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Open Pension Funds market after reform of 2014 – the global perspective[1]

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Abstract: The beginning of the second millennium coincided with major pension reforms in many countries. This global movement also included Poland where a pension market was created in 1999. The first 15 years were a period of expansion of Open Pension Funds market in Poland. This changed with the Reform of 2014, which brought new standards applicable to OFE investment policy. Half of the assets were transferred to Social Insurance Institution (ZUS) and legal investment limits for Open Pension Funds undergone a major changes. Evolution of investment policy of Open Pension Funds during last fifteen years is analyzed with special emphasis on the global perspective.

Keywords: social security, public pensions, retirement plans, private pensions, business and securities law, non-bank financial institutions, financial instruments, institutional investors.
JEL: H55, J32, K22, G23

1. Introduction

Functioning of Open Pension Funds enabled accumulation of substantial long term capital in Poland. After the first year of functioning of the market the accumulated pension capital was only 2.25 billion (bn) PLN. In just 15 years (end of 2013) this sum increased more than hundredfold to 299 bn PLN. Because of that the Open Pension Funds became an important element and a stimulus of the development of financial markets in Poland.

Together with the rest of Central and Eastern Europe countries, Poland was affected by the global financial crisis that caused serious fiscal problems. This endangered sustainability of

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Polish Pension System. Bad economic situation forced reform of the system of Open Pension Funds in order to improve situation of public finances in Poland and to increase revenues of Social Insurance Institution (ZUS).

Polish Parliament voted Act of 6 December 2013 on amendment of certain laws relating to rules of paying out retirement pensions from assets accumulated in Open Pension Funds (Journal of Laws of 2013, item 1717). According to this legal act Open Pension Funds were forced to transfer 51.5% of their accounting units to Social Security Institution on February 3rd 2014. Total value of transferred assets was 153 151.2 mln PLN. Nominal value of transferred securities was 146 bn PLN. This included 130 bn PLN - Treasury Bills, 15.6 bn PLN - Highway Bonds, 200 mln PLN – debt securities guaranteed or backed by the State Treasury or the National Bank of Poland. Debt securities transferred to Social Security Institution were redeemed by the Ministry of Finances.

Partial nationalization of Open Pension Funds' assets led to reduction of Polish public debt by 145 bn PLN what constitutes 8.5% of GDP. Nevertheless, given the generous indexation of pension rights in the public part of the pension system together with the negative demographic trends, this positive fiscal effect is just temporary.

Together with the transfer major changes were introduced in legal investment limits for Open Pension Funds. Therefore the aim of this article is to analyse the changes on the Open Pension Fund market, caused by the reform of 2014. This includes description of the development of the market, thorough analysis of legal changes concerning investment limits and finally performance of Open Pension Fund market from the global perspective.

2. Development of the Open Pension Fund market

During the first nine years assets of Open Pension Funds grew steadily and they reached their peak level in October 2007. This month the assets of Open Pension Funds set their first record of 142.8 bn PLN. The financial meltdown of 2008 led to a major crisis of the Polish pension market. Despite of the constant inflow of contributions to Open Pension Funds, their net assets shrunk to just 130.87 bn PLN in February 2009 (Banaszczak-Soroka, Jakubowski 2009). Thanks to the rapid recovery in the global financial markets the situation in the Polish pension market improved (Table 1). Open Pension Funds market grew almost 175 bn PLN between February 2009 and November 2013 reaching its peak level of 305.8 bn PLN.

This growth is largely explained by the good performance of financial markets (both in Poland and around the world) after the end of the first wave of the financial crisis. It shows that one of the most important factors that influence the size of the Polish pension market is the situation of the financial markets. The first nine years of functioning of the Polish pension market coincided with the bull market period in the global economy that lasted since 2003 to 2007. Finally the growth of Open Pension Funds market was stopped at the beginning of 2014 when half of the pension assets were transferred to Social Insurance Institution.

Table 1. Open Pension Fund assets (millions PLN)

Year	Net Assets Value
1999	2 254.84
2000	9 921.25
2001	19 409.42
2002	31 564.65
2003	44 833.09
2004	62 626.94
2005	86 078.78
2006	116 563.26
X 2007	142 800.99
2007	140 030.89
2008	138 261.45
II 2009	130 867.80
2009	178 630.09
2010	221 251.12
VI 2011	236 802.43
2011	224 701.82
2012	269 596.47
2013	299 272.47
2014	149 054.60

Source: Monthly Bulletins of Polish Financial Supervision Authority '*Open Pension Funds' market*'.

The development of Open Pension Funds market would not be possible without a steady and substantial inflow of capital to the second pillar of the Polish pension system. Till 2014 compulsory contributions transferred by the Social Insurance Institution from workers gross earnings constituted major part of capital gathered and managed by Open Pension Funds (Table 2). For long time outflows of capital from the Polish pension market were very limited, since the number and value of the private pension benefits were very low. For long time big inflows matched with very limited outflows of capital were the major sources of pension market growth in Poland in the first fifteen years (Jakubowski 2012).

This pattern was first changed in 2011 when contribution to Open Pension Funds was lowered from 7.3% to 2.3% of gross salary. Finally this pattern was reversed at the beginning of 2014 when contribution to Open Pension Funds became voluntary. Since that moment insured citizens are enabled to choose if they still want to pay their pension contribution both to Open Pension Fund and Social Insurance Institution or just and only to Social Insurance Institution. These two changes led to significant drop in the value of Open Pension Funds' contributions.

Table 2. Contributions and net assets of Open Pension Funds 1999-2014

Data	Net Assets	Total Contributions	Annual Contributions
1999	2.25		
2000	9.92	9.89	
2001	19.41	18.60	8.71
2002	31.56	28.14	9.55
2003	44.83	38.45	10.30
2004	62.63	49.89	11.44
2005	86.08	63.92	14.03
2006	116.56	80.10	16.17
2007	140.03	97.84	17.74
2008	138.26	118.79	20.94
2009	178.63	140.30	21.52
2010	221.25	163.46	23.16
2011	224.72	179.21	15.75
2012	269.60	184.33	8.41
2013	299.27	198.68	11.05
2014	148.45	203.20	4.53

Source: Annual Bulletins of Polish Financial Supervision Authority '*Open Pension Funds' market*'.

The comparison of the total pension assets with the Gross Domestic Product shows the very rapid growth of the pension market in relation to the size of the Polish economy. At the very beginning of the pension reform the pension asset to GDP ratio was just 1.33%. Ten years later it was already 15.65% and at the end of 2013 it was 18.3% (Table 3). This indicates how important element of the Polish economy pension savings had become. This accumulation of capital enabled fast development of the Polish financial markets and turned the Warsaw Stock Exchange into a local financial centre for Central and Eastern European enterprises. This development was reversed together with the transfer of half of Open Pension Funds' assets to Social Insurance Institution. The transfer lowered OFE asset to GDP ratio to the level of just 8.8%. Limited enrolment of new customers to Open Pension Funds together with lower inflow of contributions to these funds might hamper fast development of local financial markets.

Table 3. Open Pension Funds' assets to GDP ratio

Year	Assets as % of GDP
2000	1.24%
2001	2.41%
2002	3.77%
2003	5.25%
2004	6.66%
2005	8.74%
2006	10.96%
2007	11.86%
2008	10.84%
2009	13.33%
2010	15.65%
2011	14.70%
2012	16.89%
2013	18.30%
2014	8.82%

Source: Own calculation based on data from: Annual Bulletins of Polish Financial Supervision Authority '*Open Pension Funds' market*'; Statistical Yearbooks of Polish Central Statistical Office

3. The Polish pension market in the global context

From the global perspective in the middle of the second decade the Netherlands had the highest ratio of pension assets to GDP – 166%, followed by the United States of America– 127% and Switzerland – 121 % (Table 4). During the first fifteen years of the second millennium, the pension assets to GDP ratio grew the most in the Netherlands – 52% and Australia - 43%. Poland with 17% growth between year 2000 and 2013 was also among the fastest growing pension markets in relation to GDP. This growth was reversed in 2014 together with the transfer of half of the Open Pension Funds' assets to Social Insurance Institution.

It is worth noting that the Polish pension market is still bigger than the French, considering total assets to GDP ratio. The reason behind that is lack of private and mandatory pension funds in France. This country still relies heavily on the public pension system that is financed through pay-as-you-go method. While private pension programs based on capital funding have rather limited scope.

Table 4. Total pension assets to GDP ratio

COUNTRY	2000	2010	2013	2014
Netherlands	114%	134%	170%	166%
United States	102%	104%	113%	127%
Switzerland	124%	126%	122%	121%
Britain	85%	101%	131%	116%
Australia	70%	103%	105%	113%
Canada	92%	73%	80%	85%
South Africa	51%	72%	67%	69%
Japan	52%	64%	65%	60%
Ireland	52%	49%	59%	54%
Hong Kong	18%	38%	41%	41%
Germany	10%	14%	14%	14%
Brazil	12%	17%	13%	12%
Poland	1%	16%	18%	9%
France	6%	5%	6%	6%

Source: Own calculation based on data from: Annual Bulletins of Polish Financial Supervision Authority '*Open Pension Funds' market*'; Statistical Yearbooks of Polish Central Statistical Office; Towers Watson '*Global Pension Asset Study 2015*' (TW 2015).

The situation of the Polish pension market looks completely different when the size of total pension assets is measured in USD. From this point of view the Polish pension market is still insignificant in the global perspective. The United States remains the largest market in terms of pension assets (more than 22 trillion USD). It is followed by the United Kingdom (more than 3 trillion USD) and Japan (almost 3 trillion USD). The smallest markets are, in descending order, France (171 billion USD), Ireland (132 billion USD), Hong Kong (120 billion USD) and Poland (42 billion USD) (Table 5).

Table 5. Total pension assets (USD billions)

COUNTRY	2000	2010	2013	2014
United States	10 141	15 265	18 878	22 117
Japan	2 418	3 471	3 236	2 862
Britain	1 256	2 279	3 263	3 309
Australia	275	1 261	1 565	1 675
Canada	668	1 140	1 451	1 526
Netherlands	441	1 032	1 359	1 457
Switzerland	310	661	786	823
Germany	188	471	509	520
Brazil	74	342	284	268
South Africa	67	256	236	234
France	85	133	169	171
Ireland	50	100	130	132
Hong Kong	31	87	114	120
Poland	4	75	99	42

Source: Towers Watson '*Global Pension Asset Study 2015*' (TW 2015).

4. Legal investment standards

Together with the transfer of assets to Social Insurance Institution (ZUS) also legal investment limits for Open Pension Funds undergone a major changes. In the years 1999 – 2011 their assets were managed just like in balanced funds. Open Pension Funds' portfolios were composed of two major components: a fixed income portion and an equity portion (Dybał 2008).

According to the law on organization and functioning of pension funds (the Act) (Journal of laws 2013, item 989) there was no legal limit of investments in fixed income assets and the expected role of this asset class was to provide for more stable periodic returns and provide some protection against prolonged decline in the market value of OFE equity investments.

The legal limit of investments in equity assets was set at the maximum level of 40% of OFE portfolio. The expected role of this asset class was to maximize the long term real growth of Open Pension Funds' assets. These two limits were the most important legal standards and had a fundamental influence on the structure of OFE portfolios (Chybalski 2009a).

4.1 Legal standards for equity allocations

Practically the most important maximum limit was set for equity allocations (Jakubowski, 2013a). According to art. 141 point 4 in conjunction with art. 142 point 5 of the Act in the version in force before May 1st 2011 - shares listed on a stock exchange could consist only 40% of OFE assets.

In line with art. 141 point 5 in conjunction with art. 142 point 5 of the Act in the version in force before May 1st 2011 Open Pension Funds also had a possibility to invest in shares listed on a regulated over the counter market or not listed shares. In this case the limit was set at 10% of OFE portfolio. As per art. 141 point 6 and 7 and 13c in conjunction with art. 142 point 5 of the Act in the version in force before May 1st 2011 the same 10% level was set for investment certificates of investment funds, shares in National Investment Funds and depository receipts. Only participation units of open investment funds had higher limit set at 15% of OFE assets – in line with art. 141 point 8 in conjunction with art. 142 point 5 of the Act in the version in force before May 1st 2011.

The financial crisis led to underperformance of Open Pension Funds and showed that fundamental reforms were needed (Chybalski 2009b). The liberalization process started in 2011 with the phasing out of the restrictive legal limits on equity investment of Open Pension Funds (Jakubowski 2014a). The changes were introduced by the art. 4 of act of March 25th 2011 on amendment of certain laws relating to functioning of the social security system (Journal of laws 2011, No 75, item 398). The new law raised the limit on equity investments. According to the art. 142 of the Act in the version in force before January 1st 2012 OFE could invest up to 90% of their assets in shares of companies listed on a regulated stock market and listed on regulated stock exchange market pre-emptive rights, rights to shares and bonds convertible into shares of these companies and national investment funds shares. But this target limit was planned to be phased in gradually (Table 6). According to The Ordinance of the Council of Ministers the legal limit on equity investment was supposed to be raised year by year to the level of 90% in 2034 (Journal of Laws 2011, No 90, item 516).

Table 6. Legal limits on equity investments of Open Pension Funds

Year	Restrictions on Equity Investments
2010	40.0%
2011	42.5%
2012	45.0%
2013	47.5%
2014	50.0%
2015	52.0%
2016	54.0%
2017	56.0%
2018	58.0%
2019	60.0%
2020	62.0%
2021	64.0%
2022	66.0%
2023	68.0%
2024	70.0%
2025	72.0%
2026	74.0%
2027	76.0%
2028	78.0%
2029	80.0%
2030	82.0%
2031	84.0%
2032	86.0%
2033	88.0%
2034	90.0%

Source: Journal of Laws 2011, No 90, item 516

The liberalization of limits on equity investments was accelerated on February 3rd 2014 together with transfer half of Open Pension Funds' assets. The major change took place in Open Pension Funds investment limits for equity allocations. Right now Open Pension Funds are managed just like equity funds. Their portfolio is mainly composed of shares of companies listed on regulated markets (stocks). Since 2014 there is no maximum level for this asset class. Instead of that art 35 of the act on amendment of certain laws relating to rules of paying out retirement pensions from assets accumulated in Open Pension Funds (Journal of Laws of 2013, item 1717) introduced temporary minimum limit on equity allocations, which will be phased out in the following years (Table 7). In 2014 Open Pension Funds had to invest at least 75% of their assets in these equity instruments. This year this minimum limit is 55%. In 2016 the limit will be lowered to 35% and in 2017 to 15%. According to art. 141 paragraph 1 points 7 and 9 in conjunction with art. 142 paragraph 6 of the Act - since January 1st 2018 there will be no minimum or maximum level for investments in: shares of companies listed on regulated markets in Poland or abroad and bonds convertible into such shares, listed pre-emptive rights and listed rights to shares. As per art. 141 paragraph 1 points 8 and 10 in conjunction with art. 142 paragraph 6 of the Act - also shares, pre-emptive rights and rights to shares offered in public offering in Poland or in the European Union, Organization of Economic Co-operation and Development or European Economic Area member states will be free of minimum or maximum level.

Table 7. Minimum limits on equity investments of Open Pension Funds

Year	Minimum investment limit
2014	75.0%
2015	55.0%
2016	35.0%
2017	15.0%
2018	0.0%

Source: Journal of Laws of 2013, item 1717

Act on organization and operation of pension funds determined maximum investment limits for other equity instruments. According to art. 141 paragraph 1 points 13 - 14 in conjunction with art. 142 paragraph 6 point 3 of the Act Open Pension Funds are allowed to invest in participation titles issued by collective investment undertakings. Participation units of open investment funds and specialized investment funds and units issued by collective investment undertakings of the open-end type with a seat in member states of the European Union, Organization of Economic Co-operation and Development or European Economic Area, which meet certain specific criteria can constitute 15% of OFE assets.

As per art. 141 paragraph 1 points 11 - 12 in conjunction with art. 142 paragraph 6 point 2 of the Act investment certificates of closed-end funds and units issued by collective investment undertakings of the closed-end type with a seat in member states of the European Union, Organization of Economic Co-operation and Development or European Economic Area, which meet certain specific criteria can constitute 10% of OFE assets. Lower level of 10% is set for depository receipts admitted to trading on the Polish and foreign regulated markets (art. 141 paragraph 1 points 30 -31 in conjunction with art. 142 paragraph 6 point 12 of the Act). In line with art. 142 paragraph 2 of the Act the lowest level of 5% was set for investment certificates or bonds issued by securitization fund and units or bonds issued by collective investment undertaking with a seat in member states of the European Union, Organization of Economic Co-operation and Development or European Economic Area, for the purpose of collecting money to acquire claims or rights to certain claims.

Finally Open Pension Funds are not allowed to invest in shares listed on alternative markets (i.e. New Connect market in Poland) (Journal of Laws of 2014, item 116).

4.2 Legal standards for debt allocations

Much bigger change has taken place in the second most important limit for Open Pension Funds – limit on debt allocations. There was no maximum limit for investments in treasury bonds and treasury bills (Journal of Laws 2004, No 32, item 276). Also debt securities guaranteed or backed by the State Treasury or the National Bank of Poland and bonds issued by BGK (Bank Gospodarstwa Krajowego[2]) were free of maximum limit, what was literally stated by art. 141 point 1-2 and 15 in conjunction with art. 142 point 5 of the Act in the version in force before May 1st 2011. Act on organization and operation of pension funds determined maximum investment limits for other income instruments. In accordance with art. 141 point 9 in conjunction with art. 142 point 5 of the Act in the version in force before May 1st 2011 - municipal dematerialized debt securities could constitute only 10% of OFE assets. In line with art. 141 point 10 in conjunction with art. 142 point 5 of the Act in the version in force before May 1st 2011 - municipal not dematerialized debt securities had a maximum limit of 20% in OFE portfolio. As per art. 141 point 10a and 11 in conjunction with art. 142 point 5 of the Act in the version in force before May 1st 2011 the same 20% maximum level was set for income bonds and non-treasury and non-municipal dematerialized debt securities fully secured. According to art. 141 point 12 in conjunction with art. 142 point 5 of the Act in the version in force before May 1st

[2] Bank Gospodarstwa Krajowego (BGK) is Poland's only state-owned bank. BGK was established in 1924 during the monetary reforms of Władysław Grabski. The primary business objective of BGK is to provide banking services for the public finance sector, in particular through the support of the government's economic programs, as well as local government and regional development programs implemented with the use of public funds, including those of the European Union.

2011 non treasury and non-municipal debt securities fully secured and not dematerialized could constitute only 10% of OFE assets. As per art. 141 point 13 in conjunction with art. 142 point 5 of the Act in the version in force before May 1st 2011 - the same 10% maximum level was set for other debt securities of public companies. In accordance with art. 141 point 13a in conjunction with art. 142 point 5 of the Act in the version in force before May 1st 2011 - other dematerialized debt securities (i.e. mortgage bonds, not fully secured bonds, etc.) could constitute only 5% of OFE assets.

During the first wave of investment limits liberalization in 2011 the legal limits for debt allocations remained unchanged. The major shift came together with the reform of 2014. Almost all debt securities were transferred to Social Security Institution and the legal limits for this asset class became the most restrictive.

Practically right now the most important limits are set for debt allocations. According to article 141 paragraph 2 point 1 of the Act Open Pension Funds are not allowed to invest in government bonds, treasury bills and other debt instruments issued or guaranteed by the State Treasury, National Bank of Poland, governments or central banks.

As per art 141 paragraph 2 point 2 of the Act - OFE are also not allowed to invest in bonds, mortgage bonds and bank securities issued by BGK (Bank Gospodarstwa Krajowego), which are guaranteed by the State Treasury. But Open Pension Funds are allowed to invest in other debt instruments. Art. 141 and 142 of law on organization and operation of pension funds allows OFE to invest up to 40% of their net assets into: municipal bonds and other municipal debt securities, offered in a public offering; municipal bonds and other debt securities issued by regional and local authorities from the European Union, Organization of Economic Co-operation and Development and European Economic Area, offered in a public offering; corporate bonds with their nominal value and potential interest secured, offered in a public offering in Poland; corporate bonds and other corporate debt securities with their nominal value and potential interest secured, offered in a public offering in the European Union, Organization of Economic Co-operation and Development or European Economic Area member states; mortgage bonds; debt securities issued by one credit institution with its seat in the European Union, Organization of Economic Co-operation and Development or European Economic Area member states, which is subject to a special public supervision aimed at protecting the holders of securities, provided that the amounts collected from the issue of this securities are invested in assets which, until their redemption, ensure repayment of money to which their holders are entitled under the securities and in the event of an issuer's insolvency – ensure the priority of repayment.

Other debt instruments allowed for Open Pension Fund investments are: municipal bonds and other municipal debt securities not offered in a public offering; municipal bonds and other debt securities issued by the regional and local authorities from the European Union, Organization of Economic Co-operation and Development and European Economic Area not offered in a public offering; revenue bonds referred to in the Polish Act on Bonds of 29 June 1995; debt securities under which the issuer's liability may be limited to the amount of income or value of an undertaking, from which bondholders may satisfy their claims with priority against other creditors of the issuer, provided that the debt securities are issued by certain categories of issuers having their seat in the European Union, Organization of Economic Co-operation and Development or European Economic Area member states. The maximum investment limit for this income instruments is set at 20% of OFE assets.

The third group of income instruments can constitute only 10% of Open Pension Funds' assets. This group includes: corporate bonds or other corporate debt securities with their nominal value and potential interest secured, which are not offered in a public offering in Poland; corporate bonds and other corporate debt securities with their nominal value and potential interest secured, which are offered in the European Union, Organization of Economic Co-operation and Development or European Economic Area member states not in a public offering; bonds and other debt securities under which companies listed on the Polish regulated market are liable (other than the corporate bonds subject to the 40% investment limit referred to above), bonds and other debt securities under which companies listed on foreign regulated markets are liable (other than the corporate bonds subject to the 10% investment limit referred to above).

As stated by art. 141 paragraph 1 point 26 and point 27 in conjunction with art. 142 paragraph 6 point 10 of the Act - other bonds and debt securities which are the subject of a public offering in Poland, the European Union, Organization of Economic Co-operation and Development or European Economic Area member states are limited up to 5% of OFE net assets.

4.3 Legal standards for cash allocations

Cash investments were, under normal circumstances, only considered as temporary Open Pension Funds holdings, and were used for OFE liquidity needs. According to art. 141 point 3 in conjunction with art. 142 point 5 of the Act in the version in force before May 1st 2011 - the legal limit for deposits and bank securities in Polish currency was 20% of OFE assets. As per art. 141 point 3a in conjunction with art. 142 point 5 of the Act in the version in force before May 1st 2011 - deposits and bank securities in foreign currencies were allowed only to settle current liabilities and the maximum level was set at 5% of the assets.

During the first major change of investment limits of Open Pension Funds in 2011 the legal limits for cash allocations remained unchanged. Some changes were introduced together with the reform of 2014.

Right now, according to art. 141 paragraph 1 point 5 in conjunction with art. 142 paragraph 6 point 1 of the Act - the legal limit for bank deposits in PLN held in licensed banks or credit institutions which are seated and pursue business activity in member states of the European Union, Organization of Economic Co-operation and Development or European Economic Area is 20% of OFE assets. The same limit is applied to bank deposits in currencies of the European Union, Organization of Economic Co-operation and Development or European Economic Area member states held in licensed banks or credit institutions which are seated and pursue business activity in the member states as per art. 141 paragraph 1 point 6 in conjunction with art. 142 paragraph 6 point 1 of the Act. The foreign currency purchase is only permitted to settle the fund’s current obligations arising from the acquisition or sale of assets according to the fund’s investment policy.

4.4 Legal standards for foreign allocations

Domestic bonds and domestic shares were always a core asset class of Open Pension Funds with long term investment horizons and modest liquidity constraints. The objective of the portfolio dominated by domestic investments was to generate investment returns and to foster development of the domestic financial markets (Dybał 2013).

But Open Pension Funds always had some possibility to invest part of their assets abroad.

The act on pension funds determined maximum limit for foreign investments at the level of 5% of OFE assets - as per art. 143 point 2 of the Act in the version in force before January 1st 2012. The objective of the foreign investment part of Open Pension Fund portfolio was to generate investment returns with adequate liquidity and to provide a diversification benefit to the entire portfolio. Foreign investment of Open Pension Funds included bonds and publicly traded common stock of predominantly international markets, both in developed and emerging regions. Over long term periods of time international investments have relatively low correlations to the Polish markets, making them not only a return source, but a portfolio diversification tool.

In April 2009 the European Commission brought a case against Poland at the European Court of Justice concerning excessively restrictive limits on foreign investments by Open Pension Funds (Chybalski 2009c). The case was closed with the judgment of the European Court of Justice of 21 December Commission vs. Poland (Case C‑271/09, 2011). The European Court of Justice declared that by maintaining in force very restrictive investment limits on foreign allocations of Open Pension Funds in other Member States, the Republic of Poland has failed to fulfil its obligations under Article 56 of Treaty establishing the European Community (Treaty of Nice).

Therefore Poland was forced to increase the legal limit for foreign investments of OFE from the 5% to 30%, as per art. 141 paragraph 5 of the Act. But the change is not immediate and the target level is planned to be reached in 2016 (Table 8). According to art. 22 of Law of 6 December 2013 on amendment of certain laws (Journal of Laws 2013, item 1717) the new limit will be phased in as follows: till December 31st 2014 the legal limit for foreign investments of OPF is 10% of their assets; between January 1st 2015 and December 31st 2015 the legal limit for foreign investments of OFE will be 20% of their assets; since January 1st 2016 the legal limit for foreign investments of OFE will be 30% of their assets.

Table 8. Legal limits on foreign investments of Open Pension Funds

Year	Limit on Foreign Investments
2013	5.0%
2014	10.0%
2015	20.0%
2016	30.0%

Source: Journal of Laws 2013, item 989.

5. The open pension market – a global perspective

From the economic perspective the most important issue is how pension capital is invested. For long time, till the beginning of 2014, Open Pension Funds remained the most dependent on domestic assets, with around 100% of total assets invested in Polish market. Less than one percentage point of the pension capital was invested abroad. At the same time the domestic part of aggregate portfolio had high exposure to bonds. Equity allocations remained low, much below the half of total assets (Table 9). The main reason behind that were old legal investment limits of Open Pension Funds (Jakubowski 2014a).

The reform of 2014 completely changed the aggregate portfolio of all Open Pension Funds and turned them from balanced funds (40% equity and 60% bonds) into equity funds (minimum 75% equity). This radical change is quite unusual from the global perspective. Therefore it is the most interesting to analyse asset structure of Open Pension Funds and to compare structure of Polish pension capital to structures of pension capital in the World.

During the 2000 – 2013 period domestic bonds were always dominating portfolios of Open Pension Funds. Till 2012 bond allocations were always kept above the level of 60% and during the first wave of financial crisis (2008-2009) the level increased to almost 80%. At the same time equity allocations remained second biggest part of Open Pension Funds' portfolios. Till the second half of 2013 this asset class was always below the level of 30%.

Table 9. Polish pension asset allocation.

Year	Equities	Bonds	Other	Cash
2000	35%	63%	0%	2%
2005	32%	64%	4%	0%
2010	36%	59%	1%	4%
2013	42%	52%	0%	6%
2014	83%	9%	1%	7%

Source: Annual Bulletins of Polish Financial Supervision Authority '*Open Pension Funds' market*'; Annual Bulletins of Polish Financial Supervision Authority '*Occupational Pension Programs' market*'; Annual Bulletins of Polish Financial Supervision Authority '*Individual Retirement Accounts' market*'.

This was completely in the opposition to the trends in the global pension markets. During the 1995 – 2014 period bonds, equities and cash allocations were reduced. Pension funds did this in order to diversify their investments. The asset class that benefits from this trend is the alternative investment category. This includes real estate, private (non-public) equities, hedge funds and other alternative investments. In almost twenty years this asset class saw its weight grow from 5% to 25% at 2014 (Table 11).

Table 10. World's aggregate pension asset allocation from 1995 to 2014.

Year	Equities	Bonds	Other	Cash
1995	49%	40%	5%	6%
2000	60%	30%	7%	3%
2005	60%	24%	15%	1%
2010	47%	33%	19%	1%
2013	52%	28%	18%	1%
2014	42%	31%	25%	2%

Source: Towers Watson '*Global Pension Asset Study 2014*' (TW 2014).

The transfer of majority of Open Pension Funds' fixed income assets (worth 153 billion of PLN) to Social Insurance Institution completely reshaped the structure of OFE assets. Since the beginning of 2014 equity allocations dominate OFE portfolios. Almost 83% of pension capital is invested right now in domestic equities. Domestic corporate bonds constitute almost 9% of OFE portfolios.

This makes Polish pension market the most exposed to equities. Other pension markets with higher than average equity allocations (Australia, Britain and the United States) are much less exposed to this asset class. On the other side, Japan and the Netherlands are the markets with high exposure to bonds (Towers Watson 2015).

Table 11. Aggregate pension assets allocation 2014.

COUNTRY	Equity	Bonds	Other	Cash
Australia	51%	15%	26%	8%
Britain	44%	37%	15%	3%
Canada	41%	35%	22%	2%
Japan	33%	57%	7%	3%
Netherlands	30%	55%	14%	1%
Poland	83%	9%	1%	7%
Switzerland	29%	36%	28%	7%
United States	44%	25%	29%	2%
World	42%	31%	25%	2%

Source: Towers Watson '*Global Pension Asset Study 2014*' (TW 2014).

Further analysis of the Polish pension market indicates that it still remains dependent on the domestic assets, with more than 95% of total assets invested in its own market. Less than five percentage points of the pension capital is invested abroad. What is striking this situation is not changing despite liberalization of the legal limit on foreign investments of Open Pension Funds.

Figure 12. Open Pension Funds' asset allocation.

Year	Domestic Equities	Domestic Bonds & Cash	Foreign Assets
December 2006	34.0%	64.7%	1.3%
June 2007	38.1%	60.6%	1.2%
December 2007	34.6%	64.4%	1.0%
June 2008	28.7%	70.3%	1.0%
December 2008	21.6%	77.8%	0.6%
June 2009	24.7%	74.6%	0.8%
December 2009	30.2%	69.0%	0.7%
June 2010	32.6%	66.6%	0.8%
December 2010	36.2%	63.1%	0.7%
June 2011	35.5%	63.6%	0.8%
December 2011	31.2%	68.2%	0.5%
June 2012	32.6%	66.9%	0.5%
December 2012	35.0%	64.2%	0.8%
June 2013	37.8%	60.9%	1.3%
December 2013	40.8%	57.8%	1.4%
June 2014	79.8%	15.2%	5.0%
September 2014	79.6%	16.1%	4.3%
December 2014	79.7%	16.4%	3.9%

Source: Monthly Bulletins of Polish Financial Supervision Authority '*Open Pension Funds' market*'.

It is worth noting that the domestic allocations have the positive influence on the development of the Polish financial markets. But the high exposure to domestic bonds and the low equity and foreign allocations are not safe for the customers. It is because the very limited diversification of the pension assets may endanger this capital in the case of macroeconomic, demographic or even political shocks affecting the Polish state and the Polish economy[3]. Moreover the heavy dependence of the Polish pension market on the domestic assets (that include mainly equities) is against the trends in the world. From the global perspective, in the last twenty years, the home bias in the equity space was significantly reduced. The weight of domestic equity in pension assets portfolios was falling in almost all analysed countries[4].

[3] More about macroeconomic, demographic and political shocks see: Nicholas Barr 'Reforming Pensions: Myths, Truths, and Policy Choices' (2000) IMF Working Paper WP/00/139, 5–8, 31-32.
[4] Towers Watson '*Global Pension Asset Study 2012*' (TW 2012).

6. Concluding remarks

In the past, the Polish pension system was based on a pay-as-you-go rule. In 1999 Poland introduced a major pension reform in order to improve sustainability of the pension system. This led to creation of the pension market. It enabled the creation of domestic long-term capital, which till today plays an important role in the Polish economy and assists the development of the local financial markets.

For almost fifteen years Poland together with South Africa and Australia belonged to the fastest growing pension markets in the World. This spectacular growth in the first decade of the second millennium was possible thanks to steady and substantial inflow of contributions to Open Pension Funds and very limited outflow of capital from the Polish pension market. This pattern was changed by decrease of OFE contribution in 2011 and later reversed in 2014 by the transfer of 153 151.2 mln PLN from Open Pension Funds to Social Security Institution. This change stopped any chances to make Polish pension market significant from the global perspective. The asset ratio to GDP fell down from more than 18% to less than 9% and fast development of local financial markets was significantly slowed down.

The reform of 2014 also totally changed the investment policy of Open Pension Funds together with the structure of their portfolios. Before the reform pension funds' investment policy was based on the same assumptions as investment policy of balanced funds. Fixed income instruments were dominating their portfolios (more than 60% of net assets). While equity allocations remained second biggest part of Open Pension Funds' portfolios (less than 40% of net assets). The transfer of assets to Social Insurance Institution left OFE mainly with domestic equity allocations (almost 83% of net assets) with insignificant level of fixed income instruments (9% of net assets) and cash deposits (7% of net assets).

This makes Polish pension market quite specific from the global perspective. Polish dependence on the domestic assets joined with extremely high exposure to domestic equities (almost 80% of net assets) is exceptional in the World. The global pension assets are mostly invested in equities, but not at such extreme level. At the same time there are clear signs of reduced home bias in the equity space. Moreover in the last twenty years bonds, equities and cash allocations were all reduced, to a varying degree in global pension assets portfolios. The asset class that benefits from this trend is the alternative investment category (real estate, non-public equities, hedge funds, etc.). So far this process does not take place in Poland.

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Rynek otwartych funduszy emerytalnych po reformie 2014r. – perspektywa globalna

Streszczenie Od powstania otwartych funduszy emerytalnych minęło już ponad 15 lat. Przez ten stosunkowo krótki czas, jak na funkcjonowanie powszechnego systemu emerytalnego, ujawnił się szereg niedoskonałości i błędów konstrukcyjnych w systemie OFE. Niedoskonałości te, jak również kryzys finansowy, pogarszający się stan finansów publicznych oraz niezadowalające członków zyski OFE, doprowadziły do poważnych zmian w ramach II filaru systemu emerytalnego. Pierwsza reforma kapitałowej części ubezpieczenia emerytalnego przeprowadzona została w 2011 r., a kolejna niedługo później, bo już na przełomie 2013 i 2014 r. Skutkiem tych reform jest między innymi stopniowa liberalizacja zasad polityki inwestycyjnej OFE oraz wprowadzenie swoistej dobrowolności opłacania kolejnych składek do otwartego funduszu emerytalnego. Zmiany te powoli i stopniowo prowadzą do różnicowania polityki inwestycyjnej prowadzonej przez OFE, która jak dotąd była dość jednolita. Dlatego celem niniejszego artykułu jest analiza najważniejszych zmian na rynku otwartych funduszy emerytalnych, wywołanych ostatnią reformą emerytalną. W pierwszej części opracowanie to zawiera opis rozwoju rynku OFE z perspektywy globalnych rynków emerytalnych. Druga część artykułu poświęcona jest analizie zmian prawnych dotyczących limitów inwestycyjnych ciążących na OFE. Ostatnia część dokonuje przeglądu polityki lokacyjnej OFE, w tym jej gwałtownej zmiany w 2014, z perspektywy globalnych rynków emerytalnych.

Słowa kluczowe: bezpieczeństwo socjalne, publiczne emerytury, plany emerytalne, prywatne emerytury, biznes i prawo papierów wartościowych, niebankowe instytucje finansowe, instrumenty finansowe, inwestorzy instytucjonalni.
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