnosc_podm_posiad_udzialy_2010.pdf (each site last visited April 20, 2013).

however, is not confirmed by the numbers on foreign affiliates and employees abroad. By the end of 2010, the EU accounted for about 60% of Polish MNEs' foreign affiliates and 42% of their employment abroad (Annex Figure 7). The discrepancy between the value of foreign assets and the number of employees held abroad is caused primarily by the capital in transit. A few EU countries on the list of the top recipients of FDI from Poland are reputed to be home to a large number of SPEs, mainly: Cyprus, Luxembourg, Belgium, the Netherlands and the UK. There are no FDI projects in the traditional meaning behind those numbers. Data on employment[32] suggest that the most popular destinations for actual FDI projects were Germany and the Czech Republic inside the EU as well as Russia and Ukraine outside the EU. The United States clearly dominates among the more distant locations, but some Asian countries such as China, India and UAE are becoming increasingly important.

Slightly more than half of Polish investment abroad was in the services sector (53% at the end of 2011), 35% in manufacturing and only 2% in agriculture and exploration of natural resources put together (Annex Table 7). The rest, that is 10%, has not been assigned to any industry. The FDI in services was dominated by financial intermediation and professional, scientific and technical services considered to be knowledge-intensive services. That is a rather unexpected result because not many Polish companies provided such services abroad. An analysis of more detailed statistics on those services (a high share in total OFDI of such items as activities of head offices, holding companies and management consultancy) suggests that it might be associated again with SPE activities. When it comes to manufacturing, almost a third of OFDI went to medium-high or high technology industries such as the automotive sector, chemicals (including pharmaceuticals), communication equipment and consumer electronics. Investment in low technology manufacturing was well distributed between coke and petroleum products, food and beverage, metals and metal products, and rubber and plastic products.

In regard to the state policies for outward FDI, we observe an evolution that can be divided into three distinct phases. The first phase, which lasted until 1989, was characterised by very strict regulations imposed on trans-border transactions and other adverse political circumstances that resulted in the closure of Poland to the international transfer of capital. In the second phase, which covered the following 20 years, state policy could be described as neutral – no incentives, no obstacles. This hands-off approach was to some extent comprehensible, particularly at the beginning of the process of transition to a market economy, since Polish companies did not have any capital accumulated or other ownership advantages allowing them to enter foreign markets in the form of FDI. The third phase began in 2010, as a significant change in the government's approach has been observed since then. To promote outward FDI, the Polish government has started to engage in their diplomatic visits abroad a wide range of Polish business representatives that are already present abroad or are planning to expand to foreign markets, particularly to potential markets that are geographically and culturally distant.

[32] The Central Statistical Office, *Działalność podmiotów posiadających udziały w podmiotach z siedzibą za granicą w 2010 roku [The activities of entities holding stakes in companies located abroad in 2010]*, (April 30, 2012), available at: http://www.stat.gov.pl/cps/rde/xbcr/gus/pgwf_dzialalnosc_podm_posiad_udzialy_2010.pdf (last visited April 25, 2013).

Besides the “Go China” program that we described in our previous report, the government has recently launched a “Go Africa” initiative aimed at strengthening business relations with the African emerging markets such as Angola, Kenya, Mozambique, Nigeria, and South Africa. The portal www.goafrica.gov.pl is to be the key tool for Polish firms to gather knowledge about African markets.

Further, in 2013, the Ministry of Economy along with other agencies launched a new project called “Global Company – The Strategy to Promote Exports and Foreign Expansion of Polish Companies”.[33] The main objective of the program is to provide a platform for discussion and exchange of experiences between companies already familiar with overseas operations, newcomers to foreign markets and companies operating domestically but of high potential to expand globally. Future reports will cover the impacts of these new policies and initiatives.

[33] For more information on the program see http://global.mttp.pl/

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Emerging Markets Global Players Project

This report on Polish multinationals was prepared in the framework of the Emerging Markets Global Players (EMGP) Project, an international collaborative effort led by the Vale Columbia Center on Sustainable International Investment. It brings together researchers on FDI from leading institutions in emerging markets to generate annual reports on the leading multinationals in each participating country. Since 2007, reports have been published on 14 countries: Argentina, Brazil, Chile, China, Hungary, India, Israel, Republic of Korea, Mexico, Poland, Russia, Slovenia, Taiwan and Turkey. For further information, visit: http://www.vcc.columbia.edu/content/emerging- market-global-players-project.

Institute for Market, Consumption and Business Cycles Research

The Institute for Market, Consumption and Business Cycles Research is a leading economic research institute located in Warsaw. Its research focuses on global economic trends, along with their implications for the Polish economy; sectoral analyses and forecasts; and the development of multilateral and regional integration processes, with special attention to integration within the European Union and its consequences for Poland. The Institute's research areas also include FDI and the internationalization of Polish enterprises. Since 1990, the Institute has been publishing annual reports on inward FDI in Poland and, since 2006, also reports on Poland's outward investment. The Institute provides analyses and recommendations to the Polish

Government, government agencies as well as companies and their associations. Since March 2013, the Institute has participated in the initiative “Global Company – The Strategy to Promote Exports and Foreign Expansion of Polish Companies”. For more information on the Institute’s activities and publications, visit: http://www.ibrkk.pl.

Vale Columbia Center on Sustainable International Investment

The Vale Columbia Center on Sustainable International Investment (VCC), a joint center of Columbia Law School and the Earth Institute at Columbia University, is a leading forum for discussion by scholars, policy makers, development advocates, practitioners, and other stakeholders of issues related to FDI in the global economy, paying special attention to the impact of this investment on sustainable development. The VCC bridges education, scholarship and practice in the field of sustainable investment. Its objectives are to analyze important topical policy-oriented issues related to investment and to develop and disseminate practical approaches and solutions to promote development outcomes. For more information, visit http://www.vcc.columbia.edu.

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Annex Table 1. Poland: The top 30 multinationals: Key variables, 2011 (US$ million[a] and number of employees)

Rank by foreign assets	Company	Assets		Sales		Employment		TNI[c] (%)	No. of foreign affiliates	No. of host countries
		Foreign	Total	Foreign	Total	Foreign	Total			
1	PKN Orlen	5,977	17,186	16,112	31,302	6,965	22,380	43	34	9
2	PGNiG	1,559	11,109	41	6,731	852	32,783	6	30	20
3	Asseco Group	1,424	2,775	997	1,451	10,280	14,496	64	161	35
4	Synthos	800	1,371	786	1,592	839	2,150	49	7	2
5	LOTOS	785	5,976	176	8,562	124	5,070	6	15	4
6	Ciech	432	1,190	769	1,222	1,330	5,808	41	14	9
7	BIOTON	287	592	50	85	n.a.	997	(54)	22	14
8	Polimex-Mostostal	169	1,320	392	1,412	n.a.	14,290	(20)	8	6
9	Kopex	153	1,108	201	622	854	5,606	20	21	9
10	Koelner	132	220	71	194	605	1,986	43	25	17
11	Selena FM	110	216	204	299	699	1,620	54	23	17
12	AB	101	319	505	1,271	370	704	41	6	2
13	KGHM Polska Miedź	96	8,941	1	6,469	5	31,183	0	6	5
14	Cognor (former Złomrex)	82	286	158	453	n.a.	1,468	(32)	2	2
15	Ferro	81	102	41	76	488	607	71	3	3
16	Comarch	71	299	87	230	454	3,446	25	35	18
17	PZ Cormay	28	47	23	26	46	176	57	4	4
18	Decora	24	82	48	88	n.a.	710	(42)	10	10
19	Grupa Kęty	23	452	136	436	80	3,200	13	10	8
20	Fasing	20	63	23	56	157	547	34	3	3
21	LPP	18	472	192	729	n.a.	5,000	(15)	16	12
22	Wielton	16	107	44	145	n.a.	1,008	(22)	2	2
23	Apator	10	139	21	157	240	1,923	11	5	4
24	TOYA	9	47	14	62	92	293	24	2	2
25	TelForceOne	5	41	11	33	n.a.	194	(22)	2	2
26	FFiL Śnieżka	5	104	54	161	n.a.	1,053	(19)	4	3
27	Redan	4	55	6	104	n.a.	2,318	(6)	4	3
28	Relpol	4	25	11	33	257	729	27	7	6
29	Aplisens	4	31	6	20	34	291	18	7	6
30	Bakalland	2	75	2	81	n.a.	343	(2)	3	2
Total (average for TNI)		**12,429**	**54,750**	**21,183**	**64,104**	**24,771**	**162,379**	**29**	**491**	**66**

Source: IBRKK-VCC research on leading Polish multinationals, 2012.

[a] The exchange rate used is the rate reported by the IMF as of December 31, 2011: US$ 1 = PLN 3.4174.

[b] Data on foreign sales are not fully comparable and should be interpreted with caution because, as noted in footnote 2 in the main report, for some companies, foreign sales include exports.

[c] The Transnationality Index (TNI) is calculated as the average of the following three ratios: foreign assets to total assets, foreign sales to total sales, and foreign employment to total employment. It is expressed as a percentage. The TNI for ten firms is calculated without foreign employment data and shown in parentheses.

Annex Table 2. Poland: The top 30 multinationals, Regionality Index[a] (%), 2011

Rank	Company	Other Europe	Eastern Europe & Central Asia	Middle East & North Africa	East Asia & the Pacific	North America	South Asia	Latin America & the Caribbean	Developed Asia-Pacific	Sub-Saharan Africa	No. of foreign affiliates
1	PKN Orlen	100									34
2	PGNiG	33	10	33	7		13			3	30
3	Asseco Group	40	1	50		6	1		1	1	161
4	Synthos	100									7
5	LOTOS	100									15
6	Ciech	86			7			7			14
7	BIOTON	50	9	5	18		14		5		22
8	Polimex-Mostostal	63	38								8
9	Kopex	38	19		24				14	5	21
10	Koelner	68	24	8							25
11	Selena FM	48	22		17	9		4			23
12	AB	100									6
13	KGHM Polska Miedź	67			17	17					6
14	Złomrex	100									2
15	Ferro	67			33						3
16	Comarch	74	9	3	6	6		3			35
17	TelForceOne	100									2
18	PZ Cormay	50	50								4
19	Decora	70	30								10
20	Grupa Kęty	50	40	10							10
21	Fasing	33	33		33						3
22	LPP	75	19	6							16
23	Wielton		100								2
24	Apator	40	60								5
25	TOYA	50			50						2
26	Śnieżka	25	75								4
27	Redan	25	75								4
28	Relpol	43	57								7
29	Aplisens	43	57								7
30	Bakalland	33	67								3
Average		**56**	**12**	**20**	**4**	**3**	**2**	**1**	**1**	**1**	**491**

Source: IBRKK-VCC research on leading Polish multinationals, 2012.

[a] The Regionality Index is calculated by dividing the number of the firm's foreign affiliates in a particular region of the world by its total number of foreign affiliates and multiplying the result by 100.

Annex Table 3. Poland: The top 30 multinationals: Stock exchange listings, 2011

Rank	Company's name	Domestic	Foreign
1	PKN Orlen	Warsaw	none
2	PGNiG	Warsaw	none
3	Asseco Poland	Warsaw	Tel Aviv Stock Exchange (TASE), NASDAQ Global Market
4	Synthos	Warsaw	none
5	LOTOS	Warsaw	none
6	Ciech	Warsaw	none
7	BIOTON	Warsaw	Australian Securities Exchange (ASX)
8	Polimex-Mostostal	Warsaw	none
9	Kopex	Warsaw	none
10	Koelner	Warsaw	none
11	Selena FM	Warsaw	none
12	AB	Warsaw	none
13	KGHM Polska Miedź	Warsaw	London (LME), Shanghai (SHFE), New York (NYMEX)
14	Cognor (former Złomrex)	Warsaw	Luxembourg Stock Exchange
15	Ferro	Warsaw	none
16	Comarch	Warsaw	Frankfurt (FSE)
17	PZ Cormay	Warsaw	none
18	Decora	Warsaw	none
19	Grupa Kęty	Warsaw	none
20	Fasing	Warsaw	none
21	LPP	Warsaw	none
22	Wielton	Warsaw	none
23	Apator	Warsaw	none
24	TOYA	Warsaw	none
25	TelForceOne	Warsaw	none
26	FFiL Śnieżka	Warsaw	none
27	Redan	Warsaw	none
28	Relpol	Warsaw	none
29	Aplisens	Warsaw	none
30	Bakalland	Warsaw	none

***Source*:** IBRKK-VCC research on leading Polish multinationals, 2012.
[a] These Polish multinationals are not listed directly on foreign exchanges, but through their subsidiaries.
[b] These are futures rather than stock exchanges.

Annex Table 4. Poland: Top 10 outward M&A transactions, 2010-February 2013 (US$ million)

Effective Date	Acquirer's name	Target firm's name	Target industry	Target country	% of shares acquired	Value of transaction
03/05/2012	KGHM Polska Miedź[a]	Quadra FNX Mining Ltd.	Exploration of natural resources (metals)	Canada	100.0	2,840
07/05/2011	Trakcja Polska	Tiltra Group AB	Engineering construction	Lithuania	100.0	278.5
09/20/2011	Polpharma	Chimpharm	Pharmacy	Kazakhstan	>50	155.0
11/25/2010	Asseco Poland[a]	Formula Systems Ltd.	Software and IT services	Israel	51.19	145.3
04/08/2011	Ferro[a]	NOVASERVIS a.s.	Sanitary and installation equipment	Czech Republic	100.0	69.5
01/12/2010	LOTOS SA (through its affiliate – LOTOS Petrobaltic)[a]	AB Geonafta	Exploration and extraction of natural resources (oil)	Lithuania	59.4	59.9
02/15/2013	PZ Cormay[a]	Diesse Diagnostica Senese	Medical Diagnostics	Italy	50.0	20.0
04/19/2011	Asseco Poland[a]	Necomplus, S.L.	Software and IT services	Spain	65.0	10.9
03/02/2011	Asseco Poland[a]	GLOBENET Zrt.	Software and IT services	Hungary	60.0	10.4
07/20/2011	Pelion (former Polska Grupa Farmaceutyczna)	UAB Saulegrazu Vaistine	Pharmacy	Lithuania	100.0	6.0
Total						**3,596**

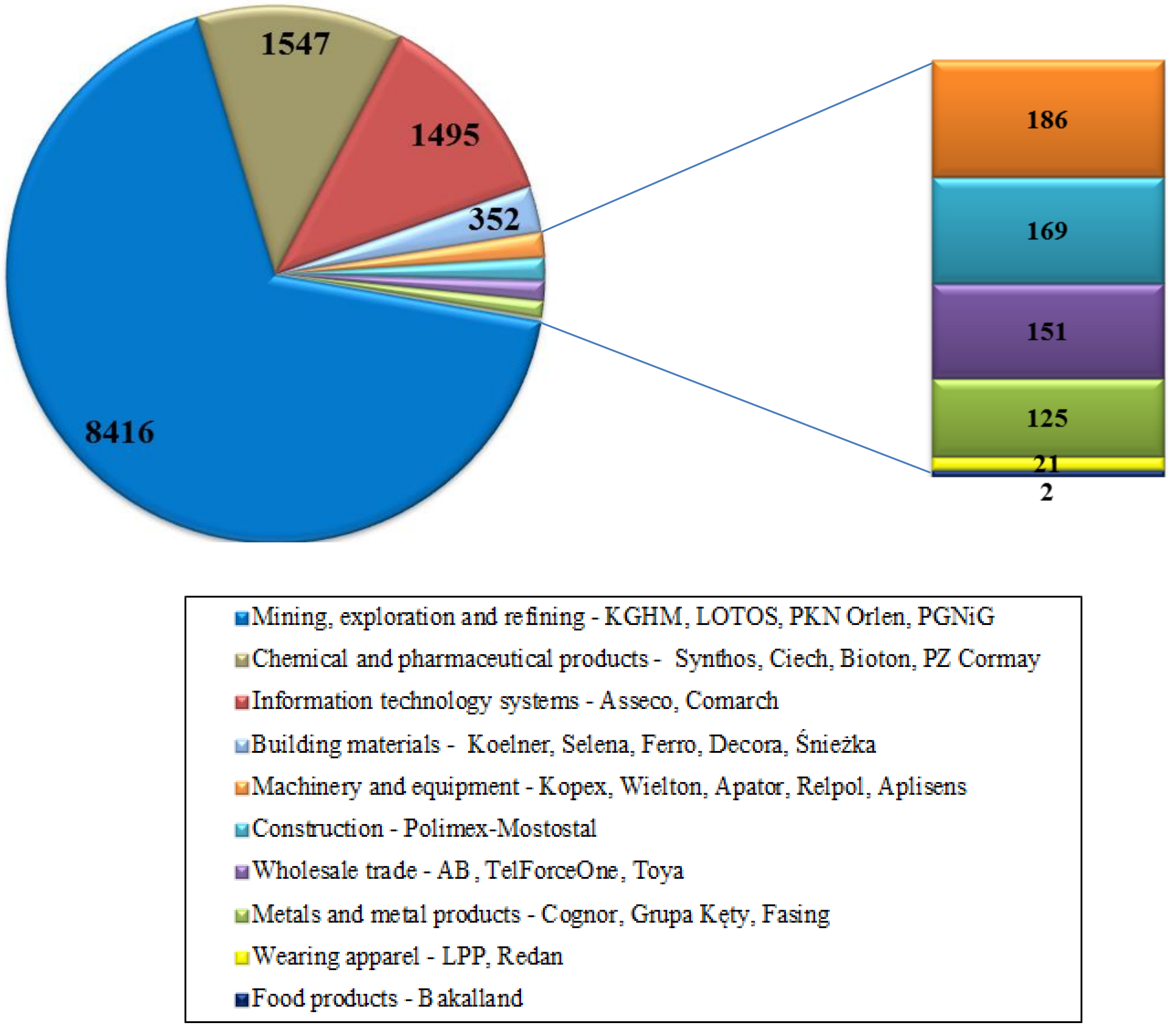
Source: Drawing on company websites and articles published in the media.
[a] These companies are ranked in the list of the top 30 non-financial outward investors.
[b] As a result, LOTOS became the owner of 100% of shares in AB Geonafta.

Annex Table 5. Poland: The top 10 outward greenfield transactions, announced, 2010-February 2013 (US$ million)

Announcement Date	Company	Destination	Industry	Value of transaction
May-10	KGHM Polska Miedź[a]	Canada	Extraction of natural resources (copper)	535.0
Feb-11	Can-Pack Group	Finland	Metals	100
Oct-12	Boryszew	Russia	Automotive components	20
Feb-10	Comarch[a]	France	Software and IT services	7-10
Sep-11	Spółdzielnia Mleczarska Mlekovita	China	Food & beverage	5.3-7
Feb-10	Comarch[a]	Germany	Software and IT services	n.a.
Nov-12	Can-Pack Group	UAE	Metals	n.a.
Nov-12	Can-Pack Group	Philippines	Metals	n.a.
Oct-11	Konspol	China	Food & beverage	n.a.
Nov-11	Konspol	Indonesia	Food & beverage	n.a.
Total				**670.0**

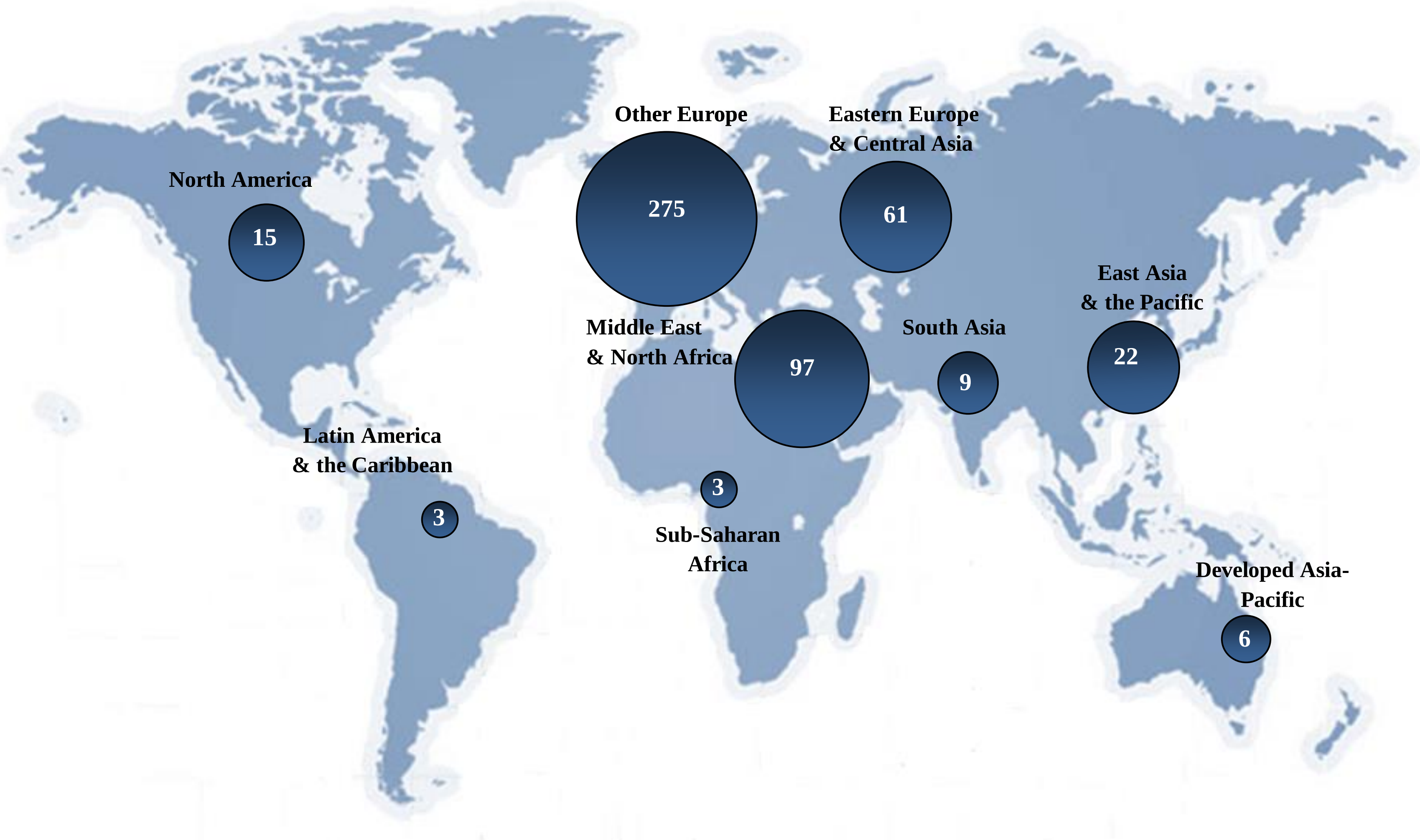
Source*:* Adapted from company websites and information published in the media.
[a] These companies are ranked in the list of the top 30 non-financial outward investors.

Annex Figure 1. Poland: Breakdown of the foreign assets of the top 30 multinationals, by main industry, 2011



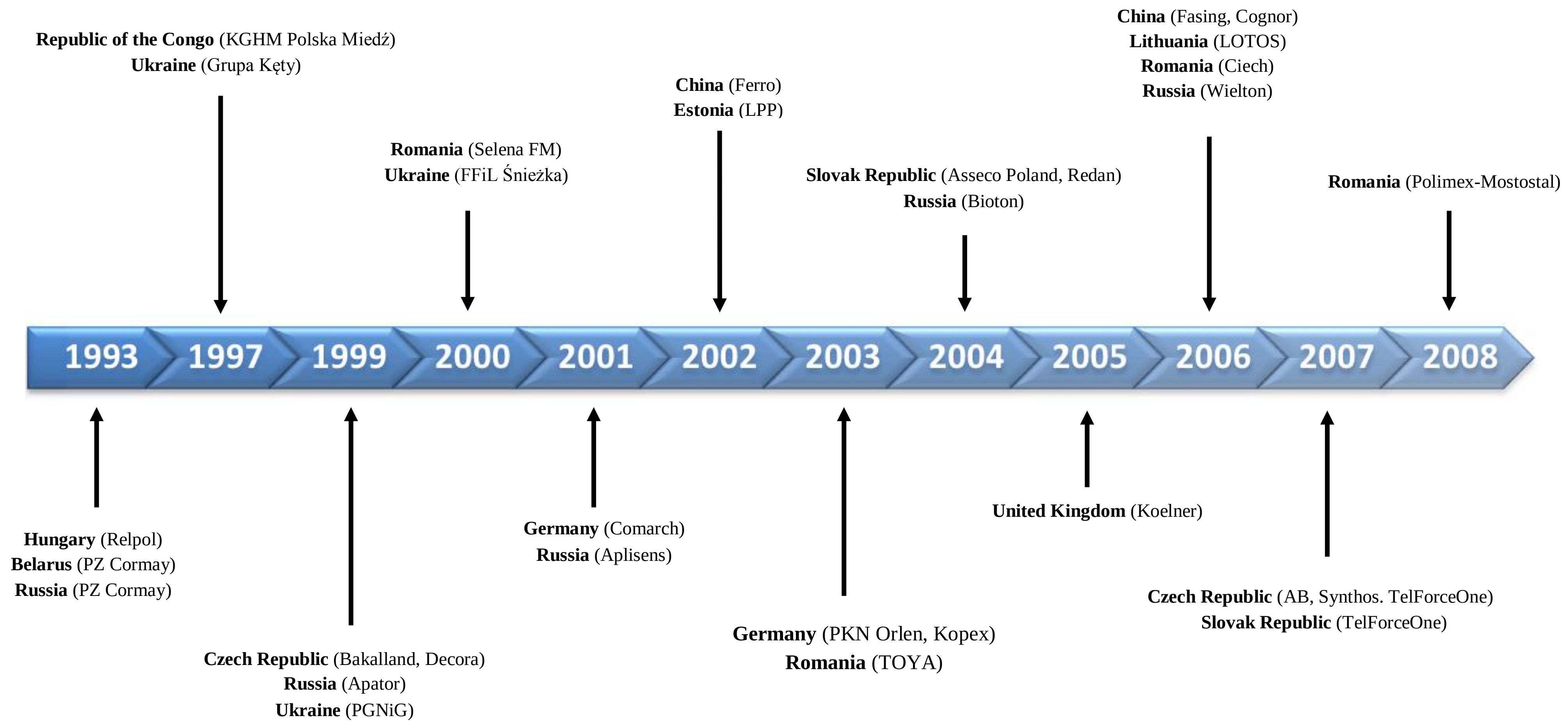
Source: IBRKK-VCC research on leading Polish multinationals, 2012.

Annex Figure 2. Poland: Foreign affiliates of the top 30 multinationals by region, 2011 (number of affiliates)



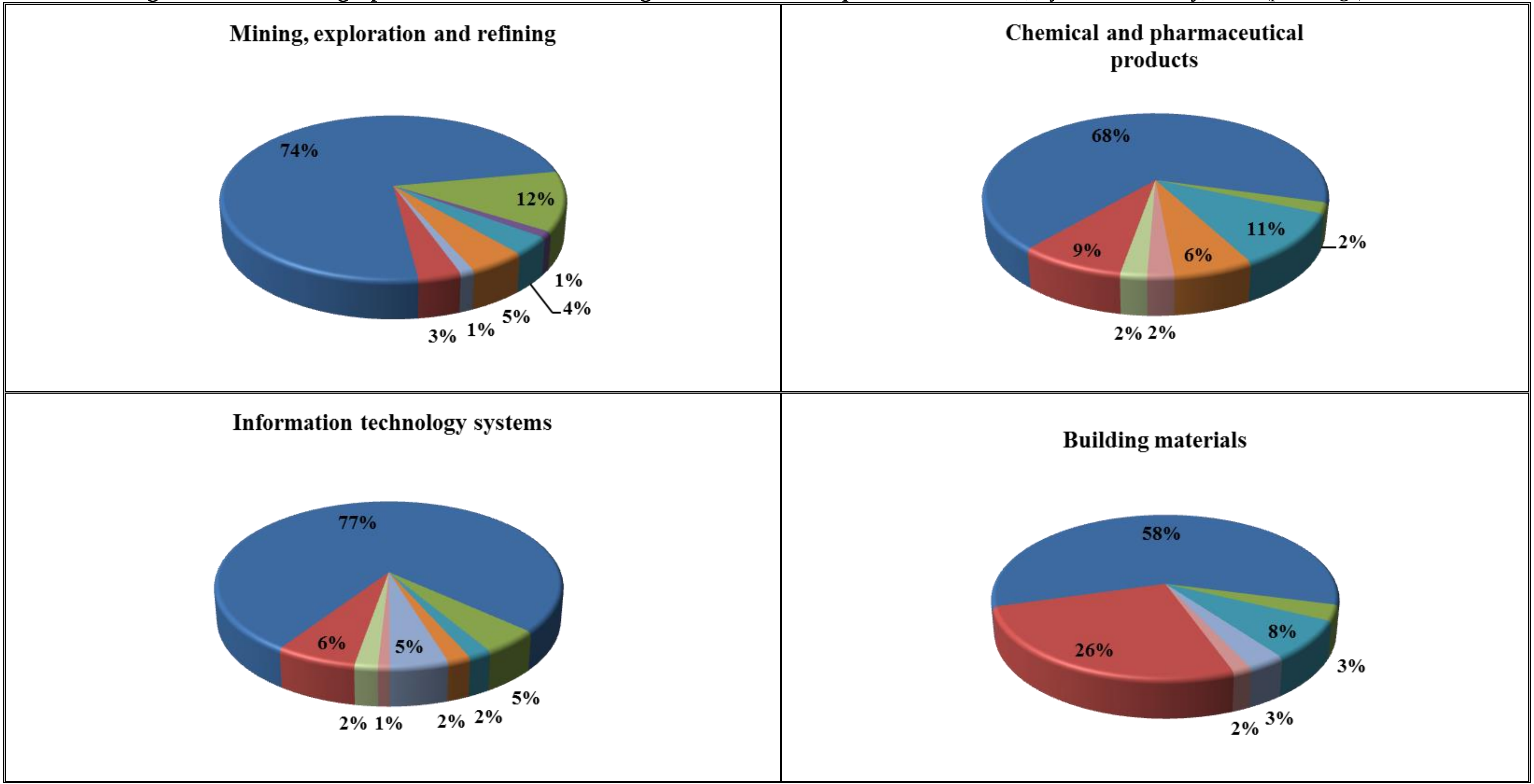
Source: IBRKK-VCC research on leading Polish multinationals, 2012.

Annex Figure 2a. Poland: Timeline tracking the opening of the first foreign affiliate by each of the listed companies

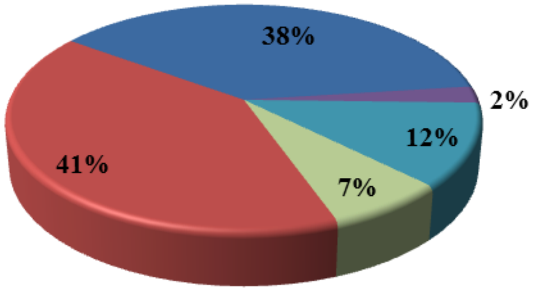


Source: IBRKK-VCC research on leading Polish multinationals, 2012.

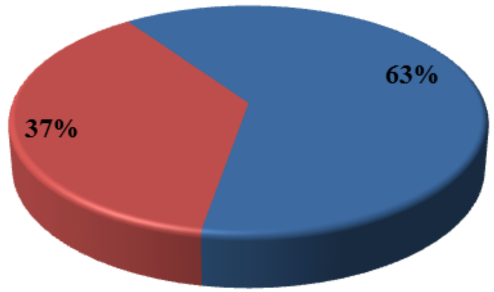
Annex Figure 3. Poland: Geographic distribution of the foreign affiliates[a] of the top 30 multinationals, by main industry, 2011 (percentage)



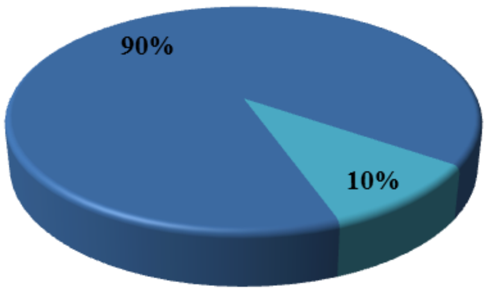
Machinery and equipment



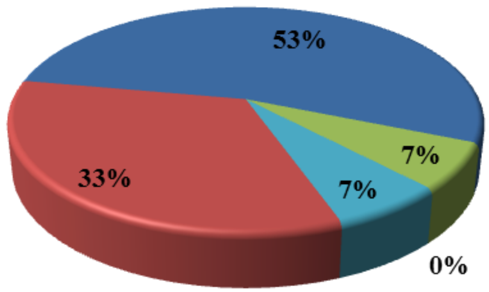
Construction

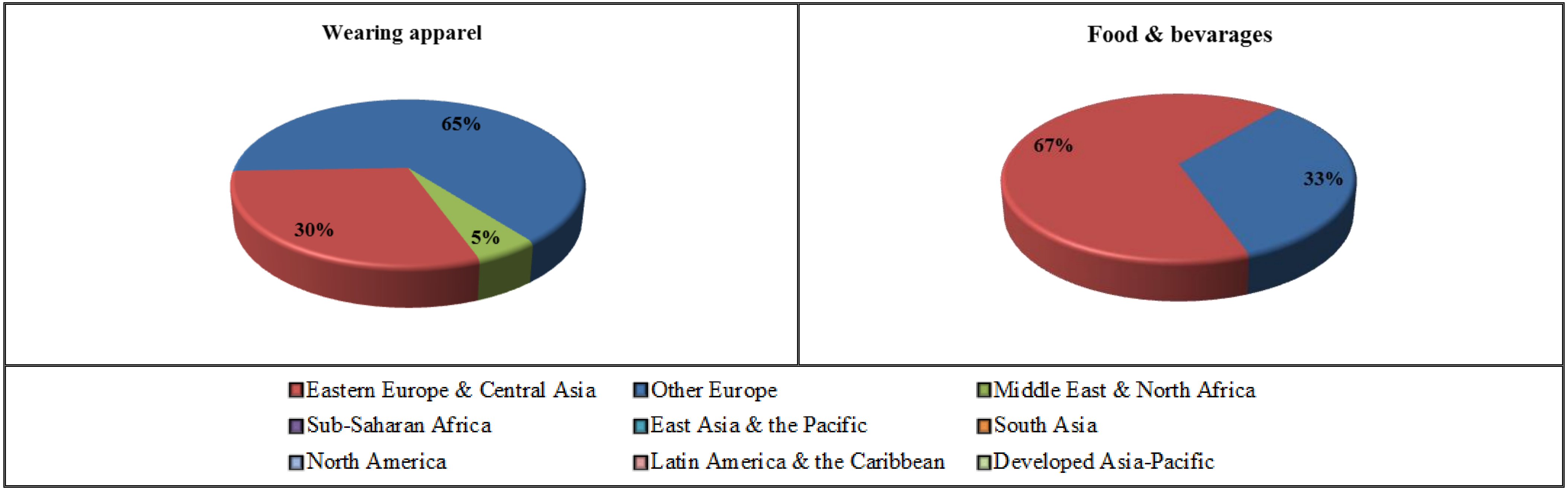


Wholesale trade



Metals and metal products





Source: IBRKK-VCC research on leading Polish multinationals, 2012.

Annex Table 6. R&D expenditure and patents of the top 30 multinationals

Company	R&D spending in 2011, US$ thousand	R&D intensity (R&D as a % of sales)	R&D activities abroad	International patents in force, 2012	TNI
Asseco Group[a]	~48,000	2.51	Israel, Germany, Slovakia, Spain, Balkans	1	64
Comarch	30,223	13.15	Germany, Austria, Switzerland, France	0	25
Kopex	18,984	3.05		4	20
KGHM Polska Miedź	13,027	0.20		0	0.4
PKN Orlen	10,255	0.03	Czech Republic, Lithuania	14	43
PGNiG	9,541	0.14		0	6
PZ Cormay	3,336	12.66	Ireland, Italy[c]	0	57
Ciech	3,088	0.25		6	41
LOTOS	2,874	0.03		0	6
Relpol[b]	2,836	8.57		0	27
Synthos[b]	2,650	0.17	Czech Republic	0	49
BIOTON	2,447	2.89	Finland, Italy, Switzerland, China, India	59	54
Selena FM	2,042	0.68	Spain, Turkey, China	0	54
Apator	1,482	0.94	Czech Republic	21	11
Koelner	1,328	0.69	United Kingdom	56	43
Cognor	1,051	0.23		0	32
Wielton	978	0.67		0	22
Grupa Kęty	503	0.12		6	13
Aplisens	313	1.55		0	18
Polimex-Mostostal	105	0.01		0	20
FFiL Śnieżka	61	0.04		0	19
Fasing	37	0.07		7	34

TOYA	28	0.04		0	24
AB	0	-		0	41
Ferro	0	-		0	71
Decora	0	-		0	42
LPP	0	-		0	15
TelForceOne	0	-		0	22
Redan	0	-		0	6
Bakalland	0	-		0	2
Total / Average	**155,189**	**2.1**		**174**	**29**

Source: Own calculations based on data derived from WIPO, EPO, the 2012 survey of Polish multinationals, companies' annual reports, and media sources.

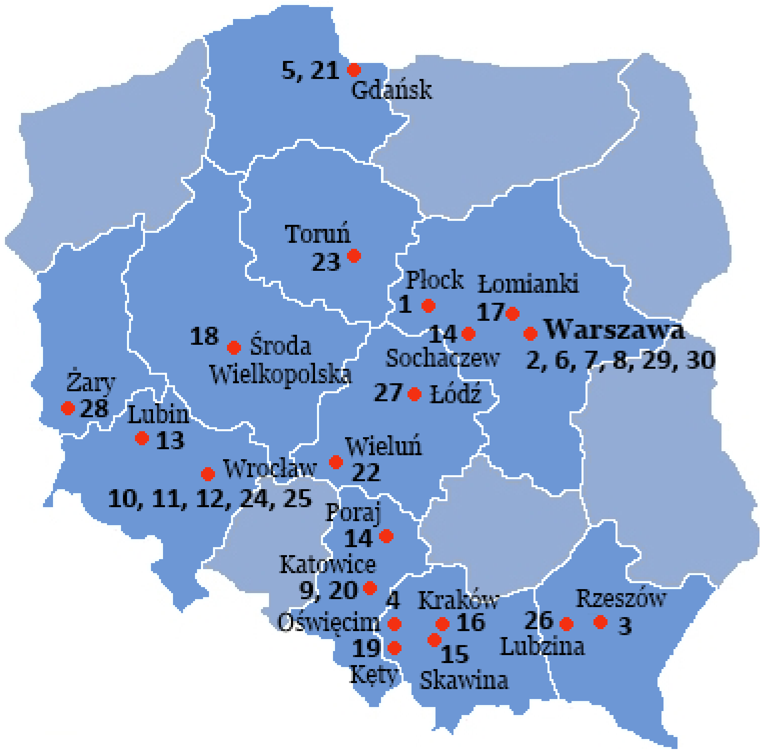
[a] Our estimates.

[b] In the case of Relpol and Synthos, data on R&D expenditure are provided for 2012.

[c] From 2013 after the acquisition of Diesse Group.

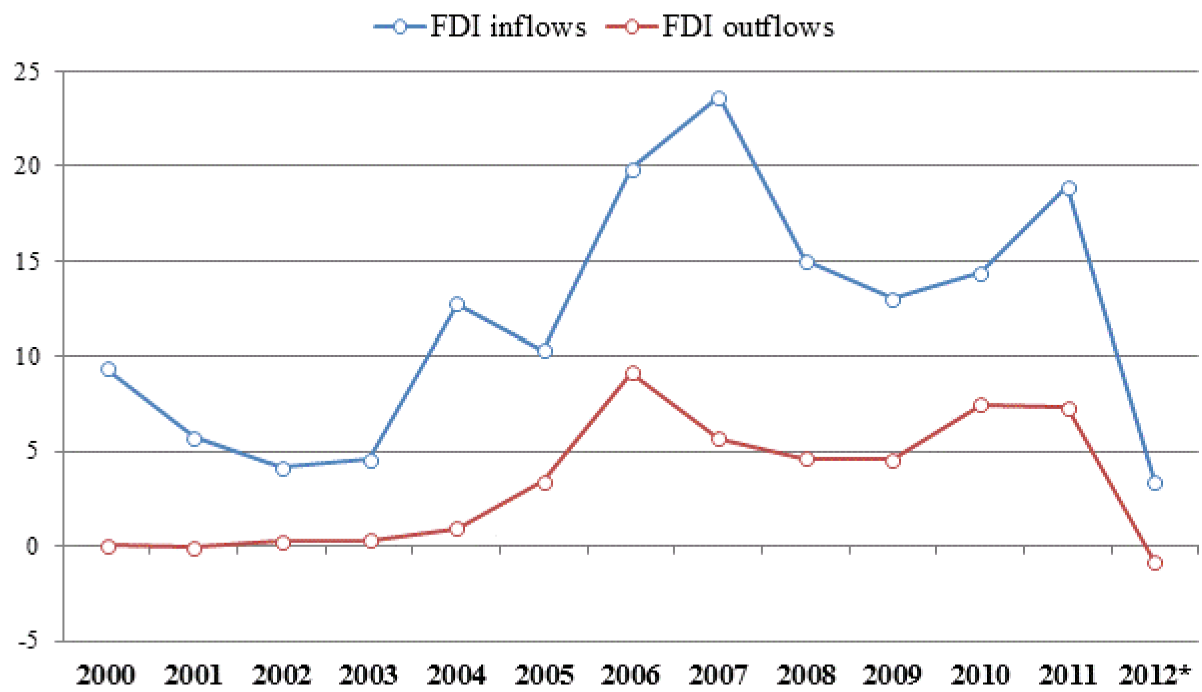
Annex Figure 4. Poland: Head office locations of the top 30 multinationals, 2011

1	PKN Orlen	Płock
2	PGNiG	Warszawa
3	Asseco Poland	Rzeszów
4	Synthos	Oświęcim
5	LOTOS	Gdańsk
6	Ciech	Warszawa
7	BIOTON	Warszawa
8	Polimex-Mostostal	Warszawa
9	Kopex	Katowice
10	Koelner	Wrocław
11	Selena FM	Wrocław
12	AB	Wrocław
13	KGHM Polska Miedź	Lubin
14	Cognor	Poraj
15	Ferro	Skawina
16	Comarch	Kraków
17	PZ Cormay	Łomianki
18	Decora	Środa Wielkopolska
19	Grupa Kęty	Kęty
20	Fasing	Katowice
21	LPP	Gdańsk
22	Wielton	Wieluń
23	Apator	Toruń
24	TOYA	Wrocław
25	TelForceOne	Wrocław
26	FFiL Śnieżka	Lubzina
27	Redan	Łódź
28	Relpol	Żary
29	Aplisens	Warszawa
30	Bakalland	Warszawa



Source: IBRKK-VCC research on leading Polish multinationals, 2012.

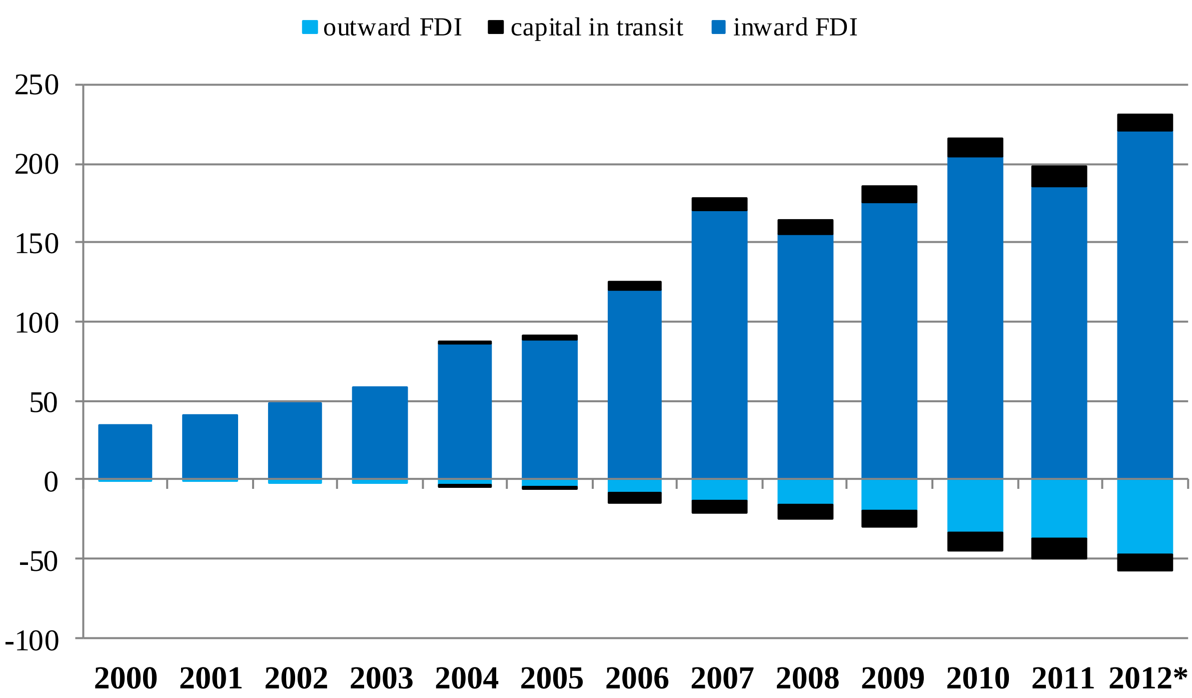
Annex Figure 5. Poland: FDI inflows and outflows, 2000-2012 (US$ billion)



*Preliminary data.

Source: Adapted from the reports of the National Bank of Poland (NBP).

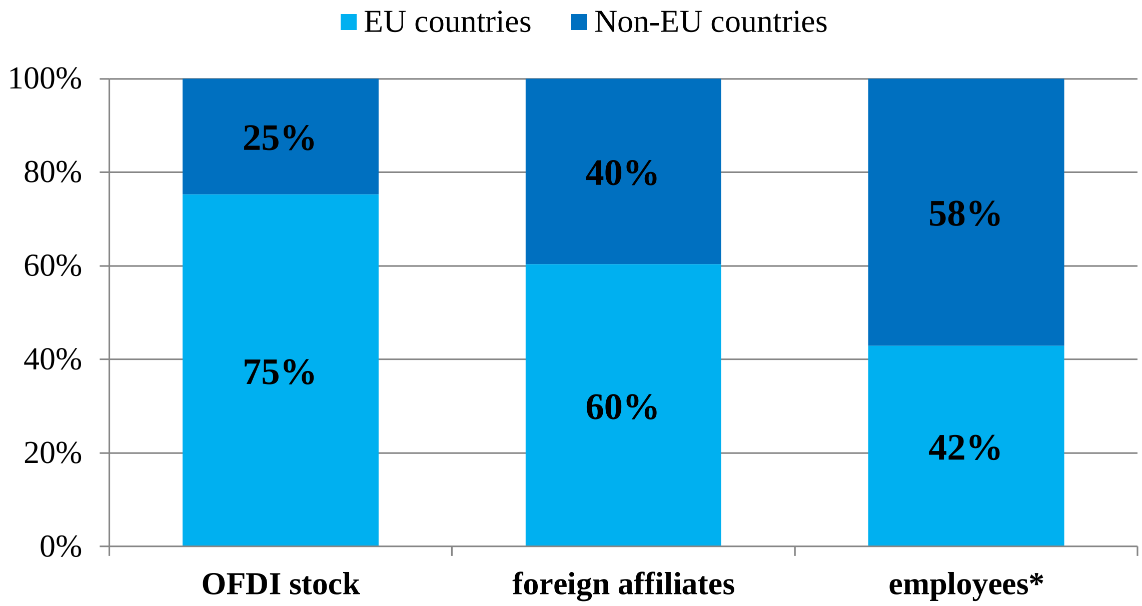
Annex Figure 6. Poland: Inward and outward FDI stock, 2000-2012 (US$ billion)



*Preliminary data.

Source: Adapted from the reports of the National Bank of Poland (NBP).

Annex Figure 7. Geographic distribution of Polish investment abroad in terms of value of assets, number of foreign affiliates and number of employees, 2010



* Due to a lack of official figures on employees for a few of the EU countries, they have been estimated by the authors.

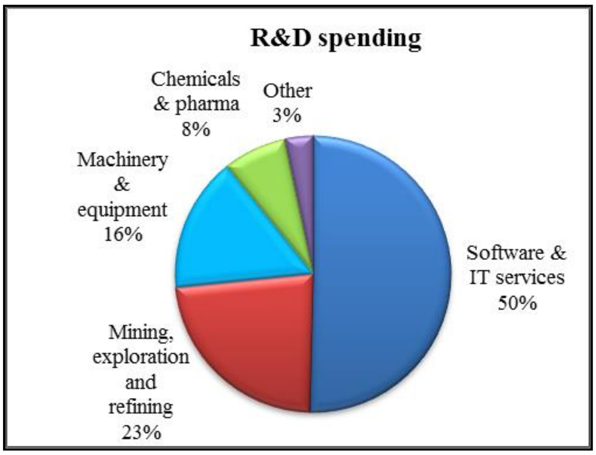
Source: The authors' calculations based on data from the National Bank of Poland and the Central Statistical Office, available at:
http://www.nbp.pl/home.aspx?f=/publikacje/pib/pib.html and
http://www.stat.gov.pl/cps/rde/xbcr/gus/pgwf_dzialalnosc_podm_posiad_udzialy_2010.pdf (each site last visited April 20, 2013).

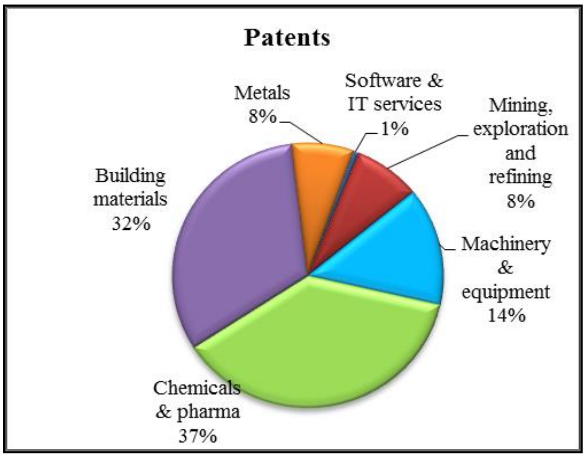
Annex Table 7. Polish outward FDI stock by technology- and knowledge-intensity, 2011

Specification	**Value in US$ million**	**Share in %**
Agriculture and mining	**908**	**2**
Manufacturing	**17,200**	**35**
medium low and low-technology manufacturing	9,763	20
medium high and high-technology manufacturing	5,589	11
other manufacturing	1,849	4
Services	**26,482**	**53**
less knowledge-intensive services	9,132	18
knowledge-intensive services	17,350	35
Others	**5,066**	**10**
Total	**49,657**	**100**

Source: The authors' calculations based on data from the National Bank of Poland, available at: http://www.nbp.pl/home.aspx?f=/publikacje/pib/pib.html (last visited April 20, 2013).

Annex Figure 8. R&D spending (2011) carried out and active patents (2012) granted abroad





Source: Own calculations based on data derived from WIPO, EPO, companies' annual reports, the 2012 survey of Polish MNEs, and media sources.

Annex II. Brief company profiles (in order of ranking)

No.1. Polski Koncern Naftowy Orlen
http://www.orlen.pl/EN/

The company was established as a national petroleum company (Polski Koncern Naftowy, PKN) in 1998 by a merger of two Polish oil refineries - *Centrala Produktów Naftowych CPN S.A.* and *Petrochemia Płock S.A*. In 2000, PKN adopted a new trade name – ORLEN, under which it is recognized nowadays outside the country. Its first step toward foreign expansion was buying petrol stations in Germany from BP. Since acquiring a controlling stake in Lithuanian Mažeikių Nafta (2006), it has become the largest petroleum group in Central Europe with major operations in Poland, the Czech Republic, Germany, and the Baltic States. In 2011, it was ranked first in the list of the 500 largest companies in Central and Eastern Europe published by Deloitte and 347th in the Fortune Global 500 in terms of revenue value.

No.2. Polskie Górnictwo Naftowe i Gazownictwo
http://www.pgnig.pl/

PGNiG was established in 1982 as a state-owned enterprise. In 1996, PGNiG was transformed into a joint-stock company with the State Treasury holding 100% of the shares. Since 2004 it has been listed on the WSE. The state still owns 72.48% shares but further privatization is in progress. The PGNiG Group, a leader In the domestic market, is the only vertically integrated company in the Polish gas sector. The enterprise's activity covers not only natural gas and crude oil exploration and production but also trade in, storage and distribution of natural gas to individual and industrial customers. The PGNiG Group includes PGNiG SA as the parent company, and more than a dozen production and service companies operating domestically and internationally - in Denmark, Egypt, Kazakhstan, Norway and Pakistan.

No.3. Asseco Group
http://www.asseco.pl/en

Asseco Poland was established in 1991 as COMP Ltd Sp. At first, it was engaged mainly in the production of software for cooperative banks, and later expanded operations to the banking and financial sector, insurance institutions, public administration and industry. In 2004, the company debuted on the WSE. After the acquisition of Slovak ASSET Soft a.s., it was renamed Asseco Poland SA. Having achieved the leading position in Poland, the company is continuing to build IT holdings that operate across Europe – from Spain and Portugal to Scandinavia and the Baltic states. At present, Asseco is the largest IT company listed on the WSE and a major software producer in Europe.

No.4. Synthos
http://www.synthosgroup.com/

Founded in 1946 as *Fabryka Paliw Syntetycznych w Dworach* (Factory of Synthetic Fuels in Dwory, Poland), the company is one of the largest Polish chemical companies. It was privatized in the 1990s and renamed *Firma Chemiczna Dwory S.A.* (Chemical Factory Dwory SA). In 2004, the company successfully debuted on the WSE. After the acquisition of the Czech firm Kaucuk Kralupy a.s., Dwory changed its name to Synthos SA. So far, the company has established its foreign plants only in the Czech Republic, where it employs almost 50% of its workers. The Group concentrates on manufacturing three types of products: rubber and synthetic latex, styrene plastics, and vinyl and copolymer dispersions. It is the largest manufacturer of rubber emulsions and the third largest manufacturer of polystyrene for foaming applications in Europe.

No.5. LOTOS
http://www.lotos.pl/en/

The LOTOS Group was founded in 2003 as a consequence of the government's move to merge the Gdańsk Refinery with Petrobaltic, extracting oil from the Baltic Sea, and the local refineries from southern Poland. The company debuted on the stock market in 2005. Over 53% of its shares are owned by the state and the remaining shares are in free float on the WSE. The LOTOS Group is the second largest oil company in Poland, exploiting, processing and distributing oil-based products such as lead-free gasoline, diesel oil, diesel fuel, aviation fuel, engine and industrial oil, asphalt and gases. A nationwide filling station chain operates under the LOTOS brand. The group consists of approximately 30 direct and indirect subsidiaries, including a few abroad. Through its Norway-based subsidiary, the company is present on the Norwegian Continental Shelf, where it carries out oil exploration and exploitation.

No.6. Ciech
http://www.ciech.com/

Ciech was established in 1945 as a state-owned company, *Centrala Importowo-Eksportowa Chemikalii i Aparatury Chemicznej* (Chemical Products and Equipment Import-Export Enterprise). In 2005 Ciech was partly privatized and listed on the WSE. Its largest shareholder is the State Treasury (36.7%), followed by institutional investors, such as Pioneer Pekao Investment Management and Otwarty Fundusz Emerytalny (Open Pension Fund) PZU "Złota Jesień". In 2006, it finalized the acquisition of two chemical synthesis companies, Organika-Sarzyna and Zachem, and of the first foreign manufacturing company, the Romanian soda plant US Govora. As a result, the production capacity of the Ciech Chemical Group almost doubled. The Group is currently one of the leaders in the European chemical market. It comprises more than 30 companies, including 16 located abroad. The main products of the Group are: soda ash (the second largest producer in Europe) and TDI (number 1 on the Polish market), plant protection chemicals and phosphate fertilizers, and other basic chemicals used in the glass, furniture, construction and food industries.

No.7. BIOTON
http://www.bioton.pl/en

BIOTON is a biotechnology company, established in 1989 to manufacture basic pharmaceutical substances. The company started its foreign expansion relatively late, establishing its first affiliate in Russia in 2004. Since then, it been has expanding its activities abroad very quickly. By the end of 2009, BIOTON had undertaken several outward M&As, which resulted in the acquisition of a dozen foreign affiliates in over ten countries, including Italy, Singapore, India, South Korea and Australia. The group produces primarily insulin and generic medicines (mainly antibiotics). It also conducts R&D activities and is expanding its product portfolio. The company is building a factory to produce recombinant insulin in India, to be sold in Latin America, the Middle East and North Africa.

No.8. Polimex-Mostostal
http://www.polimex-mostostal.pl/en

Polimex-Mostostal is an engineering and construction company that has been on the market since 1945. Until 2004 it operated as two separate businesses – Polimex-Cekop and Mostostal Siedlce, which had been privatized before the merger and one of them was also first listed on the stock exchange in 1997. The company provides services as a general contractor for the chemical as well as refinery and petrochemical industries, power engineering, environmental protection, and industrial and general construction. It also operates in the field of road and railway construction as well as municipal infrastructure. The largest production plants are located in Poland, but the company operates abroad as well. The export activity is facilitated by an international sales network (agencies or locally registered branch offices) and manufacturing plants in foreign countries.

No.9. Kopex
http://www.kopex.com.pl/

Kopex was founded in 1961 as a state-owned enterprise and shortly became a main provider of mining equipment for export. It debuted on the Warsaw Stock Exchange in 1998. After completion of privatization and a merger with another company operating in the same industry, Kopex became the largest Polish manufacturer and supplier of machineries and equipment as well as modern technologies for mining. Currently, the KOPEX Group comprises nearly 30 enterprises, including 20 foreign affiliates. It focused its manufacturing and mining activities abroad mainly in the five following countries: Australia, China, Indonesia, RPA and Serbia. The Company also holds a couple of distribution companies abroad.

No.10. Koelner
http://www.en.koelner.pl/

The company started business activity as *Tworzywa Sztuczne Krystyna Koelner* (Plastics Krystyna Koelner) in 1982, producing plastic socket wrench handles, buttons and flowerpots. In 2004, Koelner debuted on the WSE. Since then it has become an international holding company, comprising manufacturing and distribution enterprises from 16 countries worldwide. Currently, the company develops innovative solutions for fastening techniques, their design, production and distribution. The Group's product portfolio includes high-quality mechanical fasteners, threaded products, chemical anchors, drills, circular saws, tools and power tools.

No.11. Selena
http://www.selenafm.com/

The Selena Group was founded in 1992 to produce modern construction chemicals: polyurethane mounting foams and silicone sealants. In a relatively short time it became a global manufacturer and distributor of a wide range of construction chemicals for professional contractors and home users. Currently, the Group is the world's third largest manufacturer of polyurethane foam used for door and window installation. Since 2008 Selena FM shares have been listed on the WSE. The Group comprises 35 companies located in Poland and overseas, including 12 manufacturing plants (six facilities in Poland and plants in Brazil, South Korea, China, the United States and Turkey).

No.12. AB
http://www.ab.pl/

AB S.A. is one of the largest IT services providers and hardware, software and consumer electronics distributors in Central and Eastern Europe, established in 1993. Five years later the company attracted a financial investor − the Polish Enterprise Fund − which accelerated its market expansion. In 2006, AB SA made its debut on the WSE. In 2007, it purchased a 100% stake in AT Computer Holding a.s., one of the largest IT services providers and electronic equipment distributors in the Czech Republic and Slovakia. With the acquisition of AT Computer Holding, AB has become the owner of personal computers manufacturer and services provider, AT Compus. The Company was honored as the 2012 Distributor of the Year (ranked first in the Czech market and second in the Slovakian one).

No.13. KGHM Polska Miedź
http://www.kghm.pl/

KGHM was established in 1961 under the name of *Kombinat Górniczo-Hutniczy Miedzi* (Copper Smelting-Mining Plant), as a state-owned enterprise. In 1991 it was transformed into a joint stock company. Since July 1997 its shares have been listed on the WSE. The state holds 31.79% of the stock. Basic operations of the company are limited to copper ore mining, copper production, and the production of precious metals and other non-ferrous metals. KGHM is the seventh largest producer of refined copper and the second largest silver producer worldwide. The company also owns equity shares in companies involved in diverse activities: health services, tourism, and telecoms. As far as overseas operations are concerned, KGHM is interested primarily in the exploration and exploitation of copper ores in countries associated with low political risk (the investment in the Congo in the form of the acquisition of rights to and exploitation of the Kimpe ore deposit resulted in the voluntary liquidation of the Congolese subsidiary in 2006). In 2012, as a consequence of the friendly takeover of Quadra FNX, KGHM has become the owner of copper mines in Canada, the US and Chile, as well as the co-owner of the world-class Sierra Gorda project. The company also has two foreign distribution companies (in Austria and the UK).

No.14. Cognor (Złomrex)
http://www.cognor.eu/

The company was established in 1990 as a small business focused on the purchase of scrap metal named Złomrex. Due to systematic development, it has expanded the scale of its activities and becoae the leader of a group comprising manufacturing plants and distribution entities. The company began its foreign expansion shortly before the global crisis hit the metal industry in 2008. The company, among others, took part in the privatization of a Croatian steel works (Zeljezara Split), becoming its strategic investor. It also acquired an Australian group distributing metal products. At the end of 2010, the Group consisted of 25 businesses, including 19 abroad. Due to serious financial problems and the looming bankruptcy, the company decided to sell most of its assets abroad in 2011.

No.15. Ferro
http://www.ferrocompany.com/

Ferro was established in the 1990s. The Group operates in the Polish market as well as conducting international sales activities in Romania, France, Ukraine, Belarus, Bulgaria and Russia, among others. The production of the Group is carried out in a plant located in China, a joint-venture company in which Ferro SA owns 50% of shares. Apart from the head office, the logistic and storage base is situated in Poland. The company debuted on the WSE in 2010. The capital raised in this way allowed Ferro to acquire a Czech company in 2011 and to strengthen its position in the Central Europe.

No.16. Comarch
http://www.comarch.com/

Comarch was founded in 1993 by Professor Janusz Filipiak from the University of Science and Technology (AGH) in Kraków. He has been the president and, since the company debuted on the WSE (1999), also the major shareholder. Comarch is a software house and IT services provider that specializes in innovative IT solutions for the telecommunications and financial services industries, public institutions and non-financial enterprises. Its products and solutions cover billing, network management, ERP systems, IT security, CRM and loyalty management, EDI, sales support, electronic communication and business intelligence. The majority of products offered by Comarch are developed in-house. In its R&D centers it employs over 1,000 people. During 2007-2010, expenditure on R&D exceeded US$ 110.5 million. The organizational structure of the Comarch Capital Group comprises a network of subsidiaries located in Poland and abroad, i.e. in Europe, the Americas, the Middle East and East Asia.

No.17. PZ Cormay
http://www.pzcormay.pl/index.php?lang=_en

PZ CORMAY is a group of companies developing, manufacturing and distributing diagnostic reagents and advanced laboratory equipment. The company's history as well as its first foreign operations date back to 1990. For a very long period PZ Cormay was present on foreign markets primarily through exports to more than 120 countries. The company has intensified its foreign expansion in the form of FDI recently, taking over three innovative companies located in Ireland, Switzerland and Italy. It is one of the most innovative Polish multinationals, whose innovative projects are supported by its experienced international R&D team.

No.18. Decora
http://www.decora.eu

Decora was established in 1994 by a team of four to manufacture ceiling tiles. Within a few years the company expanded to other interior decorating products: ceiling moldings, rosettes, wall insulation and heat reflectors. As Decora started its foreign operations relatively late (in 2005), the majority of its foreign affiliates are distribution-oriented. The only production facility was set up in Belarus to supply the Russian and Ukrainian markets with baseboards. Since 2005 the company has been listed on the WSE.

No.19. Grupa Kęty
http://www.grupakety.com/en/

Kęty was established in 1950 as *Zakłady Metali Lekkich* (Light Metals Plant). In 1992, it was transformed into a sole-shareholder company of the State Treasury. Soon afterwards, it was privatized and then floated on the WSE (1996). The company has no dominant shareholder, its shares being held by several cooperating private financial institutions. The main activity of the Kęty Group is manufacturing aluminum profiles and processing them into intermediate and final products, which are then used in construction, the automotive industry, transportation and accessories for woodwork. Its foreign affiliates, located mainly in European countries (Germany, Ukraine, Russia, the Czech Republic, Romania and the UK), are focused on distribution, with the exception of the production facility in Ukraine.

No.20. Fabryki Sprzętu i Narzędzi Górniczych Fasing
http://www.fasing.pl/

The history of Fasing dates back to 1913. The company changed the owner several times and then was nationalized after the Second World War. The enterprise manufactured mostly parts for machinery and equipment, mainly for mining. Since 2000 the company has been listed on the WSE. Today, Fasing is one of the world's largest producers of chains for the mining and power industries, fisheries, and the sugar, cement and timber industries. Apart from Poland, the company has manufacturing facilities in China and Germany.

No.21. LPP
http://www.lpp.com.pl/en

LPP S.A. started its business as a supplier of T-shirts made in Asia to supermarkets. Quickly though, it began to develop its own brands (RESERVED, CROPP TOWN, ESOTIQ, HOUSE) and retail chains. Currently, the company is a leader among Polish companies in the wearing apparel industry. Its main activity is the design and distribution of clothing to several countries in Central and Eastern Europe. The manufacture of clothing (sewing) is contracted to Asian low-cost countries. It has been listed on the Warsaw Stock Exchange since 2001.

No.22. Wielton
http://www.wielton.com.pl/?pid=home&language=en

The business was founded in 1991. Inthe beginning it focused on imports of second-hand semi-trailers and trailers from Western Europe, as well as their upgrading and selling on the Polish market. Later the business profile changed from trade to production. Currently, Wielton is Poland's biggest semi-trailer and trailer producer, and one of the 10 leading manufacturers in Europe. Its customers consist of domestic transportation, construction, production, agriculture and distribution companies, as well as foreign vehicle and semi-trailer dealers, especially from: Russia, Ukraine, Lithuania, Latvia, the Czech Republic, Bulgaria, Romania, and Italy. The company has two subsidiary companies abroad (in Ukraine and Russia), eight foreign commercial agencies and seven dealers abroad.

No.23. Apator
http://www.apator.com/en/

The company was established in 1949 in Torun as a plant manufacturing switchgear, switchboards and equipment for the energy and mining sectors. In 1992, it was transformed from a state-owned enterprise into a joint-stock company with employees as its shareholders. Since 1997 it has been listed on the WSE. Currently, the company focuses its activity on two segments of the electromechanical industry: metering and switchgear. Its offer includes metering equipment for all utilities (prepayment and post-payment electrical energy meters, heat meters, gas meters, water meters, temperature sensors) for the development of systems enabling energy usage metering, remote reading, teletransmission and visualization of data. The Apator Group includes 15 companies, nine of which are located in Poland and six abroad.

No.24. TOYA
http://www.yato.pl/?lang=en

The company was founded over twenty years ago, at the beginning of Poland's transition to a market-led economy. Now, TOYA is the leader of the Polish hand and power tools market for both professional and household use. The Group's business covers product design, outsourcing of production, supervision over production quality, and distribution of products under its own brands through an extensive sales network in Poland and abroad. Despite a rather modest size, the company operates worldwide, having modern logistics and distribution centres in Romania and China. TOYA S.A debuted on the WSE Main Market in 2011.

No.25. TelForceOne
http://www.telforceone.pl/en-gb/

The company was established in 2011 as a civil partnership trading under the name PolTelkom. Only a year after, it launched its own products and since then has developed many electronic devices. Currently, TelForceOne is the largest Polish importer, distributor and producer of mobile devices and accessories. It comprises 14 companies, including five foreign enterprises – in the Czech Republic, Slovakia, Ukraine and Romania. They have created and built brands such as TF1, FOREVER, TF1 Supplies Line or Forever-Light. Since 2007 the company has been listed on the Warsaw Stock Exchange.

No.26. Fabryka Farb i Lakierów Śnieżka
http://www.sniezka.pl/en/

The history of FFiL Śnieżka dates back to 1984 (in 1990-1998 it operated under the name of *Chemal S.c. Fabryka Farb i Lakierów* – Paints and Varnishes Plant – in Brzeźnica). The high demand for products manufactured by the plant prompted the owners to set up two further manufacturing subsidiaries – in Lubzina (1993) and Pustków (1994). Production in its first foreign plant started in 2000 in Ukraine and two years later in Belarus. Śnieżka has treated Eastern Europe as a key market. In 2003 the shares of *Śnieżka* Paints and Varnishes Plant S.A. appeared on the WSE. The company is planning further expansion in foreign markets (production and distribution); among others it intends to build a new paint factory in Romania.

No.27. Redan
http://www.redan.com.pl

The Redan Group is one of the leading companies operating in Central and Eastern Europe in the clothing market. The Group's business is divided into two sectors: the fashion and discount sectors. Redan develops, promotes and distributes its popular clothing brands Top Secret, Troll and Drywash. Collections of these brands are created by its own designers, and manufacturing is outsourced to more than 100 factories in Poland and abroad, particularly in China, India, Bangladesh, Turkey, Hong Kong, and Pakistan. Since 2003 the company has been listed on the Warsaw Stock Exchange.

No.28. Relpol
http://www.relpol.com.pl/en/

Relpol has been operating in the electrotechnical industry since 1958. In 1996 it made its debut on the WSE. The company manufactures electromagnetic relays and relay sockets, widely used in electric circuit control of various machines and equipment, vehicles, domestic appliances and electronics. Apart from two plants located in Poland, the company owns two production plants abroad (in Ukraine and Lithuania) and several distribution-oriented affiliates in other European countries.

No.29. Aplisens
http://www.aplisens.pl/en/

The company was founded in 1992 by six workers of the Industrial Research Institute for Automation and Measurements PIAP. At that time it concentrated on electronic pressure and differential pressure measurement technology. Today, the Aplisens Group has design, production and distribution affiliates in several European countries. It regards the CIS countries as strategic markets, given their demand for investment in modernizing heavy industries in particular.

No.30. Bakalland
http://www.bakalland.pl/en.html

Bakalland SA was established in 1994 by a team of three to produce and distribute fresh and then dried fruit. Currently, it is focused on the production, processing and trade in raisins, dried fruit, nuts, grains and seeds. In 2006, the company entered the WSE. The funds from the issue of securities were used for undertaking its planned acquisitions. In respect to international expansion, Bakalland established its foreign affiliates in Ukraine and the Czech Republic, but the latter is currently in liquidation.