

THE WARSAW STOCK EXCHANGE: FINANCING GROWTH

IN CEE



Central and Eastern
Europe
IPO Summit
Warsaw 2011



Bank Polski

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Main goal of the report



This Report has been prepared by McKinsey & Company in cooperation with PKO Bank Polski, the Warsaw Stock Exchange (WSE), the Ministry of the Treasury of the Republic of Poland, IPO CEE Summit. The purpose of

the report is to offer an independent perspective on the WSE; the report attempts to give a candid overview of the Stock Exchange's past and provide an unbiased perspective on its possible future direction.

THE PURPOSE OF THE REPORT IS TO OFFER AN INDEPENDENT PERSPECTIVE ON THE WSE; THE REPORT ATTEMPTS TO GIVE A CANDID OVERVIEW OF THE STOCK EXCHANGE'S PAST AND PROVIDE AN UNBIASED PERSPECTIVE ON ITS POSSIBLE FUTURE DIRECTION.

It is not intended to be read as a directional document in which the joint authors offer advice on any particular course of action. Specifically, this report should not be used as the basis for any company's decision to undertake an IPO, as there are numerous individual considerations for each potential issuer.

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AMOUNT OF CAPITAL AVAILABLE ON WSE IS LIKELY TO GROW

For the last decade the WSE has increased its capitalization on average 25 percent every year. This growth has been fueled by market appreciation as well as the inflow of new capital. It seems likely that the WSE will continue attracting new capital, but possibly at a slower pace compared to the past decade.

THIS REPORT HAS BEEN PREPARED COOPERATIVELY BY PKO BANK POLSKI,
IPO CEE SUMMIT, CITY OF WARSAW AND MCKINSEY & COMPANY.

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CAN THE WSE ATTRACT NEW ISSUERS FROM ABROAD?

Many potential issuers consider availability of capital and liquidity, cost of entry, and ability to raise their public profile when selecting a stock exchange for their IPO. To attract new foreign issuers from the CEE, the WSE would potentially need to perform better on the three dimensions than do its Western European competitors.

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Currently, the volume of tradable commercial debt in Poland is very low compared to other European markets, east and west.

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**TRADITIONAL SOURCES
OF IPOs ARE DRYING UP**

Relatively few companies in Poland are large enough to make a visible difference in the size of the stock exchange. Of the largest 500 hundred companies (according to Rzeczpospolita ranking), 130 are already listed, while 232 are subsidiaries of foreign entities and are thus highly unlikely to enter the WSE independently.

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**APPENDIX:
SURVEY RESULT**

In the weeks preceding the CEE IPO Summit, market participants were invited to respond to an online survey about their experience with the WSE. The respondents included the representatives of mutual funds, brokerage houses, pension funds, banks, stock exchanges, and issuers that debuted on WSE in the past 4 years.

Executive summary



For the past decade, the Warsaw Stock Exchange has been growing at a strong pace, and has emerged as a Central and Eastern European (CEE) leader¹. Most prominently, in 2010, the WSE has seen second-highest

number of IPOs among all European stock exchanges. Above baseline stock appreciation, three key elements contributed to the growth of WSE. First, the many privatizations of large domestic companies contributed roughly half of the value of all IPOs in the last few years (2007-2010).

Second, listed companies floated additional shares through SPOs and about three-quarters of them raised additional capital in the process. Third, roughly 40 percent of the value of IPOs was contributed by foreign debuts. The WSE was the only exchange in the CEE during the last 4 years to host IPOs of foreign CEE companies (4 IPOs), and it has competed for listings with the LSE (22) and the Deutsche Börse (5).

CAPITAL AVAILABLE ON THE WSE WILL LIKELY GROW

In the coming years, the amount of capital available for investment on the WSE will likely continue to increase. Despite the pension system reform, the growing level of disposable income should amplify the importance of domestic financial institutions (pension funds, mutual funds, and life insurance providers) as sources of capital. This is likely to happen at the expense of foreign

investor share, currently largest contributor of capital on the WSE.

HOWEVER, TRADITIONAL SOURCES OF IPOs ARE DRYING UP

At the same time, the current sources of IPOs are slowly drying up. Most of the large domestic companies have already debuted on the stock exchange and the few still to come will not much change the WSE's capitalization. Smaller companies already actively participate

in the market and so generating additional growth from that segment may be difficult. The gap in IPOs on the WSE after completion of the privatization process may be partially filled by foreign IPOs.

The WSE might find it

difficult to attract new issuers from other CEE countries, however, since it would have to compete for their business against large Western European stock exchanges, such as the LSE and the Deutsche Börse.

SPOs MAY BECOME MORE IMPORTANT USE OF CAPITAL ON THE WSE

If the state chooses to continue to privatize already listed large companies by gradually disposing of shares in them, SPOs may become a much more important use of capital on the WSE. Finally, commercial bonds may become more significant on the WSE as they grow in popularity to the levels observed on other Western and Eastern European stock exchanges.

¹ Among stock exchanges in Central and Eastern Europe (CEE), the WSE is the largest in terms of market capitalization (in Eastern Europe [EE], WSE comes second to MICEX). It had also the largest number and the largest value of IPOs of all CEE countries in the past 4 years.

*i*

CENTRAL AND EASTERN EUROPE

Among stock exchanges in Central and Eastern Europe, the WSE is the largest in terms of market capitalization (in Eastern Europe, WSE comes second to MICEX). It had also the largest number and the largest value of IPOs of all CEE countries in the past 4 years.

**THE WSE WAS THE ONLY EXCHANGE
IN THE CEE DURING THE LAST 4
YEARS TO HOST IPOs OF FOREIGN
CEE COMPANIES.**

A decade of success and growth

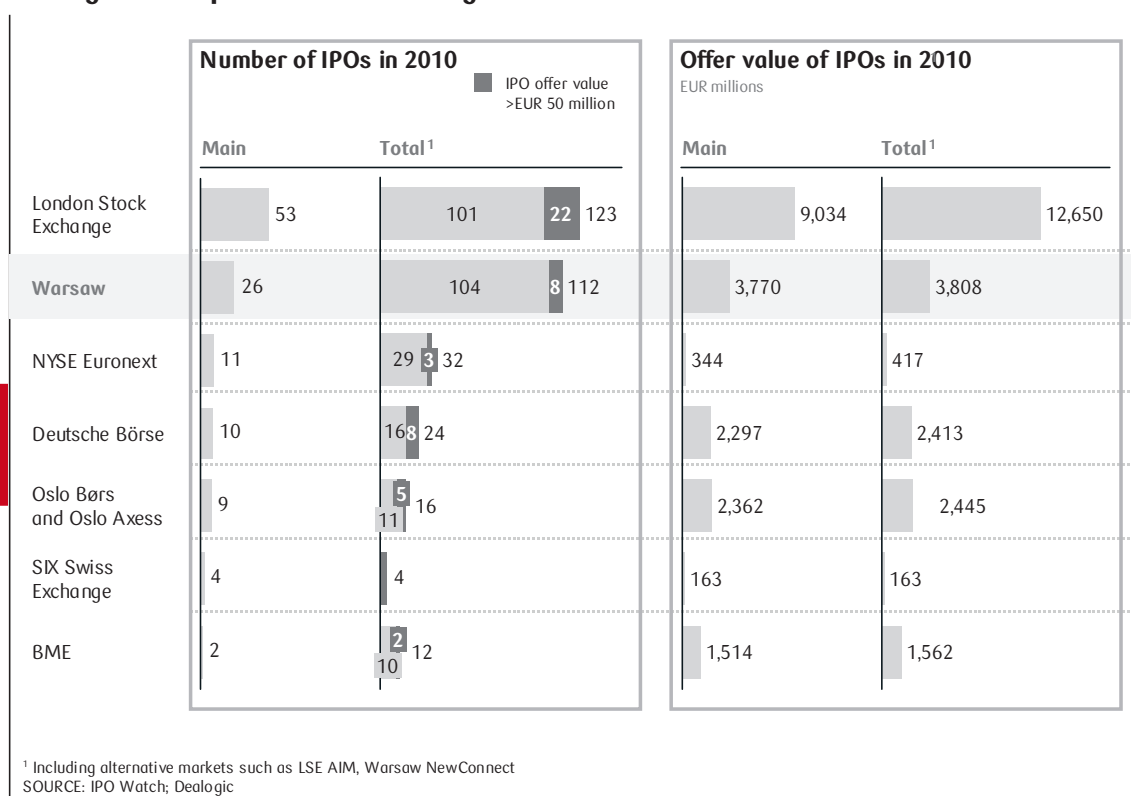


The Warsaw Stock Exchange just celebrated its twentieth anniversary. In only two decades it has grown from a start-up using rented equipment and having five listed securities to one of the largest stock ex-

changes in Eastern Europe, with over 600 companies. The WSE trades across two markets and has recently launched a debt market. In 2010 alone, 112 companies IPOed in Warsaw, 34 of them on the main market². This puts the WSE ahead of every European

In 2010, WSE had the second largest number of IPOs among all European stock exchanges

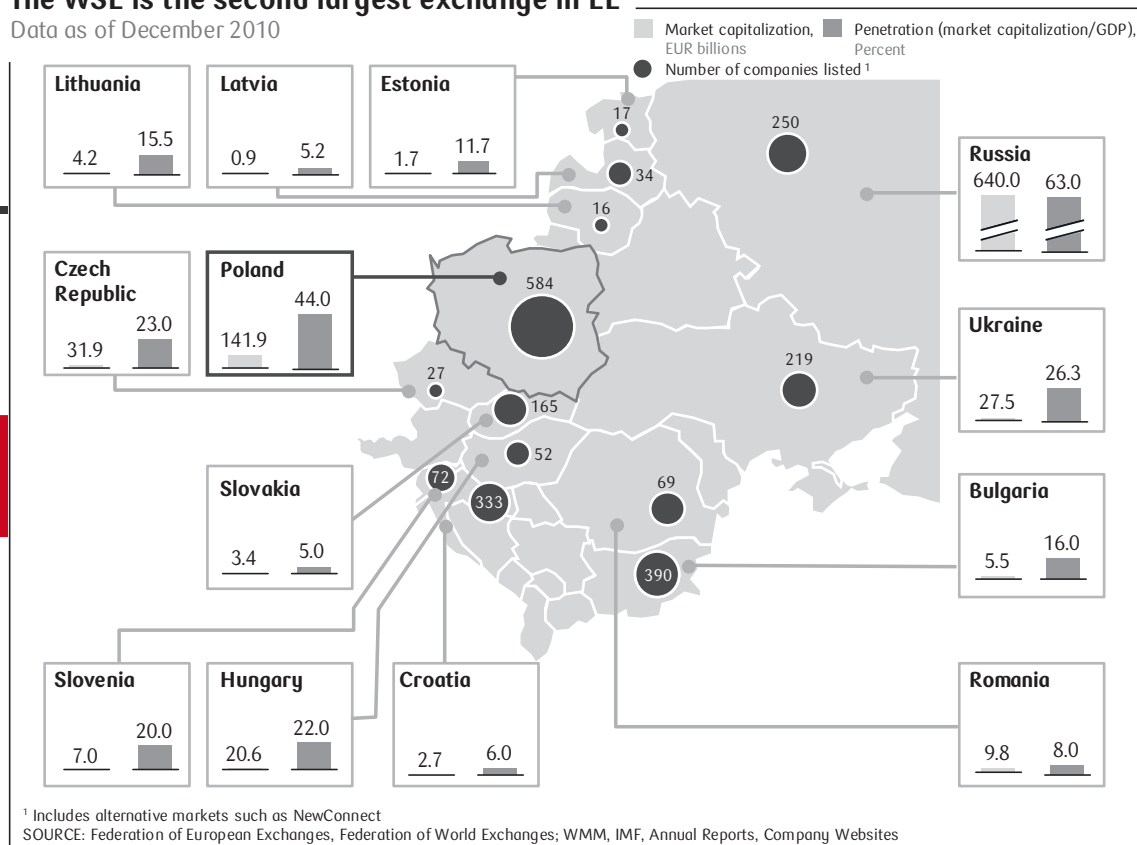
Figure 1



² This report uses, wherever possible, the definition of IPO given by the WSE and the Polish Ministry of Treasury. Accordingly, an IPO is any debut on a stock exchange, including transfers to main market from secondary markets (e.g., NewConnect), debuts without new capital raised, and cross-listings by foreign companies. To enable like-to-like comparisons with foreign markets, the report occasionally employs the definition of IPO used by Dealogic, Bloomberg and World Federation of Exchanges, whereby an IPO is simply the initial offering anywhere in the world (i.e., it is exclusive of all cross-listings), and must involve capital-raising if the company is moved from the secondary market. In 2010, for example, the WSE had 34 IPOs in the main market according to its own definition and 26 IPOs according to the second definition. The difference is attributable to 8 transfers from NewConnect to main market without issues of new shares and 2 cross-listings of foreign companies.

The WSE is the second largest exchange in EE

Data as of December 2010



stock exchange but London (with 123 and 53 IPOs, respectively) and well ahead of any other competitor (NYSE Euronext came third with 32 IPOs in total, 11 of which were hosted on the main market). The monetary value of the WSE offers, furthermore, was also second only to the LSE's. The WSE increased its main market cap through IPOs in 2010 by EUR 3.770 billion to LSE's EUR 9.034 billion (and next in line is Oslo Børs and Oslo Axess's EUR 2.363 billion) (Figure 1).

The WSE is the second largest stock exchange in EE and the largest exchange in CEE³. In Eastern Europe, its market cap of EUR 142 billion is second only to that of MICEX (EUR 640 billion). In CEE, it is more than four times larger than the next-largest exchange, in

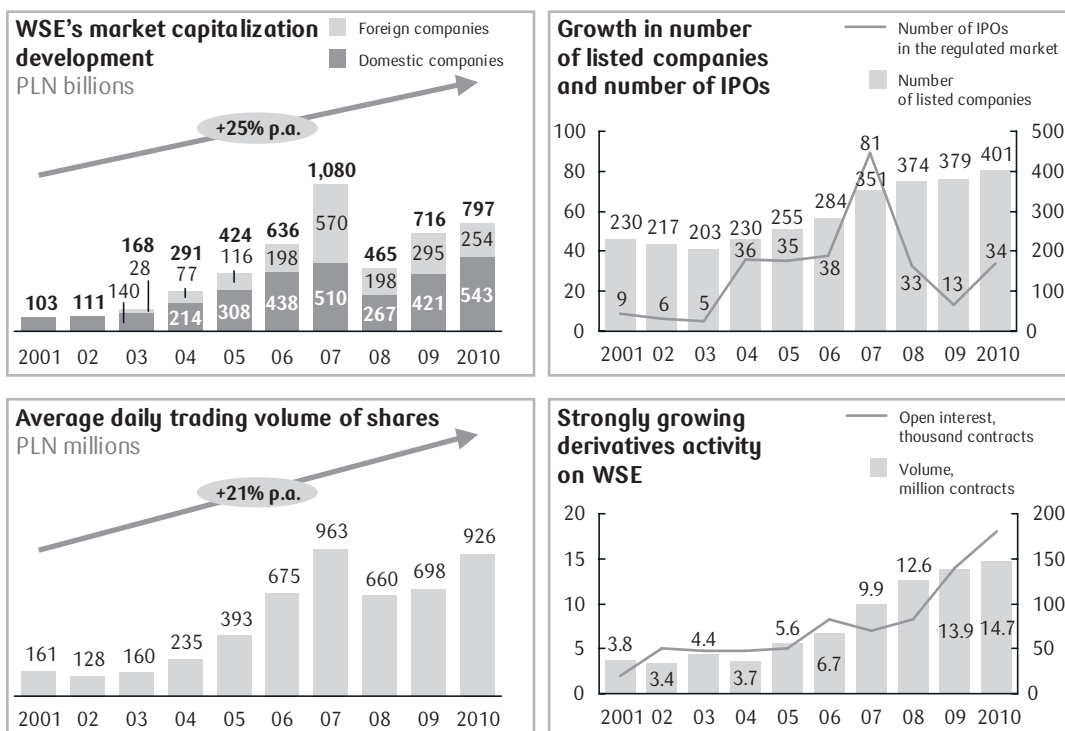
the Czech Republic (EUR 32 billion), 6 times larger than stock exchange in Hungary (EUR 20 billion) and more than 10 times larger than the remaining stock exchanges. The WSE is also well ahead of two other European exchanges that it's often compared to – Vienna Stock Exchange (EUR 94 billion) and Athens Exchange (EUR 50 billion).

Furthermore, it has attracted the most new entrants over the past few years (Figure 2). One hundred thirty-nine companies have entered the main market of WSE since the beginning of 2007 (312 including NewConnect), compared to 21 in Russia, the next-best EE stock exchange in terms of IPO numbers.

³ In this report, Central and Eastern Europe (CEE) is defined as: Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Hungary, Romania, Slovenia, Croatia, Bosnia-Herzegovina, Serbia, Kosovo, Albania, Montenegro, Macedonia, and Bulgaria; Eastern Europe (EE) is defined by all these countries and Russia, Belarus, Ukraine, and Moldova.

WSE leadership position after a decade of strong growth

Figure 3



SOURCE: Ministry of Treasury; WSE; McKinsey analysis

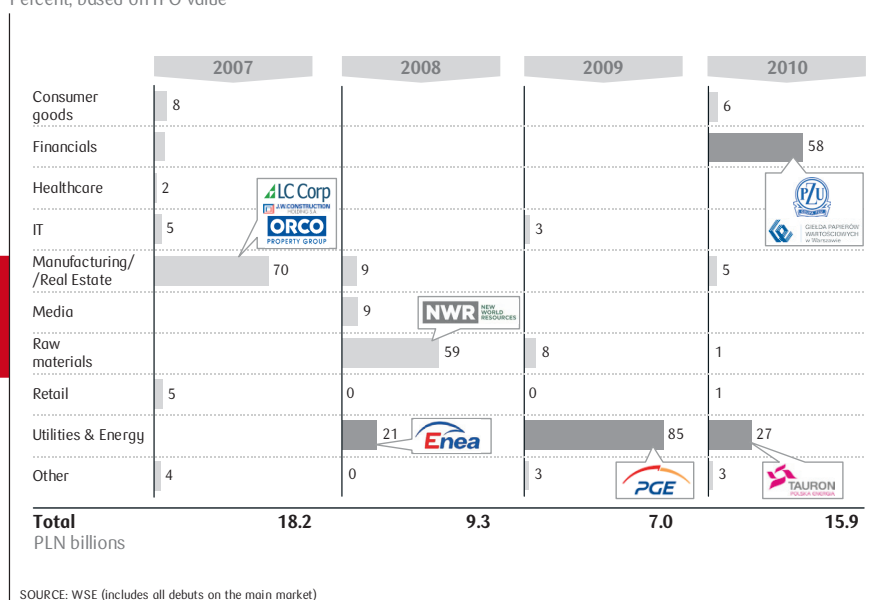
Over the last decade, the Warsaw Stock Exchange has grown in several dimensions (Figure 3). The number of listed companies went up from 230 to just over 400; market capitalization increased on average 25 percent year on year, from just over PLN 100 billion in 2001 to

just under PLN 800 billion at the end of 2010. Trading volumes went up on average by 21 percent annually and derivatives activity has increased from 3.8 million contracts in 2001 to nearly four times that in 2010 (14.7 million).

Sector composition of WSE IPOs has been heavily determined by large privatizations

Percent, based on IPO value

■ Large privatizations



VALUE OF IPOs

Almost half the total value of IPOs during the last 4 years came from the privatization of five large Polish companies: Enea in 2008, PGE in 2009, and PZU, GPW, and Tauron in 2010 (PLN 21.5 billion, or 43 percent of IPO value).

PRIVATIZATION

Almost half the total value of IPOs during the last 4 years came from the privatization of five large Polish companies: Enea in 2008, PGE in 2009, and PZU, GPW, and Tauron in 2010 (PLN 21.5 billion, or 43 percent of IPO value). Given the sheer size of individual offerings, privatizations drove the industry sector structure of IPOs on the WSE, making Utilities & Energy as well of Financial Institutions the most represented industries (Figure 4). After adjusting for the impact of privatizations, the sector split of WSE IPOs is not radically different from that of other exchanges.

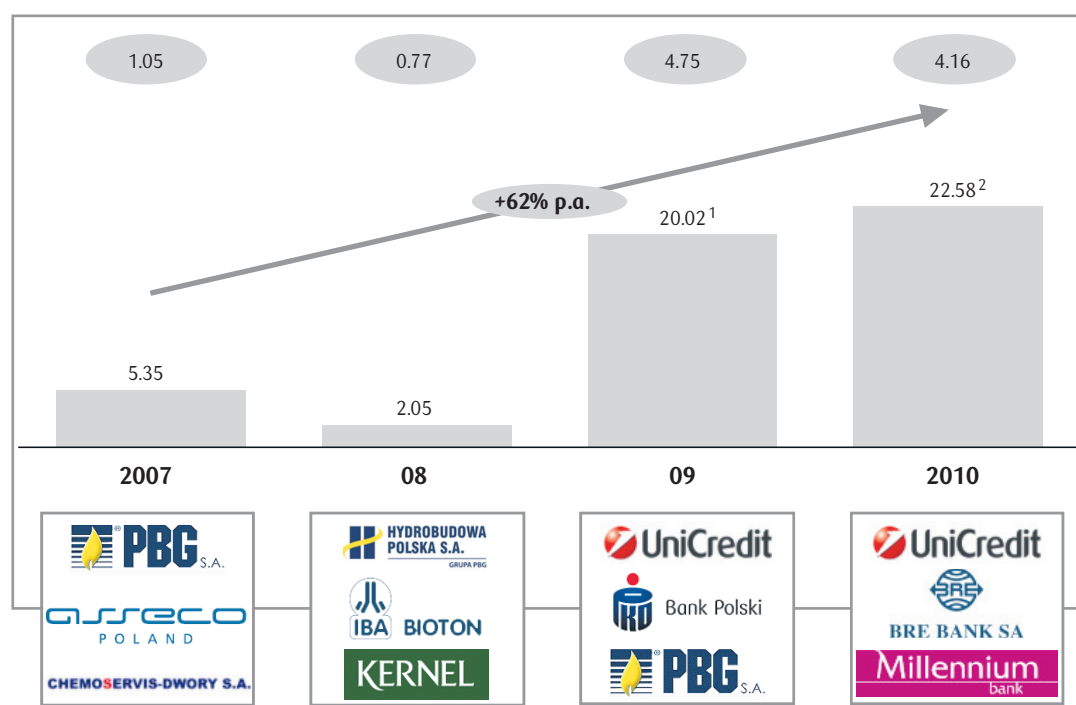
THREE ELEMENTS CONTRIBUTED TO THE GROWTH IN EXCESS OF BASELINE APPRECIATION: PRIVATIZATION OF LARGE DOMESTIC COMPANIES, SECONDARY OFFERINGS, AND LISTINGS BY FOREIGN COMPANIES.

Volume of SPOs on WSE has been growing over the past few years

PLN billions

Percentage of market capitalization

Figure 5



¹ Includes UniCredit SPO offer (PLN 13.48 billion) on multiple exchanges

² Includes UniCredit SPO offer (PLN 16.07 billion) on multiple exchanges

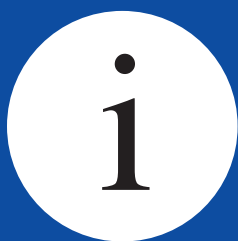
SOURCE: WSE

SECONDARY PUBLIC OFFERINGS

In 2010, SPOs⁴ have become a relatively more important source of capitalization growth on the WSE. Though the number of SPOs remained relatively stable (78 in 2007 and 80 in 2010), total SPO value increased four-fold in the same period. That represented an average year-on-year growth of 62 percent (7 percent after excluding the UniCredit offering). The value increase means that the share of SPOs in the total capitalization has increased from 1.1 percent in 2007 to 4.2 percent in 2010 (Figure 5). In terms of the

industry structure of the SPOs, financial institutions were overrepresented (vs. IPOs); this may be a result of post-crisis increases in equity requirements and the maturity of that sector on the WSE. Over the last 4 years, one-quarter of the SPOs on the WSE were the result of changes in ownership and did not raise any additional capital. Of the remaining SPOs two were seen as a method for obtaining acquisition currency and three used the proceeds to repay debt. The remainder reported capital-raising mostly for “future acquisitions” and “general office purposes.”

⁴ Throughout the document, unless otherwise stated, a secondary public offering (SPO) is defined as a stock offering for public sale by a company which already had an IPO. This definition includes sale of stock by owners (with no proceeds going to the company) as well as new issuance of stock with capital-raising (often referred to as a follow-on offer).

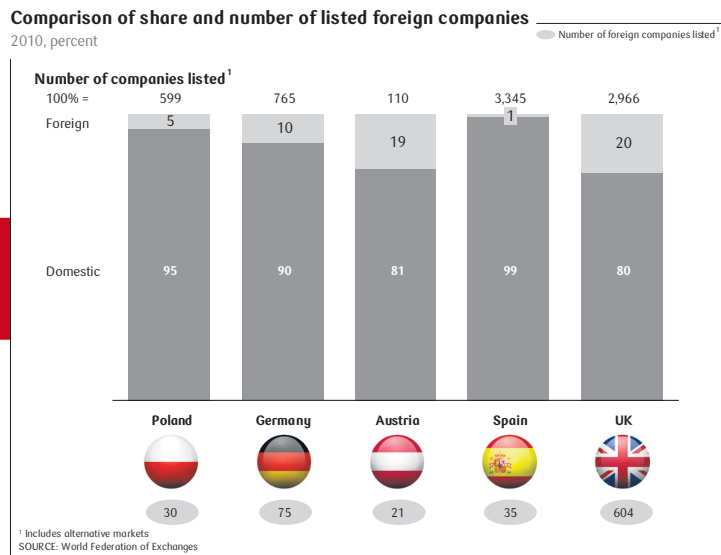


THE SHARE OF SPOs

The share of SPOs in the total capitalization has increased from 1.1 percent in 2007 to 4.2 percent in 2010.

IN 2010, 30 FOREIGN COMPANIES WERE LISTED OUT OF A TOTAL OF 599 COMPANIES ON BOTH WSE MARKETS. FOR COMPARISON, IN GERMANY IT WAS 75 COMPANIES, IN THE U.K. 604 AND IN SPAIN 75 COMPANIES; ON THE OTHER HAND, IT WAS ABOVE AUSTRIA WITH 21 COMPANIES LISTED.

Figure 6



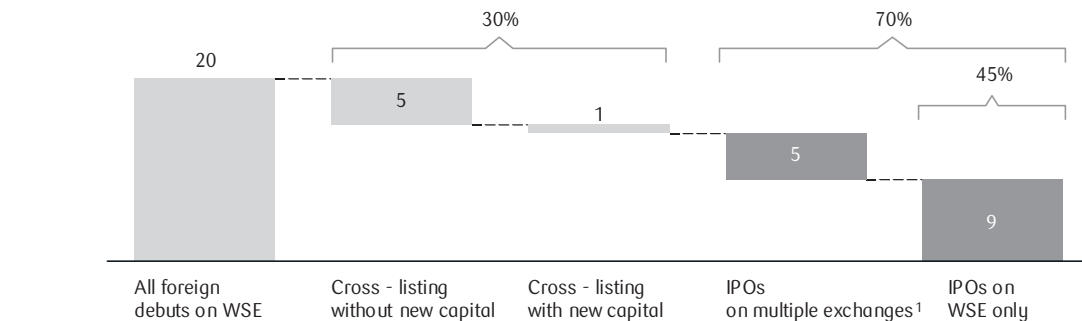
FOREIGN COMPANY LISTINGS

Despite a steadily growing number of foreign companies on the WSE, the current number of foreign listings in the total is still lower than for most Western European exchanges. In 2010, 30 foreign companies were listed out of a total of 599 companies on both WSE markets. For comparison, in Germany it was 75 companies (10 percent of all listed companies), in the U.K. 604 (20 percent) and in Spain 75 companies (1 percent); on the other hand, it was above Austria with 21 companies listed (19 percent) (Figure 6). In looking exclusively at the primary market in Poland the picture hardly changes, as 27 out of 401 companies listed were foreign – slightly under 7 percent.

Figure 7



Fewer than half the WSE's foreign debuts were exclusive to WSE

Foreign company debuts at WSE
2007-10, number



Total value of offerings
PLN billions



IPO in parallel on exchanges in		Offer value PLN billions	Captured on WSE PLN billions
	Poland, Austria	10.7	0.5
	Poland, Czech Republic, UK	5.5	<0.5

¹ Primary exchanges other than WSE
SOURCE: WSE; Money.pl

The growth in share of foreign companies on the main market of WSE has slowed in the past 4 years. Whereas the average annual growth of the number of companies was in excess of 100 percent between the years 2003 and 2007, it slowed to 5 percent thereafter. For the period of 2003-2007, growth in the number of foreign companies clearly exceeded the overall growth rate (15 percent). Since 2007, the number of foreign listings has grown in line with the growth of all listings (5 percent). As a result, the share of foreign entities on the WSE in the past 4 years has remained practically constant, at just under 7 percent. The outlook may be changing slightly, as more foreign

THE WARSAW STOCK EXCHANGE HAS HAD A SUCCESSFUL DECADE, SHOWING ESPECIALLY STRONG GROWTH IN NEW LISTINGS OVER THE PAST 4 YEARS. THERE REMAINS, HOWEVER, AMPLE ROOM FOR GROWTH, AND THIS FURTHER WSE GROWTH ITSELF COULD BECOME A CATALYST FOR THE ECONOMIC GROWTH OF THE REGION.

companies have had IPOs in Warsaw in 2011. Four new companies have launched on WSE as of May 11, 2011, as compared to five in all of 2010. (Overall, 34 IPOs were hosted in 2010 and 20 IPOs so far in 2011.) The WSE also recently decided to recognize the contribution of Ukrainian companies to the market by launching a WIG-Ukraine Index, which currently is composed of seven companies with headquarters or significant business in Ukraine.

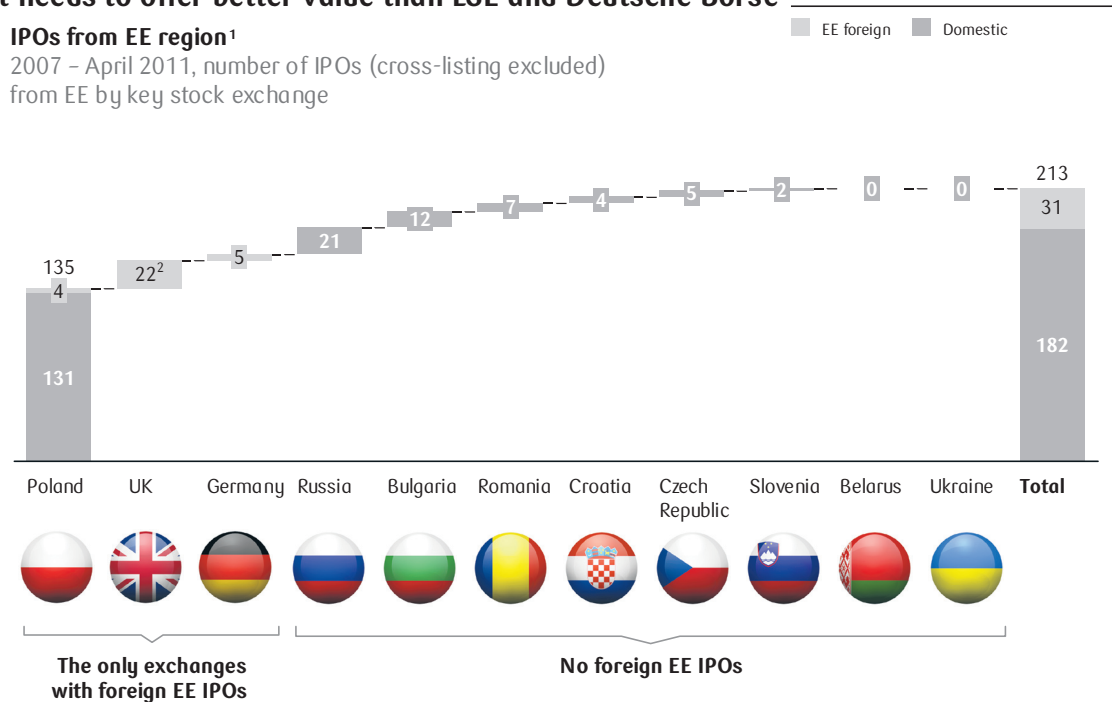
Twenty new foreign companies entered the main market of WSE between 2007 and 2010. For 6 of them (30 percent), WSE was a secondary market and only one of these decided to raise additional capital in Warsaw. The largest of those 6 offerings was a

THE WSE ALSO RECENTLY DECIDED TO RECOGNIZE THE CONTRIBUTION OF UKRAINIAN COMPANIES TO THE MARKET BY LAUNCHING A WIG-UKRAINE INDEX, WHICH CURRENTLY IS COMPOSED OF SEVEN COMPANIES WITH HEADQUARTERS OR SIGNIFICANT BUSINESS IN UKRAINE.

For WSE to capture more international EE IPOs, it needs to offer better value than LSE and Deutsche Börse

IPOs from EE region¹

2007 – April 2011, number of IPOs (cross-listing excluded) from EE by key stock exchange



¹ Analyzed countries – Poland, Czech Republic, Slovakia, Bulgaria, Romania, Ukraine, Russia, Croatia, Slovenia, Belarus

² 16 out of 22 companies come from Russia

SOURCE: Dealogic; WSE

cross-listing by UniCredit, which was obliged by the Polish Financial Authority to list on the WSE in order for the merger of the Peako and BPH banks to go forward. Although the nominal value of this debut was over PLN 270 billion, UniCredit issued no additional shares on entering the WSE. Seventy percent of foreign debuts (14) were in fact IPOs but only 9 of these (45 percent of the total number of foreign debuts) were IPOs exclusive to the WSE (Figure 7). Despite being few in number, the new foreign listings would appear to have significantly increased capitalization of the WSE. As much as 40 percent of the

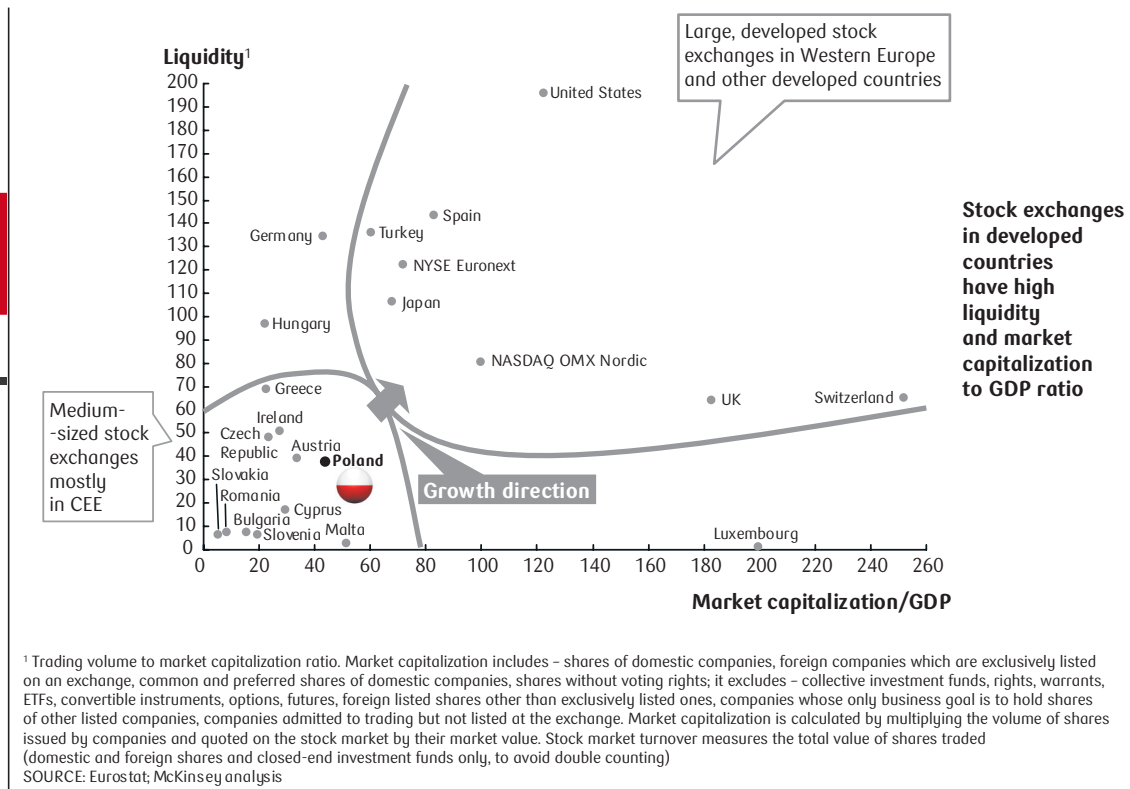
overall value of all IPOs in the 4 years from 2007 to 2010 reportedly came from foreign IPOs (about PLN 20 billion). Of that 40 percent, however, fewer than 20 percentage points of the capital was raised through the WSE. From the reported PLN 20 billion from foreign IPOs, PLN 17 billion was in reality made available on multiple markets at once and Warsaw captured less than PLN 2 billion of that.

So in fact the new foreign listings had relatively less impact on the WSE as on Western European peers. Nevertheless, the WSE remains the most international

Despite success of WSE to date, there is still significant room for growth

Percent

Figure 9



of the EE exchanges and is a possible contender for the position of EE leader. In 2007-2010, the WSE had the most IPOs in the region and was the region's only stock exchange to see foreign IPOs from other EE countries (Figure 8). In this last measure, it was far behind London and about even with Germany. Of the 31 EE companies that chose to make IPOs on European markets outside their own, 22 launched in London, 5 in Germany and 4 in Poland. Going forward, the WSE would have to continue competing for such listings with stock exchanges such as those in the UK and in Germany.

The Warsaw Stock Exchange has had a successful decade, showing especially strong growth in new listings over the past 4 years. There remains, however, ample room for growth, and this further WSE growth itself could become a catalyst for the economic growth of the region (Figure 9). Several studies made of different geographies and at different times⁵ have shown that developed financial

systems and stock exchanges are crucial to economic growth. A deep capital market, the argument goes, serves as a re-allocation mechanism, sparking growth in additional industries (e.g., business services) and sectors, thereby reducing dependency on commodity-type industries and providing broader financial product offer (e.g., derivatives, index products, information). The future of the WSE is not unequivocally clear. After a decade of solid growth, the exchange is facing uncertainty about the sources of further growth as well as profound changes to the structure of the Western European competition. Sustaining the current growth rate may require some changes to the present issuer mix and may mean head-on competition for new IPOs with the likes of the London Stock Exchange and Deutsche Börse. It is not clear yet whether the WSE could withstand such a confrontation. This report outlines some of the challenges ahead and gives a reading of the WSE's relative strengths and weaknesses versus the competition.

⁵ For example, Thorsten Beck and Ross Levine, "Stock Markets, Banks, and Growth: Panel Evidence", World Bank, May 2002; Aubhik Khan, "The Finance and Growth Nexus", Federal Reserve Bank of Philadelphia, February 2002.

Amount of capital available on WSE is likely to grow



For the last decade the WSE has increased its capitalization on average 25 percent every

year. This growth has been fueled by market appreciation as well as the inflow of new capital. With pension reform already partially in place and more decisions pending, uncertainty has lately arisen about the levels of new inflows in coming years. It seems likely that the WSE will continue at-

tracting new capital, but possibly at a slower pace compared to the past decade. Foreign investors are still the single largest source of capitalization and their involvement in the WSE has grown 14 percent year on year for the past 7 years. (Figure 10). Nonetheless, they have been gradually losing share to private investors and domestic financial institutions, which grew at 20 and 23 percent year on year, respectively. The ratio of foreign investors to financial institutions has been decreasing over the past 7 years and is likely to decline further as the structure of capital sources in Poland converges in the direction of the Western European markets. Share of equity held by the government on the WSE has increased dramatically in the last 8 years as a result of privatization process (Figure 11). As a result of pension reform, furthermore, pension funds will receive a significantly lower level of funding: in 2011 the share of gross sala-

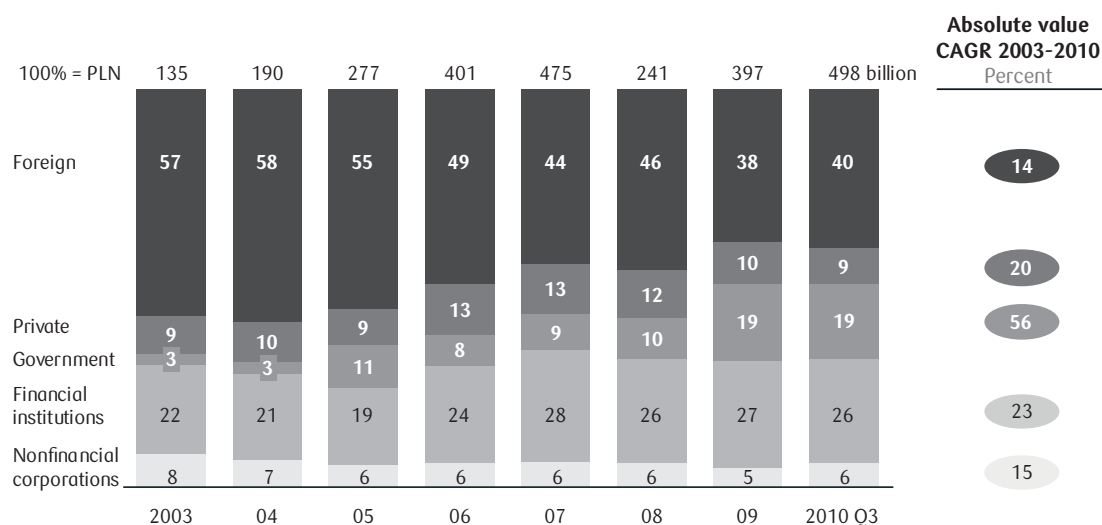
FOR THE LAST DECADE THE WSE HAS INCREASED ITS CAPITALIZATION ON AVERAGE 25 PERCENT EVERY YEAR. THIS GROWTH HAS BEEN FUELED BY MARKET APPRECIATION AS WELL AS THE INFLOW OF NEW CAPITAL. WITH PENSION REFORM ALREADY PARTIALLY IN PLACE AND MORE DECISIONS PENDING, UNCERTAINTY HAS LATELY ARISEN ABOUT THE LEVELS OF NEW INFLOWS IN COMING YEARS. IT SEEMS LIKELY THAT THE WSE WILL CONTINUE ATTRACTING NEW CAPITAL, BUT POSSIBLY AT A SLOWER PACE COMPARED TO THE PAST DECADE.

ries placed with pension funds was cut from 7.3 to 2.3 percent (with the possibility that the share will increase gradually, to 3.5 percent by 2017). At the same time, another pension system reform is currently under development, by which the share of funds that can be invested in equity should gradually increase from the current 40 percent to 62 percent by 2020. This change may have an especially large impact, as it affects not only new funds obtained but all assets under management of the pension funds. In addition, according to a further contemplated reform, the percentage of funds that could be invested abroad might also increase, from today's 5 percent to an as-yet unknown future level. Such investments would come at the expense of investments on the WSE. It is not yet clear what would be the net result of the reforms, but they may lower the amount of capital inflow to the WSE from pension funds.

Foreign investors have been gradually losing share in market capitalization to domestic financial institutions

Market capitalization by source of capital

Percent



Ratio of foreign investors to financial institutions

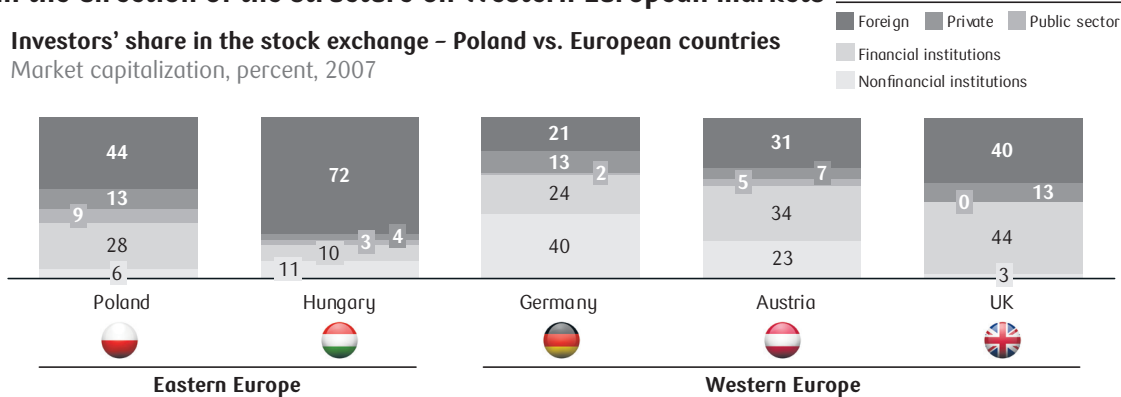
Year	Ratio
2003	2.6
04	2.7
05	2.9
06	2.0
07	1.5
08	1.7
09	1.4
2010 Q3	1.5

SOURCE: National Bank of Poland

Structure of capital sources on WSE is likely to converge in the direction of the structure on Western European markets

Investors' share in the stock exchange – Poland vs. European countries

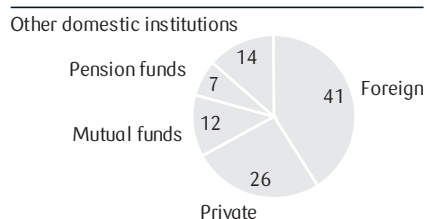
Market capitalization, percent, 2007



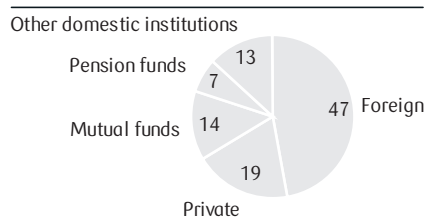
Investors' share in the stock exchange in Poland

Trading volume, percent

2005



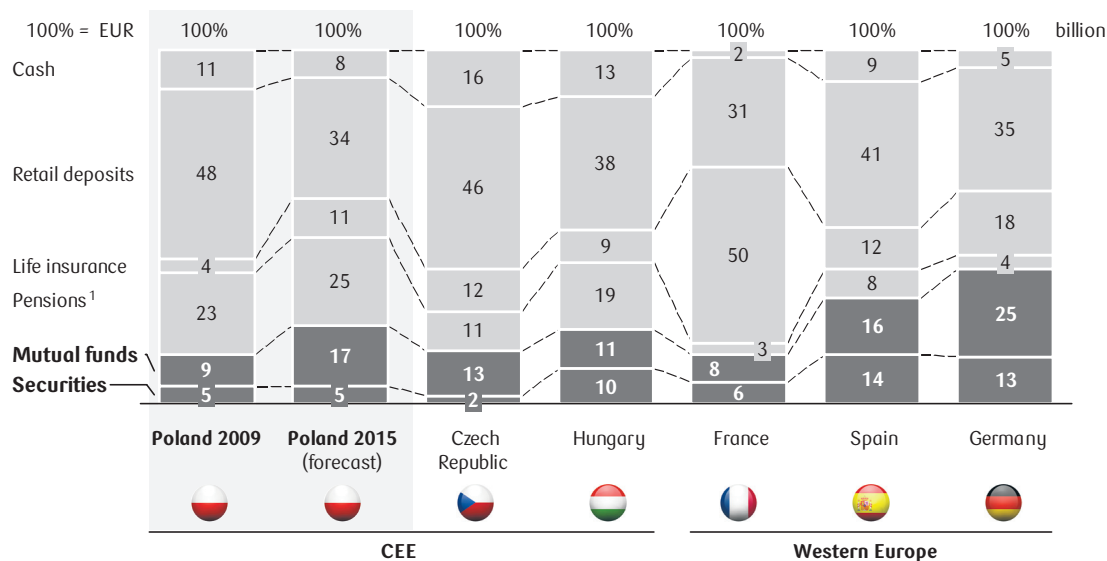
2010



SOURCE: Dealogic and NBP (data for Poland only); FESE; WSE

The amount of private funds invested on WSE by Polish institutional investors is likely to increase

Potential of private investors – PFA structure
2009, percent



¹ For CEE total private and corporate pensions under Pillar II and III schemes are included. For Western Europe only corporate pensions are included, private pensions are reported in mutual funds and life insurance section due to different schemes
SOURCE: Central Banks; Global Banking Pools

OVER THE COMING YEARS, HOWEVER, INCREASES IN DISPOSABLE INCOME AND LEVELS OF FINANCIAL KNOWLEDGE AMONG INDIVIDUALS WILL LIKELY LEAD TO AN INCREASE IN THE LEVEL OF ASSETS UNDER MANAGEMENT OF MUTUAL FUNDS AND LIFE INSURANCE PROVIDERS.

Over the coming years, however, increases in disposable income and levels of financial knowledge among individuals will likely lead to an increase in the level of assets under management of mutual funds and life insurance providers (Figure 12). We estimate that the relative share of mutual funds in personal financial assets (PFA) in Poland might in-

crease from ~9% at the end of 2009 to ~17% by 2015. At the same time the share of life insurance might increase from ~4% to 11%. The increase might happen mostly at the expense of cash and retail deposits. Overall then, new capital should still be available from financial institutions although the growth rate of capital inflows may slow down.

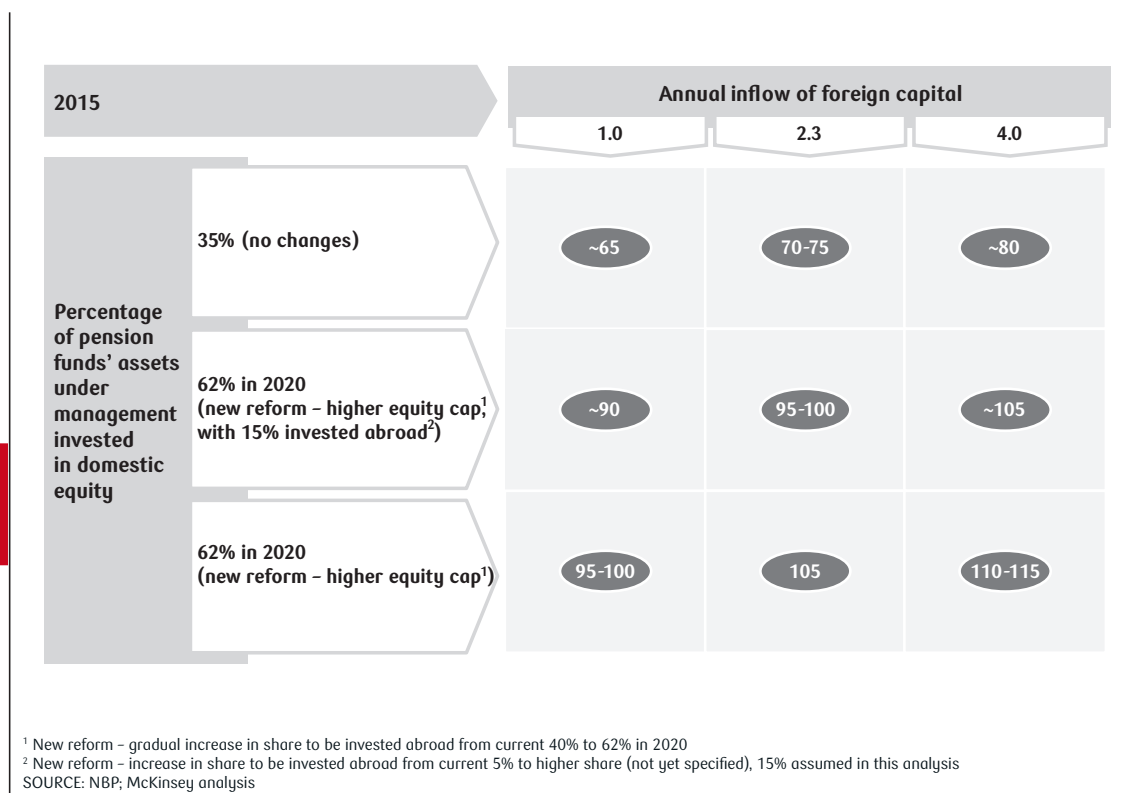


IT IS ESTIMATED THAT NEW INFLOWS OF CAPITAL MAY RANGE BETWEEN PLN 65 BILLION AND PLN 110 BILLION IN TOTAL OVER THE NEXT 5 YEARS. SINCE THE TOTAL VALUE OF ALL IPO OFFERS ON THE WSE IN THE PAST 4 YEARS AMOUNTED ROUGHLY TO PLN 50 BILLION, THE AMOUNT OF ADDITIONAL CAPITAL EXPECTED ON THE WSE WOULD SEEM SUFFICIENT TO FINANCE ITS CONTINUED GROWTH.

Possible inflows of capital to WSE

PLN billions

ESTIMATES



It is estimated that new inflows of capital may range between PLN 65 billion and PLN 110 billion in total over the next 5 years (Figure 13). Since the total value of all IPO offers on the WSE in the past 4 years amounted roughly to PLN 50 billion, the amount of additional capital expected on the WSE would seem sufficient to

finance its continued growth. In estimating potential future inflows of capital to the WSE, each of the main sources of capital was considered separately. For the two sources for which future prospects are most difficult to forecast unequivocally, nine distinct scenarios, as presented below were developed (Figure 13).



First, historical new capital inflows from foreign investors were considered. Depending on the time period selected, those inflows amounted to PLN 1 billion per annum for years 2005-2010, PLN 2.3 billion p.a. for years 2007-2010, and PLN 4 billion p.a. for years 2009-2010. To estimate future inflows, the impact of each of these amounts was tested on the total capital available – as recorded below on the horizontal axis. Second, for the pension funds, a drop in the gross salary contributions from 7.3 to 2.3 percent was assumed upfront. Then three possible options for the percentage of assets under management invested on the WSE were tested. In the baseline, no change to the current level of 36 percent occurs over time. In the most optimistic option, by 2020 a maximum level of 62 percent will be achieved and no assets will leave the country (gradual progression). The middle option assumes 62 percent of assets invested in equity by 2020 but 15 percentage points of that is invested outside Poland⁶. Results are recorded above on the vertical axis. Third, in all the scenarios, it was assumed that 35 percent of mutual fund assets and 10 percent of life insurance assets will be invested on the WSE, in line with the historical

FOR PRIVATE CAPITAL, A GRADUAL RECOVERY WAS ASSUMED, WITH ANNUAL INFLOWS OF PLN 2 BILLION TO ACHIEVE THE PRE-CRISIS LEVEL OF INVESTMENT IN 2013. SUCH GROWTH SHOULD TRANSLATE INTO PRIVATE CAPITAL VALUE OF PLN 74 BILLION BY 2015.

averages. For mutual funds, 20 percent growth in assets under management was assumed, as that would allow for convergence to Western European standards in terms of AuM to GDP ratio. Fourth, it was assumed that the government will retain or slightly reduce its current share of total market capitalization

(19 percent share in 2009 and 2010). Yet in reality, the share could drop further if the government continues to dispose of its stakes in listed companies, or it could rise if privatization continues and

new state-owned companies are launched on the stock exchange.

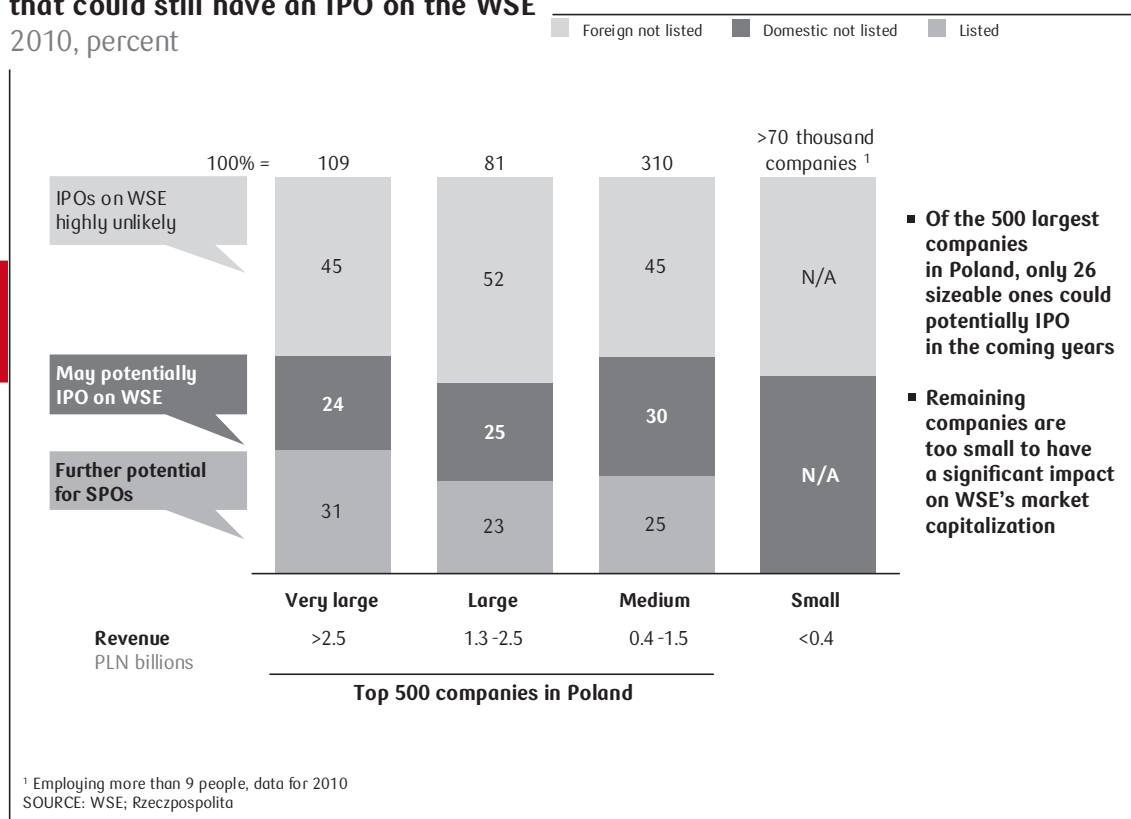
Finally, for private capital, a gradual recovery was assumed, with annual inflows of PLN 2 billion to achieve the pre-crisis level of investment in 2013. Such growth should translate into private capital value of PLN 74 billion by 2015, which would constitute 4 percent of GDP as compared to 5 percent of GDP pre-crisis (in 2007). For non-financial corporations, their share in total market capitalization was kept at the long term average of 6 percent. The numbers in Figure 13 show the estimated sum of capital inflows over the course of the next 5 years.

⁶ Although currently pension funds are allowed to invest 40 percent of their assets in equity, they use only about 90 percent of this limit (about 35 percent). In our calculation we have similarly assumed that only 90 percent of the allowed maximum limit will be used.

Traditional sources of IPOs are drying up

Few very large Polish companies are left
that could still have an IPO on the WSE
2010, percent

Figure 14



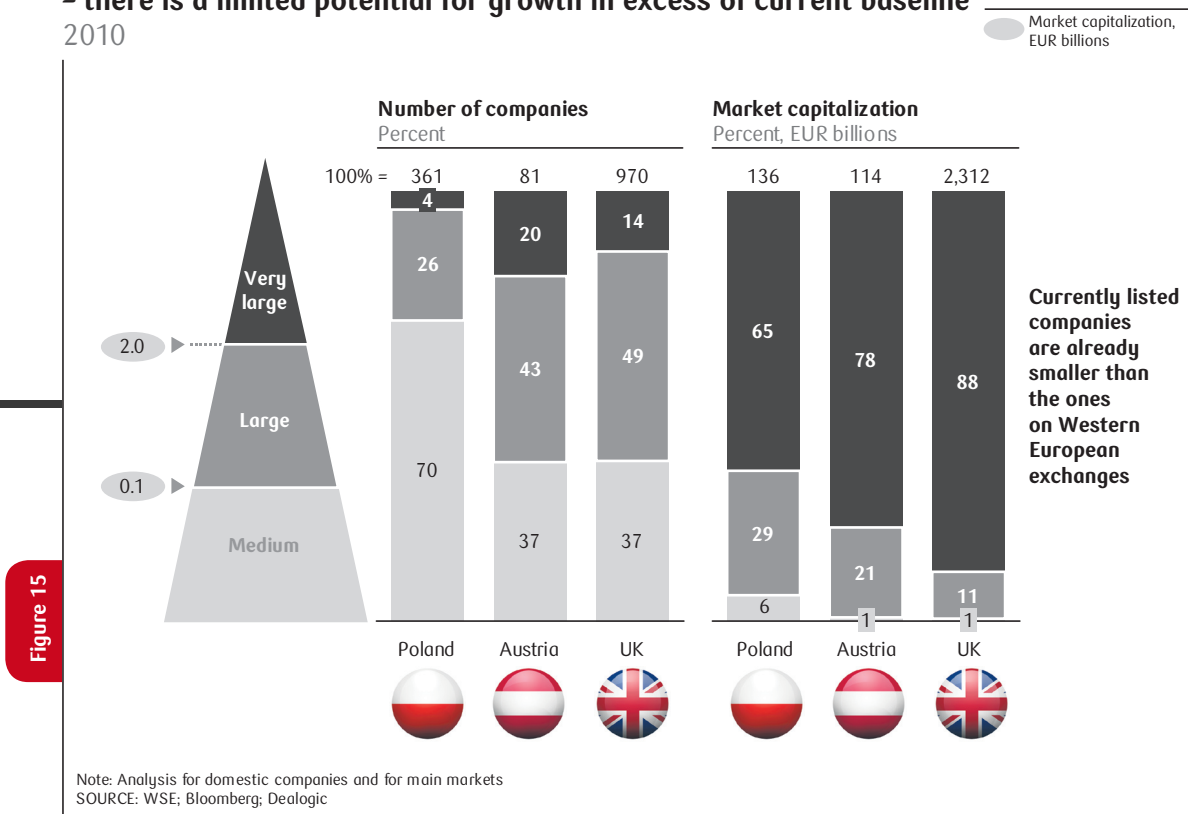
relatively few companies in Poland are large enough to make a visible difference in the size of the stock exchange. Of the largest 500 hundred companies (according to Rzeczpospolita ranking), 130 are already

listed, while 232 are subsidiaries of foreign entities and are thus highly unlikely to enter the WSE independently. That leaves 138 large companies that could make IPOs in Warsaw (Figure 14). And yet, even if all 138 floated 100 percent of their shares on the WSE, the impact

ADDITIONAL DOMESTIC IPOs

Additional IPOs of large domestic companies in the next 5 years are, therefore, relatively unlikely to consume the amount of new capital potentially becoming available in the market.

Most of the companies on WSE are already mid cap
– there is a limited potential for growth in excess of current baseline
 2010



on the total market capitalization of the WSE would be limited. Depending on the valuation assumptions⁷, total market capitalization in this highly optimistic scenario would likely increase by 15-20 percent, or EUR 30 billion to 60 billion over today's level. The actual capitalization increases from IPOs of large domestic companies would very likely be much lower. To put things in perspective, the value of all the IPOs of the past 4 years increased the market cap by 32 percent (14 percentage points of those 32 are solely attributable to 5 large privatizations). Additional IPOs of large domestic companies in the next 5 years are, therefore, relatively unlikely to consume the amount of new capital potentially becoming available in the market. Additional growth is also unlikely to come from IPOs of medium-sized companies, as most of the IPOs are already from that segment. An average CEE company debuting on the WSE had an IPO offer value of EUR 73 million as compared to EUR

GIVEN THAT THE CURRENT GROWTH RATE OF THE WSE MAY NOT BE SUSTAINED THROUGH IPOs OF DOMESTIC COMPANIES, AN OPPORTUNITY MAY EXIST IN NEW ISSUERS FROM ABROAD.

⁷ Range of potential market cap inflow based on: 2010 average market P/E ratio (18.2); 2010 average market price to revenues ratio (0.9).

585 million in the U.K., EUR 583 million in Russia, EUR 447 million in the Czech Republic or EUR 434 million in Bulgaria. The same dynamic can be observed in the current structure of companies on the WSE. WSE IPOs are already clearly skewed towards smaller companies versus stock exchanges in Austria or in the U.K. (Figure 15).

Given that the current growth rate of the WSE may not be sustained through IPOs of domestic companies, an opportunity may exist in new issuers from abroad. Currently, a lower proportion of foreign companies are listed on the WSE than on the stock exchanges of Western Europe. At the same time, the WSE is the only stock exchange in the CEE which has already hosted IPOs of foreign companies from the region. To increase that number in the future, however, the WSE would likely have to compete against the Western European exchanges. The key question to consider, then, is whether the WSE will develop further as a more local stock exchange where foreign companies have IPOs only when they have specific business to do in the country (like, for example, the Czech Republic, Spain or Italy); or alternatively, whether the WSE will more resemble hub stock exchanges (like, for example, the Deutsche Börse or the LSE), and will be in a unique position to attract foreign issuers independently of their connection to Poland. If the WSE develops as a more local exchange, then the numbers of foreign IPOs will likely remain at a stable ratio to domestic IPOs (as we have indeed seen over the past 4 years). If on the other hand the WSE opens up to hub status, then the number of foreign IPOs will likely rise.



*i*

RANKING

BY RZECZPOSPOLITA

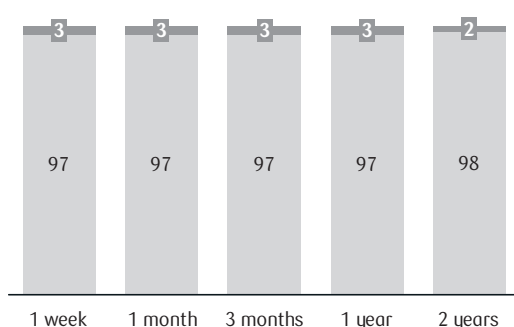
Of the largest 500 hundred companies (according to Rzeczpospolita ranking), 130 are already listed, while 232 are subsidiaries of foreign entities and are thus highly unlikely to enter the WSE independently. That leaves 138 large companies that could make IPOs in Warsaw.

There is only marginal benefit to liquidity from cross-listing as trading volumes on secondary exchanges tend to be low

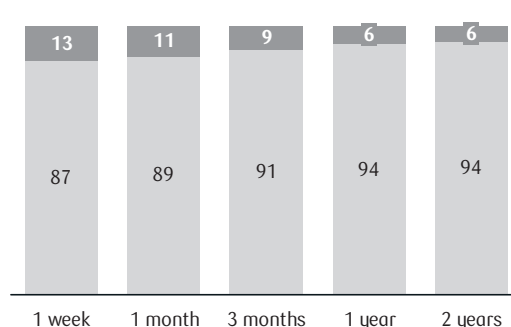
Average daily ADR (American Depositary Receipt) trading relative to total trading¹ post-offering
Percent

■ ADR ■ Ordinary shares

ADR without capital raising



ADR with capital raising



- Trading in ADR is a small fraction of total trading for European companies
- In combination with capital raising, ADR listing attracts more volume but strongly declines with time

¹ Average values for 50 European companies listed on NYSE since 1998
SOURCE: UBS Warburg

RESEARCH SHOWS, HOWEVER, THAT COMPANIES FROM DEVELOPED ECONOMIES WITH WELL-FUNCTIONING, GLOBALIZED CAPITAL MARKETS HAVE LITTLE TO GAIN FROM CROSS-LISTING. IN FACT, A NUMBER OF WESTERN EUROPEAN COMPANIES HAVE RECENTLY DELISTED FROM SECONDARY MARKETS.

OPPORTUNITIES IN CROSS-LISTING OF FOREIGN COMPANIES

In theory, instead of looking for foreign IPOs, the WSE could consider becoming a secondary stock exchange, on which some of the large foreign companies are cross-listed. Research shows, however, that companies from developed economies with well-functioning, globalized

capital markets have little to gain from cross-listing. In fact, a number of Western European companies have recently delisted from secondary markets, citing low trading volumes and no impact on visibility of the companies (number of analysts following the companies have not increased as a result of cross-listing) as the main reasons for delisting⁸.

⁸ Richard Dobbs and Marc Goedhart, "Why Cross-Listing Shares Doesn't Create Value," McKinsey Quarterly, Fall 2008. Companies from emerging markets may derive some limited benefits from cross-listing, but evidence is not conclusive.

Can the WSE attract new issuers from abroad?



Companies look at a number of factors to decide whether an IPO is appropriate for them. These may include funding availability, a desire for change of ownership, or an improvement of corporate governance, as well as other factors⁹. Once the decision to have an IPO is made, additional factors come into play in deciding where to carry it out. Historical reasons loom large of course. Many potential issuers also consider availability of capital and liquidity, cost of entry, and ability to raise their public profile (visibility and perception of corporate governance) when selecting a stock exchange for their IPO¹⁰.

To attract new foreign issuers from the CEE, the WSE would potentially need to perform better on the three dimensions than do its Western European competitors. A survey¹¹ carried out among WSE market participants, including recently IPOed companies, confirms that the two key drivers behind the decision to IPO are: obtaining capital (27 out of 27 respondents marked this as a top-three reason) and improving the company's public profile (corporate governance and reputation – 23 respondents marked this as a top-three reason). Cost of entry seems to also play an important role; after availability of capital, cost was mentioned most as the factor at play when choosing a financing method¹².

A SURVEY CARRIED OUT AMONG WSE MARKET PARTICIPANTS, INCLUDING RECENTLY IPOED COMPANIES, CONFIRMS THAT THE TWO KEY DRIVERS BEHIND THE DECISION TO IPO ARE: OBTAINING CAPITAL AND IMPROVING THE COMPANY'S PUBLIC PROFILE.

AVAILABILITY OF CAPITAL AND LIQUIDITY

While the existing hub stock exchanges may continue to attract large amounts of capital, the WSE in the coming years may be in a relatively good position to compete for the CEE issuers. Given the relative shortage of traditional sources of IPOs on the WSE, excess capital may be available for investment on the WSE in the coming years. Many large international companies may find that the WSE does not have suf-

ficient funds for their purposes, but if history is any guide, there will be sufficient capital for any CEE company considering an IPO. All the CEE companies that floated on the LSE and the Deutsche Börse over the last 4 years,

for example, were smaller than the top three companies floated in Poland. Similarly, the largest IPO on the MICEX would have ranked only number 14 on the WSE. Liquidity may prove to be a bigger obstacle to potential issuers. Whereas 2 survey respondents viewed liquidity as a WSE advantage over other European stock exchanges, 11 recognized it as a weakness, making liquidity the second most-cited WSE disadvantage. Indeed, total WSE liquidity (38 percent) does not compare well with the exchanges in the U.K. (64 percent), Switzerland (65 percent), Scandinavia (NASDAQ OMX Nordic – 81 percent), Germany (135 percent) or Spain (143 percent)¹³. It should be noted, however, that the low liquidity is partly caused by the relatively large share of strategic and government

⁹ At the same time, many other considerations, including the search for a strategic investor or availability of funds from other sources, can lead a company to postpone an IPO.

¹⁰ This is not a comprehensive list and does not apply to every company. Each potential issuer should consider their particular situation before making a decision on whether and where to have an IPO.

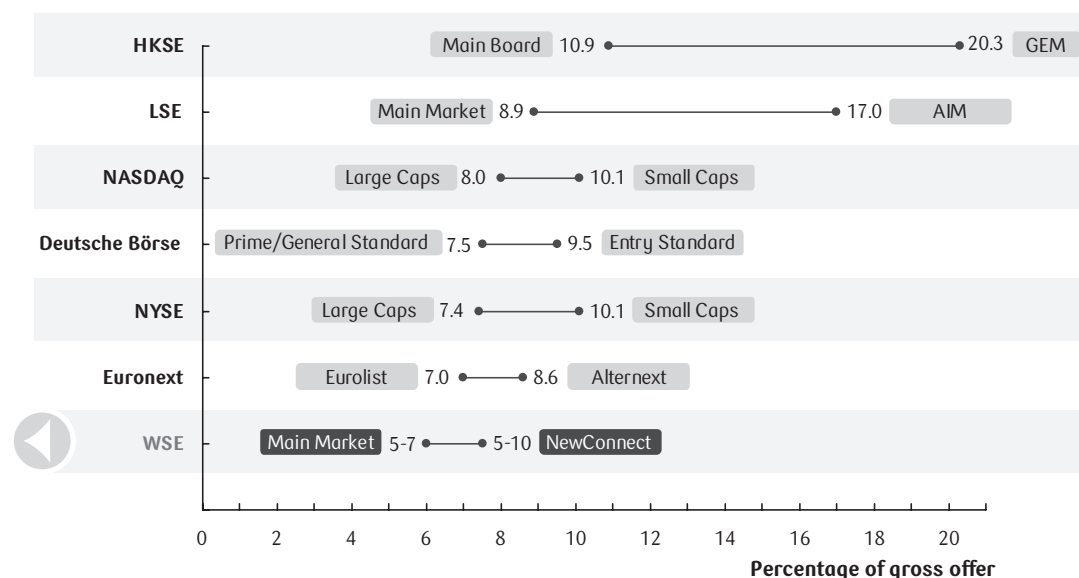
¹¹ For methodology and detailed results, please refer to the Appendix.

¹² Sum of answers to questions about what makes an IPO less or more attractive as compared to other ways of financing: 26 mentions as top-three reasons for or against IPO among 27 participants; access to capital was mentioned 26, 23 and 21 times for three questions related to capital size, speed of obtaining capital, and ease of obtaining capital, respectively.

¹³ Liquidity is defined as turnover to the market capitalization ratio; data for 2010 from Eurostat.

Total costs of listing are lower at WSE than at LSE and in line with those at Deutsche Börse

Ranges of total initial flotation costs for main and alternative markets



SOURCE: For Poland: estimates based on interviews with market participants (2010); for remaining markets: Listing Beauty Contest – A Comparative Cost Analysis of Six Global Exchanges (2008)

investment in WSE capitalization. Calculated on the free float alone, WSE liquidity could increase to nearly 100 percent¹⁴. Ultimately, however, perceptions of market participants are what matters.

COST OF ENTRY

Total cost of entry to a stock market includes direct costs such as IPO underwriting fees, initial listing fees, professional fees, compliance costs, and advertising and other costs related to the IPO, as well as indirect costs, such as underpricing and loss of proprietary information. WSE total costs seem comparable to those of the Euronext, NYSE, Deutsche Börse or NASDAQ and are visibly lower than the LSE's and HKSE's (Figure 16). Survey respondents considered the WSE on average to be more attractive from a cost perspective than other European stock ex-

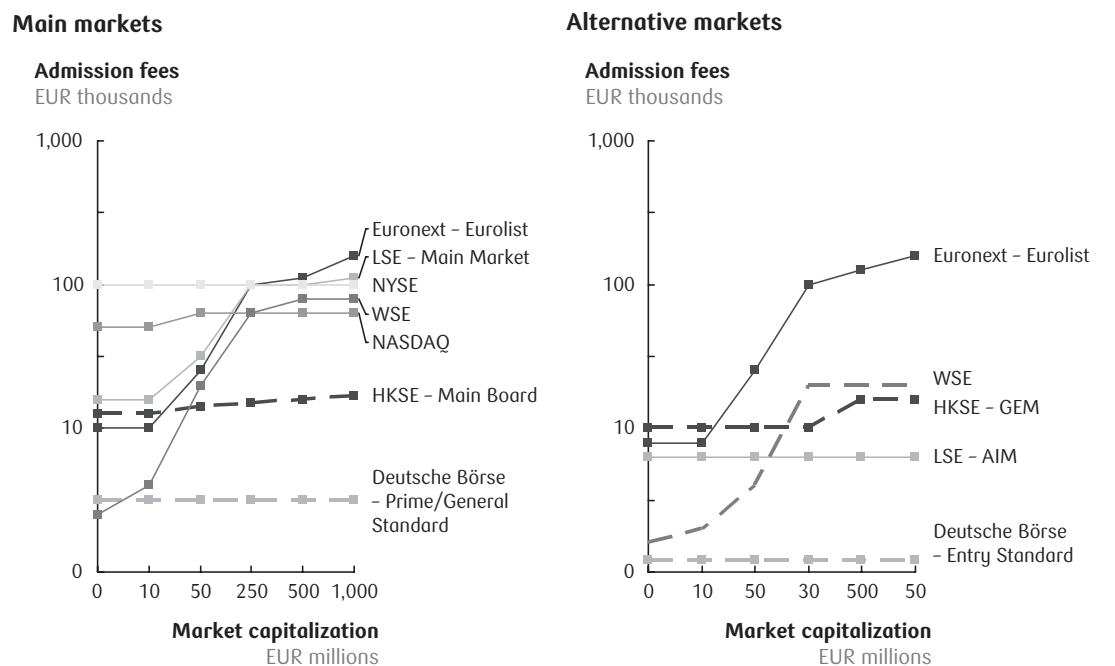
WSE TOTAL COSTS SEEM COMPARABLE TO THOSE OF THE EURONEXT, NYSE, DEUTSCHE BÖRSE OR NASDAQ AND ARE VISIBLY LOWER THAN THE LSE'S AND HKSE'S. SURVEY RESPONDENTS CONSIDERED THE WSE ON AVERAGE TO BE MORE ATTRACTIVE FROM A COST PERSPECTIVE THAN OTHER EUROPEAN STOCK EXCHANGES.

changes: 7 of 27 pointed to cost as a top-three WSE advantage over other stock exchanges and only 2 pointed to cost as a top-three WSE disadvantage. Admission costs for the WSE are in line with European average. Similarly, the cost of underpricing is a European average (Figure 18). What may thus be driving down the overall cost of IPOs on the WSE are the costs of IPO-related professional services in Poland.

¹⁴ Free float is defined as the percentage of shares not belonging to shareholders with over 5 percent ownership (if the shareholders are not investment or pension funds or depository banks); based on 2006 data (overall liquidity for Poland of 31 percent), liquidity counted on free float could be in the range of 100 percent (assuming that the majority of turnover is actually on domestic free float shares) (source: WSE Onet.pl; Datastream; McKinsey team analysis).

Direct costs of listing at WSE are lower than at LSE, but higher than at Deutsche Börse

Figure 17



SOURCE: For Poland: McKinsey Team calculation based on WSE data (2011); for remaining markets: Listing Beauty Contest - A Comparative Cost Analysis of Six Global Exchanges (2008)

IN REALITY, THE WSE MAY PROVIDE SIMILAR VISIBILITY AND REQUIRE THE SAME GOVERNANCE STANDARDS FROM THE ISSUERS AS DO THE EXCHANGES OF WESTERN EUROPE.

ABILITY TO RAISE ISSUER'S PUBLIC PROFILE

In reality, the WSE may provide similar visibility and require the same governance standards from the issuers as do the exchanges of Western Europe. In these areas, however, perceptions count for a lot, and the survey responses reflect this factor. Seven respondents recognized legal compliance required for an IPO as one of the WSE's top three advantages against other European exchanges, but twice

as many respondents (14) pointed to the same feature as being one of the top three disadvantages of WSE - the single most indicated disadvantage. Their perception has certain implications. McKinsey research indicates that issuers from emerging markets are willing to pay a premium for perceptions of good corporate governance and consequently may chose to have their IPO on exchanges such as the LSE or NYSE¹⁵.

¹⁵ Carlos E. Campos, Roberto E. Newell, and Gregory Wilson, "Corporate governance develops in emerging markets," McKinsey Quarterly, Winter 2002.

Issuers debuting at WSE experienced less dilution of ownership than at LSE

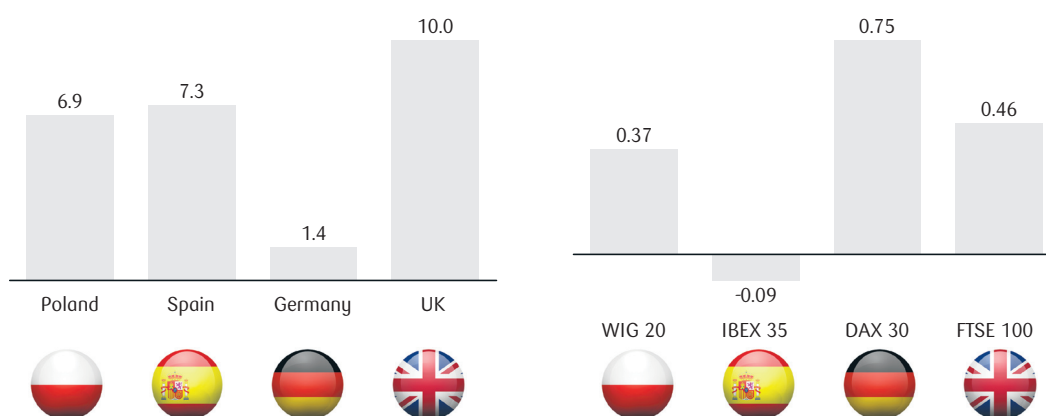
Percent

Compared to Europe-wide index, WSE IPOs rank mid-range in terms of extra performance...

... and this should not be driven by market performance alone

30-day over-performance of new IPOs vs. MSCI All Countries Europe Index, 2007-2010 average

Average 30-day¹ performance of national indices vs. MSCI All Countries Europe Index



¹ Beginning and end of each month, simple average for 48 months
SOURCE: Dealogic; Bloomberg; McKinsey analysis

SUFFICIENT CAPITAL SHOULD BE AVAILABLE ON THE WSE AND THE COSTS OF LISTING SHOULD BE IN LINE WITH THE EUROPEAN STANDARDS

All in all, competition against some of the Western European stock exchanges may prove to be a challenging undertaking for the WSE. Though, as presented above in previous chapters, sufficient capital should be available on the WSE and the costs of listing should be in line with the European standards, the WSE would still need to convince potential foreign CEE issuers and investors that the liquidity of

the exchange will be sufficient and that issuers' public profile could be as successfully increased in Warsaw as it could be in London or in Frankfurt. Both of those elements may be difficult to address in the short term and may require a long-term perspective. Decisions such as launching a WIG-Ukraine Index confirm that the Warsaw Stock Exchange is taking the long-term view.

Employing available capital in financing currently listed companies



POs form a larger proportion of the total market capitalization on the WSE than in the Western European markets (Figure 19). This is because the WSE is still in a strong growth phase and market capitalization is smaller than it is on the Western European exchanges.

Considering the young age of the WSE, we could, however, expect fewer SPOs than in Western Europe. On a young stock exchange, many companies have raised capital in re-

cent IPOs and for them it is too soon to be going back for a secondary offering. However, the proportion of SPOs to market capitalization in Warsaw was still relatively high. The likely reason is that both IPOs and SPOs on the WSE are heavily driven by privatization. Many of the large domestic state-owned companies that have already IPOed on the WSE have not yet been fully privatized. In fact, Treasury still holds on average 43 percent of the shares in listed companies with partial state ownership¹⁶. The state has partial ownership in 13 of the top 80 companies on WSE. If all the shares owned by the Treasury were floated on the WSE, this would increase investment opportunities to other investors by roughly PLN 110 billion. That impact would be comparable to the imagined collective impact of all large non-listed state-owned companies having IPOs on the WSE. In 2011, PKO BP will launch the single largest SPO in WSE's history. It will involve 15-25 percent of company value (PLN 8 billion-15 billion, or 1-2 percent of the total WSE market cap today); the state will be left with

IF ALL THE SHARES OWNED BY THE TREASURY WERE FLOATED ON THE WSE, THIS WOULD INCREASE INVESTMENT OPPORTUNITIES TO OTHER INVESTORS BY ROUGHLY PLN 110 BILLION.

15-25 percent of the shares¹⁷. The extent to which the state will continue to exit the largest companies cannot be easily predicted but it could be one of the viable ways of employing some of the capital available.

COMMERCIAL DEBT

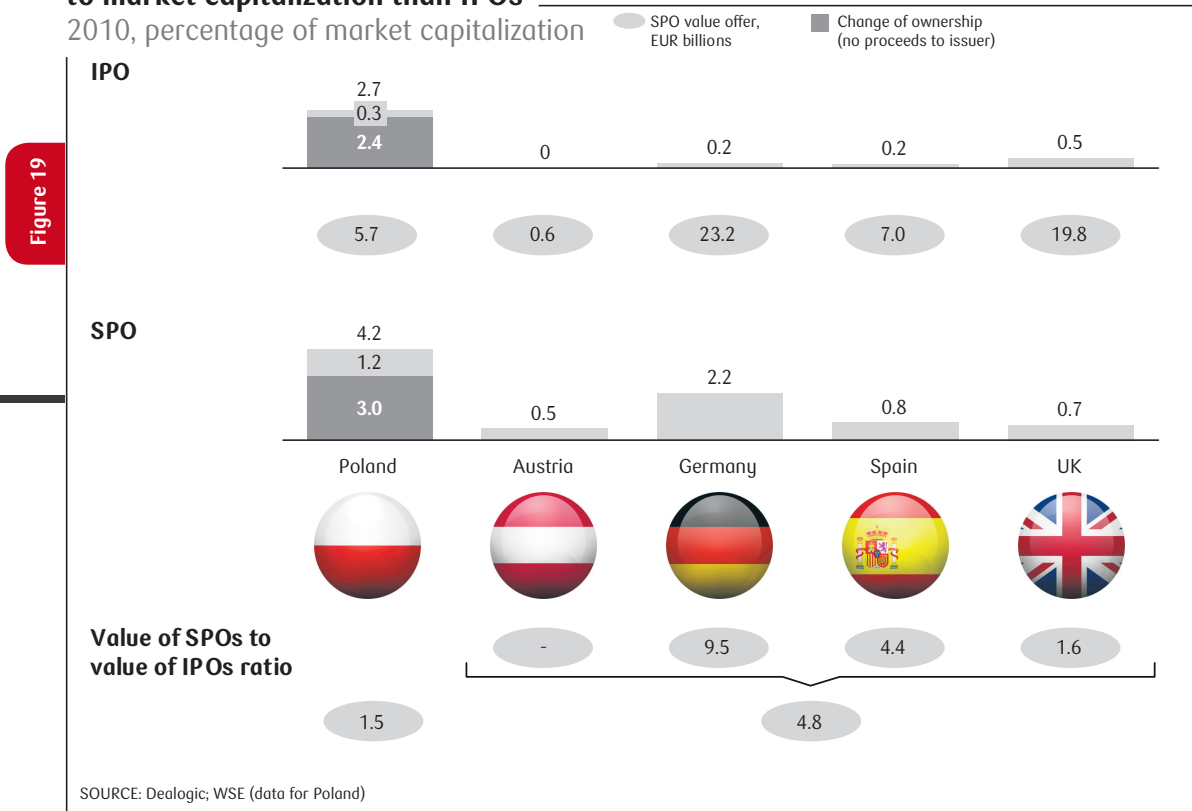
Currently, the volume of tradable commercial debt in Poland is very low compared to other European markets, east and west (Figure 20). If today the WSE possessed the ratio of commercial bonds to market capitalization prevailing in Prague or Budapest, the value of commercial bonds on the WSE would increase from its present EUR 0.3 billion to EUR 25 billion-30 billion. If the ratio in Poland were commensurate with the average ratio in France, Spain and Germany, the value of commercial bonds on the WSE could be as much as EUR 40 billion. The WSE took the first step in commercial debt trading by launching a separate market called Catalyst for non-Treasury debt instruments in September 2009, but significant potential may still remain.

¹⁶ Based on analysis of the top 80 companies (by market cap) listed on WSE.

¹⁷ Current commitment by the Ministry of Treasury.

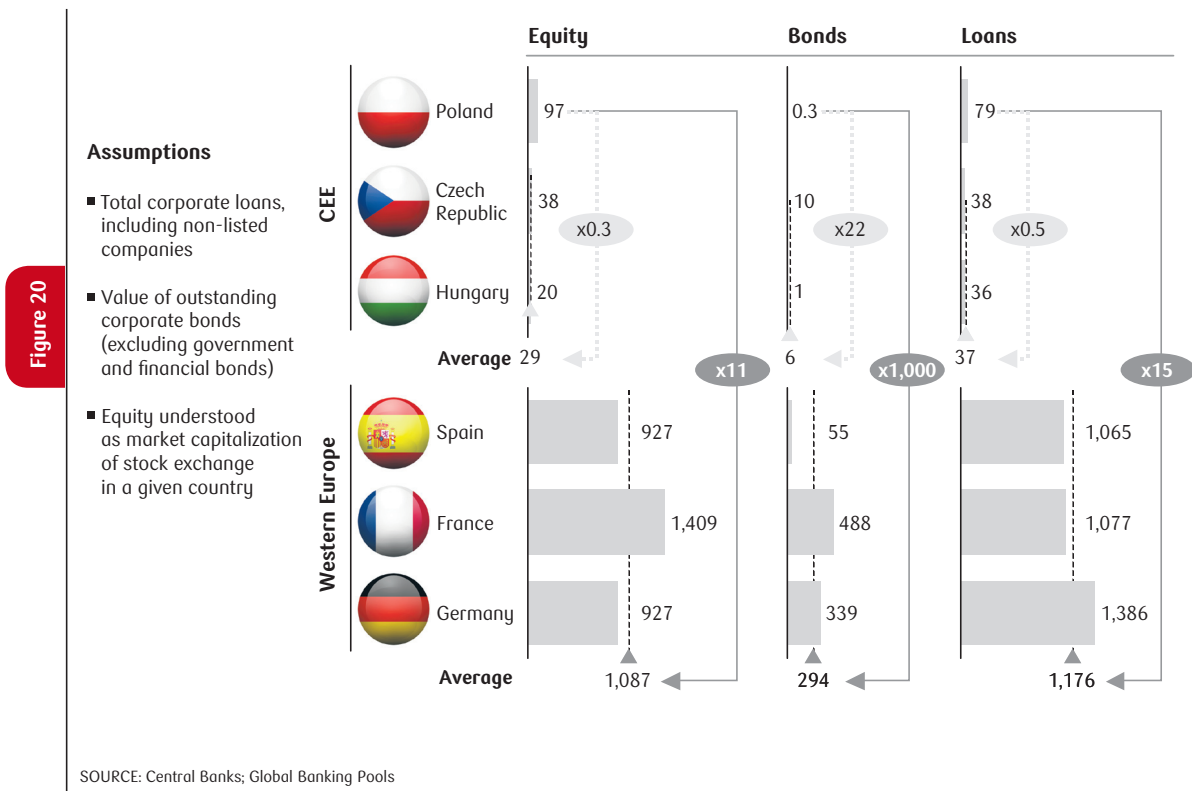
As WSE matures, SPOs are likely to become more important to market capitalization than IPOs

2010, percentage of market capitalization



Composition of corporate financing across Europe

2009, EUR billions



Final remarks



Al in all, the WSE may be able to sustain its access to significant and increasing amounts of capital in the coming years, while at the same time it may experience fewer IPOs from the current sources. To continue growing and to ensure that the capital available is invested in Warsaw, the WSE should foster new sources of capital demand. Further privatization of non-listed companies may at most increase the market cap by an additional 15-20 percent. Continued privatization of the already listed firms could help double that number. Contributions from either of those sources, however, are hard to estimate, as they depend entirely on the political decision-makers. Additional growth in the mid-cap segment is also unlikely, as most of the IPOs already come from that size segment. Foreign IPOs could prove to be good investments for the available capital, although attracting foreign issuers to Poland may be a challenge. To pull in issuers from other CEE countries to Warsaw, the WSE would need to convince the issuers of its competitiveness over the other European stock exchanges on availability of capital, capital turnover, cost of listing, and ability to raise issuers' public profile. Currently, the WSE matches competitors on issues of capital availability and cost of listing but trails on turnover and ability to raise issuers' public profile. Growth of the commercial bonds market may also

ALL IN ALL, THE WSE MAY BE ABLE TO SUSTAIN ITS ACCESS TO SIGNIFICANT AND INCREASING AMOUNTS OF CAPITAL IN THE COMING YEARS, WHILE AT THE SAME TIME IT MAY EXPERIENCE FEWER IPOs FROM THE CURRENT SOURCES. TO CONTINUE GROWING AND TO ENSURE THAT THE CAPITAL AVAILABLE IS INVESTED IN WARSAW, THE WSE SHOULD FOSTER NEW SOURCES OF CAPITAL DEMAND.

prove a good outlet for the capital available on the WSE, with an impact potentially as large as that of continued privatization. The WSE has already begun investing in the development of that market. It is relatively unlikely that a single source of capital demand will be able to replace the current stream of IPOs by large domestic companies. What we are more likely to see in the coming years is the increasing importance of secondary offerings as well as the commercial bonds market. Securing IPOs from issuers from other CEE countries may be possible, but to do this the WSE will need to compete effectively against other players.

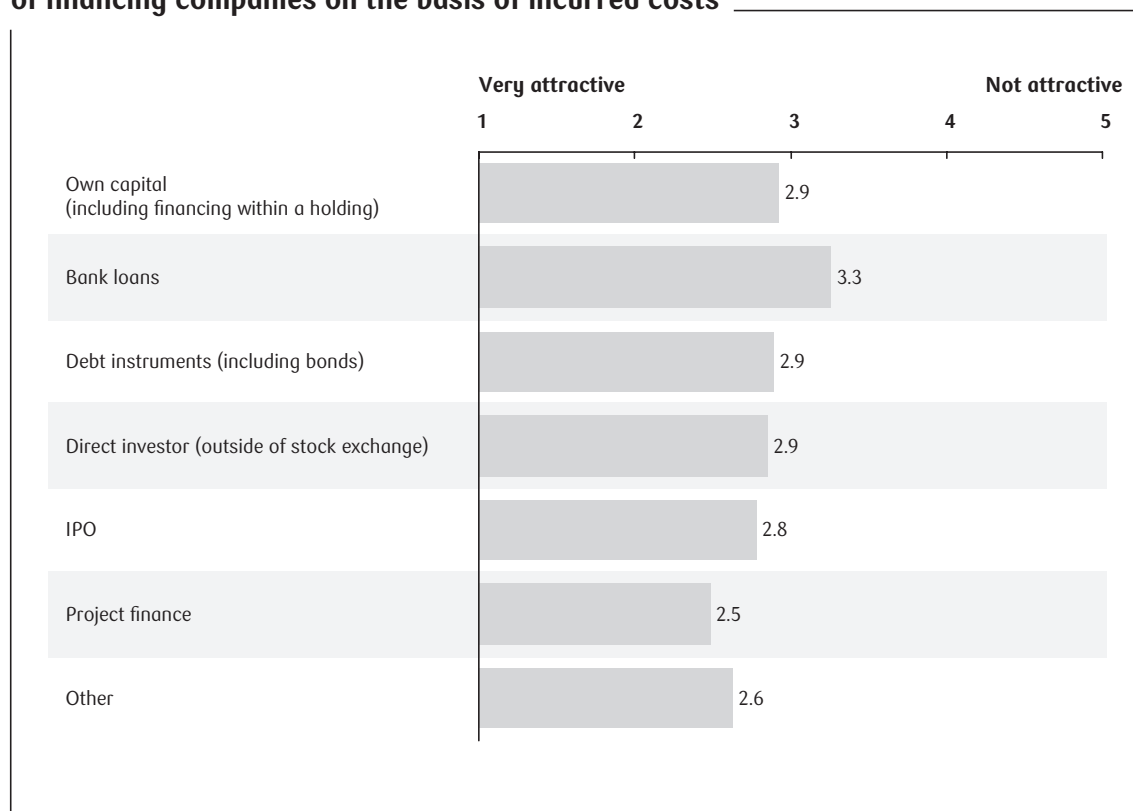
POTENTIAL FROM FURTHER PRIVATIZATION

Further privatization of non-listed companies may at most increase the market cap by an additional 15-20 percent. Continued privatization of the already listed firms could help double that number.

Appendix:

Survey result

Please evaluate different ways
of financing companies on the basis of incurred costs



In the weeks preceding the CEE IPO Summit, 120 market participants were invited to respond to an online survey about their experience with the WSE. The respondents included the representatives of mutual funds, brokerage houses, pension funds, banks, stock exchanges, and issuers that debuted on WSE in the past 4 years. As of May 8, 2011, 27 responses

have been recorded (including 14 companies which recently IPOed on the WSE and 13 other market participants). The combined results are presented in the following series of exhibits. Due to a limited response rate (the survey was conducted in the last weeks of April and beginning of May when many people were on holidays), the results can be treated as directional only.

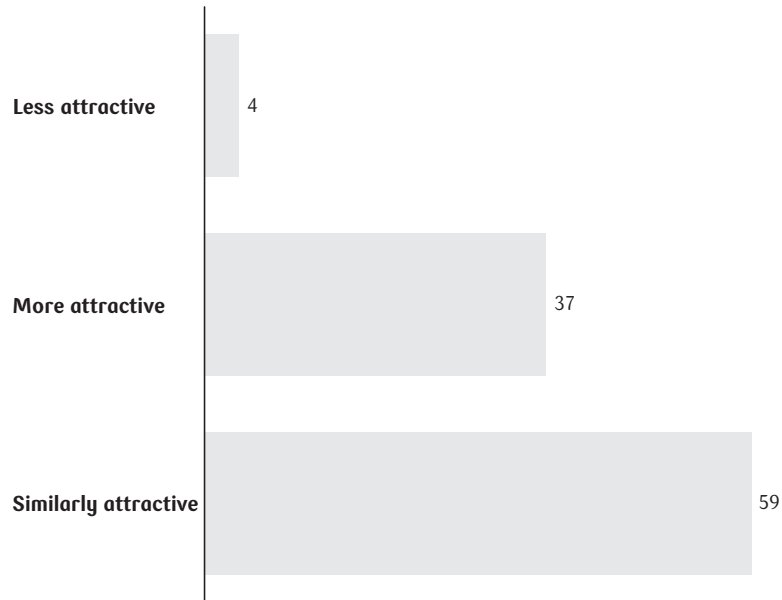


IN THE WEEKS PRECEDING THE CEE IPO SUMMIT, MARKET PARTICIPANTS WERE INVITED TO RESPOND TO AN ONLINE SURVEY ABOUT THEIR EXPERIENCE WITH THE WSE. THE RESPONDENTS INCLUDED THE REPRESENTATIVES OF MUTUAL FUNDS, BROKERAGE HOUSES, PENSION FUNDS, BANKS, STOCK EXCHANGES, AND ISSUERS THAT DEBUTED ON WSE IN THE PAST 4 YEARS.

How would your perception of IPO attractiveness (in terms of costs) change within a 5-year horizon?

Please compare with other ways of financing and choose only one answer

Percent

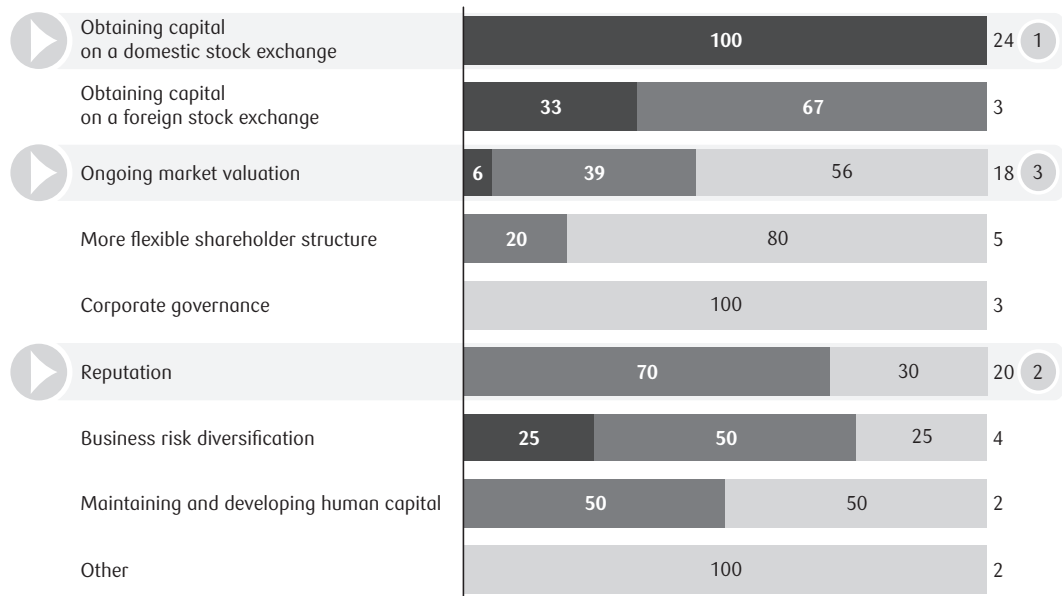


Why do companies decide to go public (IPO)?

Please choose 3 main reasons and rate them on 1-3 scale

Percent

■ The most important reason ■ Second most important reason
■ Third most important reason

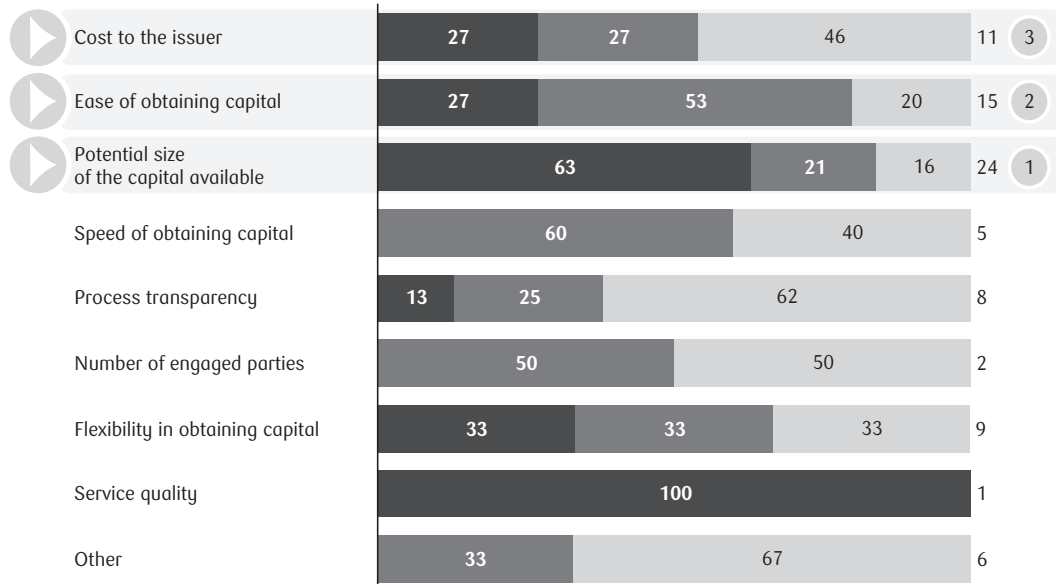


What makes IPO more attractive compared to other ways of financing?

Please choose 3 main reasons and rate them on 1-3 scale

Percent

■ The most important reason
■ Second most important reason
■ Third most important reason

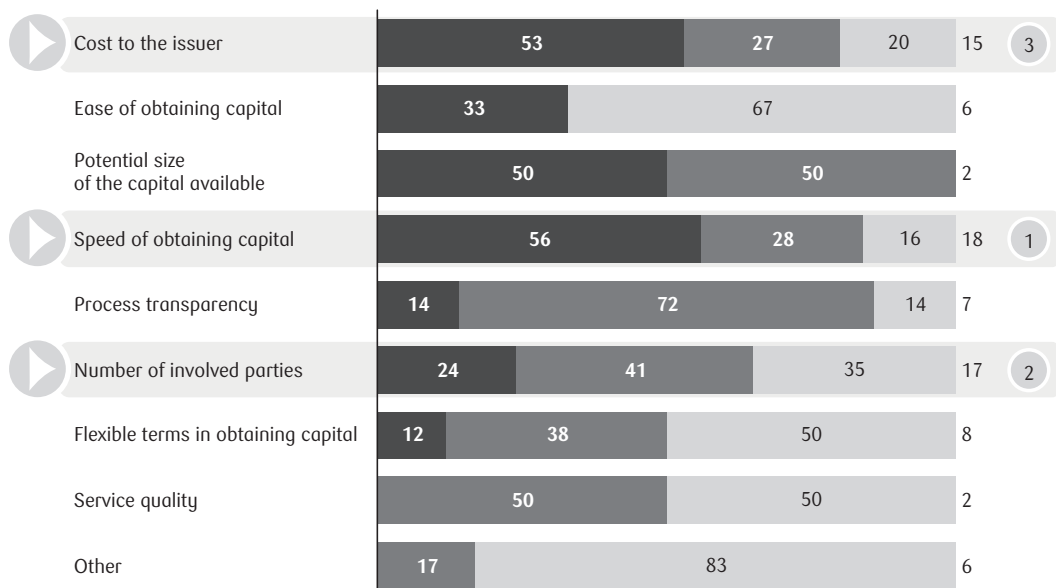


What makes IPO less attractive compared to other ways of financing?

Please choose 3 main reasons and rate them on 1-3 scale

Percent

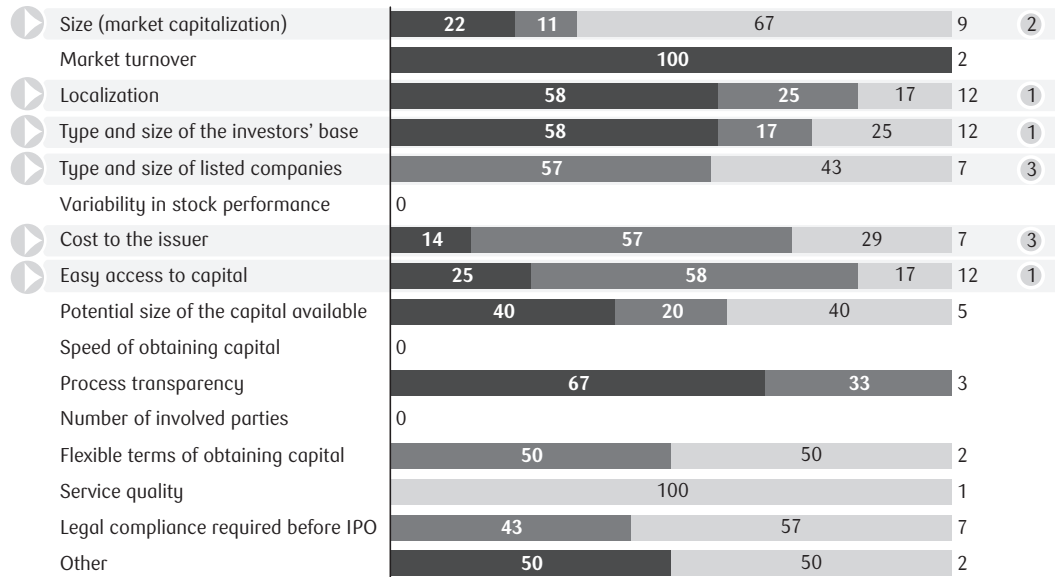
■ The most important reason
■ Second most important reason
■ Third most important reason



What are the advantages of an IPO on WSE as opposed to other European exchanges?

Please choose 3 main advantages and rate them on 1-3 scale,
Percent

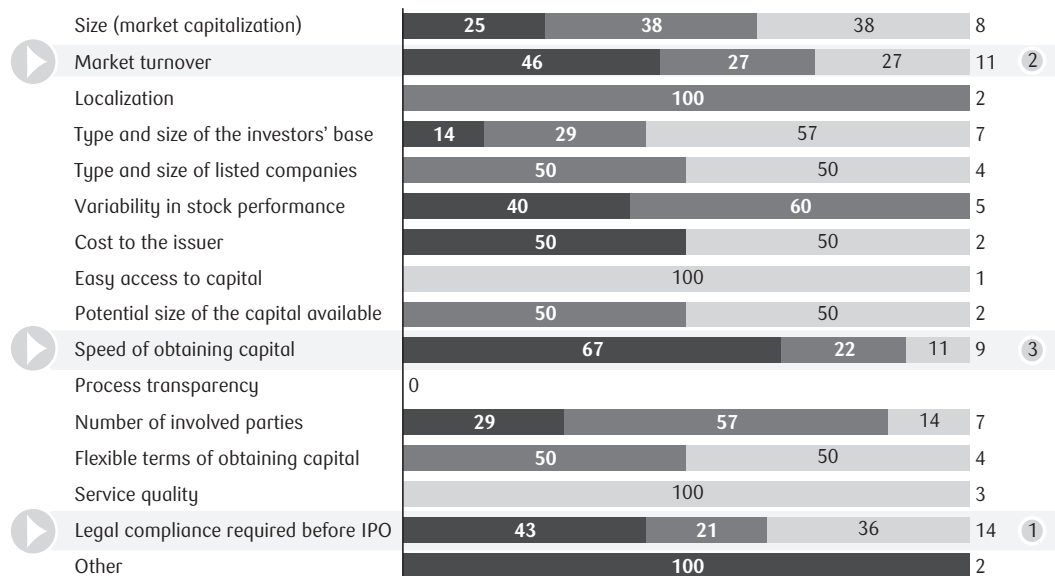
■ The most important reason
■ Second most important reason
■ Third most important reason



What are the disadvantages of an IPO on WSE as opposed to other European exchanges?

Please choose 3 main disadvantages and rate them on 1-3 scale
Percent

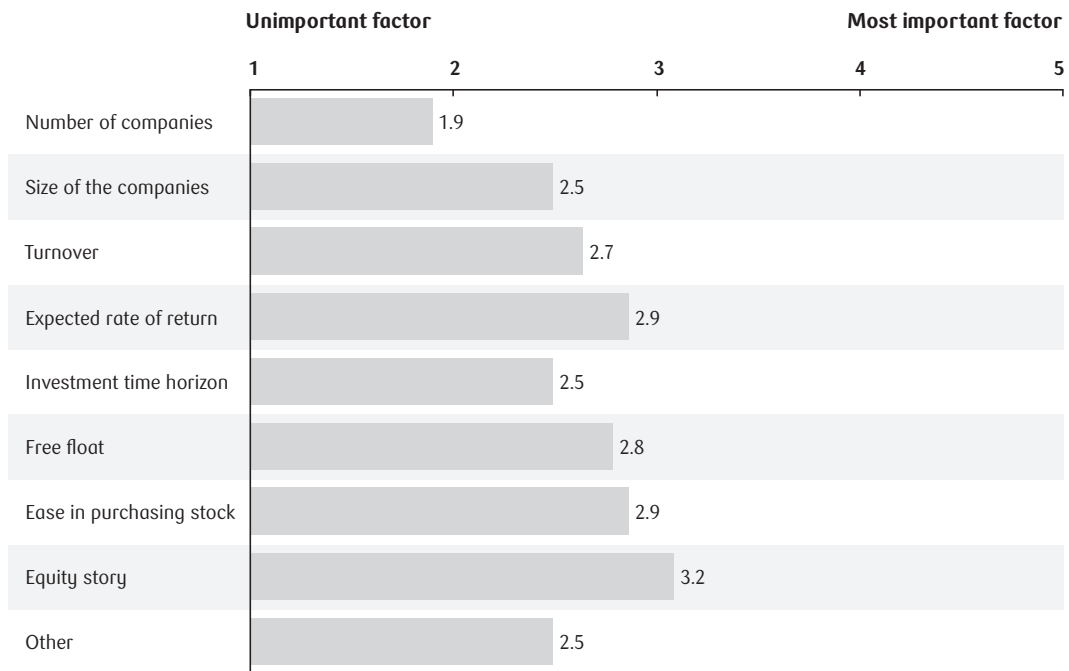
■ First most important reason
■ Second most important reason
■ Third most important reason





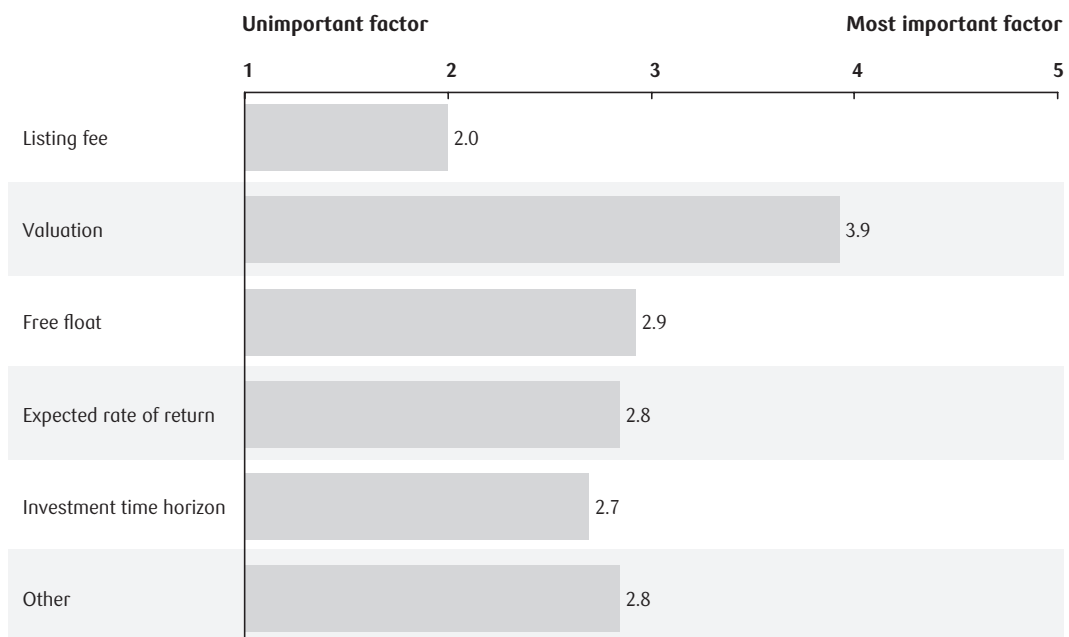
What factors do you take into consideration when comparing attractiveness of Primary against Secondary Market on WSE?

Please rate each factor on 1-5 scale



What factors drive rate of return on the Primary Market on WSE?

Please rate each factor on 1-5 scale











Bank Polski