

The Pension Funds' Investment Regulation at the Beginning of the 21st Century: Comparative Analysis of Approaches of the USA, Canada, and the EU-15 Countries

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Doi:10.5901/mjss.2015.v6n4s4p155

Abstract

The article considers the main trends in the EU-15 countries, the USA, and Canada with regard to the current approaches to the pension funds' investment activities regulation. This countries' choice is caused by the relevant static information availability, as well as by the private pension funds' growing role in this group and the diversity of the investment activity funds forms. The difference between the growth rate of the average pension funds and the GDP in a certain country has the special attention because the leading indicators of the funds volume growth, attracted by the pension systems compared with the economy growth as a whole, determine the possibility of higher payments to pensioners and also allows to increase the pension plans coverage of other population groups. The article deals with the legal aspects of the pension funds regulation with respect to their investment strategies, and contains a comparative analysis between the countries.

Keywords: *the state investment regulation, EU-15 countries, the USA, Canada, pension funds investing.*

1. Introduction

Demographic trends of the recent decades, combined with the growing financial and economic instability risk, pose the problem of the national pension systems' adaptation to changing conditions, the search for new approaches to the pension funds regulation, as an investment resource, which is of the long-termed and predictable nature and does not depend on the external factors (for example, the oil prices). In the conditions when the key demographic trend is the growth of the life expectancy and the birth rate decrease, accompanied by the increasing pension payments period, it becomes more difficult to use the traditional pension schemes based on the generations' agreement and the price distribution on the state budget; the most important question is to increase the pension funds use and decrease the load on the state budget. In 2010-2014, the support factor for the pensioners was at least 3.0 in many countries (for example, in Germany and Italy).

According to the noticed trends, the pension systems are going through the transformation process in many countries. Together with the compulsory and voluntary schemes development, and the elaboration of measures for improving the stability of the latter, the main issue on the agenda is to improve the pension savings regulation use as an investment resource. In some countries like the USA and Germany, there are some attempts to simulate the voluntary participation in capitalized pension systems through tax incentives. In other countries like Russia, the pension-funded part

is an element of the mandatory pension insurance, while voluntary insurance is poorly developed. However, despite of the prevalence of voluntary or mandatory schemes, the pension savings investment issues become very relevant.

The article considers the state limits on the pension savings investment in the USA, Canada, and the EU-15 countries (that entered EU before the 21st century). The selection of countries is caused by the great experience in pension funds' investment regulation with the big difference in the limits levels, and with the most comprehensive data presence for comparison. We also categorized countries according to the degree of limits on the pension funds' investments, including the various types of assets.

The change in the private pension funds' investments shows that they have become the powerful financial institutions. The annual growth rate in the pension funds' average investment was 8.6% in the post-crisis period in these countries. By 2013, the pension funds' investment volume in the USA, Canada, and the EU-15 countries exceeded 20.3 trillion dollars. These figures demonstrate the potential impact of the pension funds, accumulating assets, on the financial system as a whole, on the stock markets, and the capital market, and, consequently, the strategic importance of adequate regulation of the pension funds' investment activities.

The main task of this article is to reveal the main approaches to the pension funds' investment activities regulation in different countries and their impact on the investment activity, and on the use of certain tools.

The pension savings investment limits vary considerably between countries—from a total ban on the investments in certain instruments to no limits. For example, in Finland, the equity investments limits are weaker than in other countries, and there are virtually no limits in the Netherlands and in the United States.

The regulation of the pension savings use as an investment resource is carried out both in general and in specific instruments in some areas.

In most countries, the pension regulators impose quantitative and non-quantitative limits on the pension funds' investments. Shares in a fund's portfolio may not exceed 35% in Germany; in Spain, real estate investment and mortgage valuable papers should not be more than 30%. The United States, Belgium, Canada, Ireland, the Netherlands, and the United Kingdom do not set quantitative limits for the pension funds' investments in the majority of asset types, as well as investment in foreign assets, although preserve general requirements for portfolio diversification.

The regulators' consideration of pension funds' investment activities becomes increasingly important as funded pensions are considered as an instrument reducing the pension systems' dependence from demographic trends and improve the overall level of pension benefits (Geneakoplos, Mitchell and Zeldes, 1998)

International organizations such as the OECD and the World Bank made a significant contribution to the development of approaches to regulation of the pension funds' investment activities. This was achieved by annual publication of reports on the current status of the legislative limits in effect in the member countries, as well as in other leading economies with regard to pension funds' investment in different types of assets; and on the pension funds' financial position. Certain aspects of the pension funds' investment activities, as well as the assets investment limits are considered in foreign publications (Musalem and Palacios, 2004; Srinivas, 1999). The works of American researchers (Ellison, 2008; Davis, 1998; Drucker, 1995; Micocci and Gregoriou, 2010; Utouh, 2010) are of great importance.

2. Empirical Analysis

2.1 The authors

The authors have categorized countries according to the level of state regulation of pension funds as an influential factor of their investment activities.

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The authors have calculated the countries' ratings according to the level of the state regulation of the pension funds' capacity in investing in various types of assets, as well as depending on the limits on the foreign investment.

Table 1 shows the countries' ranking according to the level of the state regulation of the pension funds' capacity in investing in various types of assets. The calculation was made based on the report of the OECD Annual survey of

investment regulation of pension funds (OECD 2013).

Each investment instrument is rated from 0 to 100 points, based on the legislative limits. 0 points means no limits, 100 points—a ban on the pension funds' investment in this type of assets. Intermediate values are calculated based on the quantitative limits, where for example, the 70% limit for a separate instrument in the portfolio corresponds to 30 points: $100\% - 70\% = 30\%$, or 30 points. If there are some limits in different subtypes in the report (e.g., stocks traded and not traded on the stock exchange), the average arithmetic level of limits is calculated, and the appropriate points are given, rounded to the nearest integer. Each non-quantitative limits item equals to 10 additional points. The average score for a country is calculated in the last column, the countries are sorted by the last column in the table.

Table 1. The level of legislative limits for pension funds to invest in various types of assets (EU-15, US, Canada)

Country/Asset	Shares	Real estate	bonds	Retail investment funds	Private equity funds	Loans	Bank deposits	Average index
Netherlands	0	0	0	0	0	0	0	0
Canada	0	0	0	0	0	0	0	0
Belgium	0	0	0	0	0	0	0	0
Luxembourg	0	0	0	0	0	0	0	0
United Kingdom	0	0	0	0	0	10	0	1
Ireland	0	10	0	0	0	0	0	1
United States	10	10	10	0	0	10	0	6
Portugal	23	40	0	10	10	40	40	23
Greece	30	0	15	10	10	100	0	24
Austria	30	10	30	20	20	0	90	29
Denmark	30	10	15	15	90	49	0	30
Finland	70	60	47	0	45	30	0	36
France	65	60	48	20	10	90	0	42
Italy	0	10	0	80	80	100	80	50
Sweden	76	34	43	61	61	49	42	52
Spain	35	80	35	40	84	80	40	56
Germany	75	75	71	79	88	64	50	72

Source: Calculated by the authors according to the Annual survey of the investment regulation of pension funds (OECD 2013).

The ranking of countries is represented according to the level of the state regulation of the pension funds' capacity in investing in various types of assets. The calculation was made based on the report of the OECD Annual survey of investment regulation of pension funds (OECD 2013). Each investment instrument is rated from 0 to 100 points, based on the legislative limits. 0 points means no limits, 100 points—a ban on the pension funds' investment in this type of assets. Intermediate values are calculated based on the quantitative limits, where for example, the 70% limit for a separate instrument in the portfolio corresponds to 30 points: $100\% - 70\% = 30\%$, or 30 points. If there are some limits in different subtypes in the report (e.g., stocks traded and not traded on the stock exchange), the average arithmetic level of limits is calculated, and the appropriate points are given, rounded to the nearest integer. The most stringent limits in pension funds' investment are in Germany, Spain, Sweden, and Italy.

In general, a number of countries in the post-crisis period reduced the limits on the pension funds' investment activities in order to promote greater diversification of their portfolios. Quantitative limits on the pension funds' investment in real estate were completely abolished in Canada in 2010. However, stricter rules for investing in riskier assets in order to provide better protection of the pension plan members were introduced in this period in some countries, such as Canada and Ireland.

Based on the OECD data, the change in the volume of the funds attracted by private pension funds, which are the largest class of the participants at the pension market, over time in absolute terms and related to the GDP, is analyzed. Besides, the pension funds manage more funds than other institutional investors do.

In 2013, the volume of funds attracted by the private pension systems in the OECD countries amounted to 36 trillion dollars, including 24.7 trillion dollars (68%) attracted by private pension funds, 7.1 trillion dollars (19.7%)—by funds managed by banks and insurance companies, and 4.2 trillion dollars (12%)—through pension insurance contracts. In many countries, such as Austria, Italy, Portugal, and Finland, the attracted funds volume to non-state pension funds accounted for more than 90%.

Table 2. Investments of pension funds of the EU-15, the USA, and Canada, in billion dollars.

Countries	2003	2006	2008	2010	2011	2012	2013
United States	8259.0	10678.6	8763.7	11164.8	11143.9	12069.2	13941.6
United Kingdom	1284.3	2135.6	1352.4	2018.0	2232.6	2530.0	2676.1
Netherlands	609.6	884.9	932.8	1015.7	1055.7	1229.1	1381.9
Canada	484.3	786.3	673.3	1047.5	1072.1	1199.2	1260.2
Germany	99.4	128.9	164.1	180.2	192.9	221.1	235.5
Denmark	67.0	94.0	156.0	154.6	154.5	161.4	146.7
Finland	99.3	156.9	156.9	197.8	107.9	119.6	135.7
Italy	41.1	58.7	74.7	94.6	99.4	115.6	132.2
Spain	61.2	97.1	108.7	112.2	108.2	114.2	127.5
Ireland	70.0	115.6	88.4	100.9	93.5	106.2	126.2
Sweden	26.4	39.1	29.8	47.1	46.7	57.4	53.8
Belgium	13.6	17.6	15.9	17.8	20.2	22.8	27.2
Austria	11.8	16.8	17.5	20.3	19.1	21.5	25.2
Portugal	20.6	27.9	28.2	26.4	17.1	19.1	20.9
France	n/a	1.0	2.6	5.3	6.5	8.8	11.9
Luxembourg	n/a	0.5	0.5	1.1	1.1	1.2	1.3
Greece	n/a	n/a	0.0	0.1	0.1	0.1	0.1

Source: Pension markets in Focus. OECD, 2014.p. 30

The behavior pattern of the pension funds' investments (Table 2) shows a 2-fold increase in the investment volume on the average for the period from 2003 in this group of countries. The most active growth in pension funds' investment was shown by Italy, Canada, and Germany. The leader is the United States with the value of almost 14 trillion dollars in 2013. It is worth noting that the total investment of all other countries of the group is less than half of the USA's value.

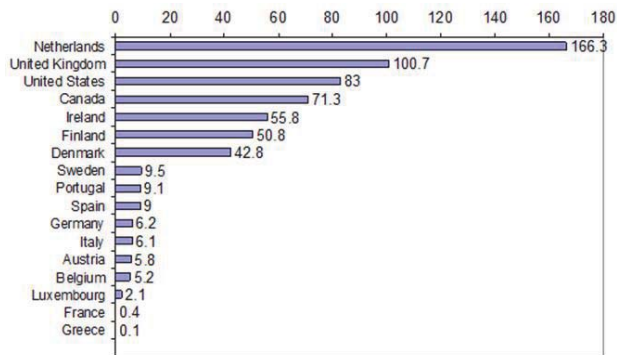


Figure 1. Total investment of pension funds as a percentage of the GDP in selected countries, 2013.

Nevertheless, the share of the US pension funds' investment decreased from 61.9% in 2003 to 56.3% in 2013 in the total volume of the OECD countries. The UK can be distinguished among other countries with a significant volume of assets in the pension funds system—2.68 trillion dollars, as well as the Netherlands—1.38 trillion dollars, and Canada—1.26 trillion dollars.

One of the key indicators of the pension funds' activity in the economy is the ratio of investment volume and the GDP size (Fig. 1). The greater the amount of the investment funds, the more income they can generate for their members. The Netherlands with an index 166.3% are the leader in this indicator among the OECD countries. The index of the ten considered countries does not exceed 10%, which shows that there are prospects for the potential growth. The average index in the current countries is 36.7%, which corresponds to the average value for all the OECD countries.

According to the pension funds' investments behavior pattern and the speed, with which they were growing compared to the GDP in the period 2003-2013, we can single out:

- a) The countries with the highest rate of the pension funds' assets growth—Finland, the Netherlands, and the United Kingdom. In the UK, the pension funds' investment growth compared to the GDP can further accelerate in the next few years, following the recent reform of the pension system and the introduction of the automatic registration of participants, which has been gradually been enacted since October 2012.
- b) The countries with the highest share of pension investments compared to the GDP (sometimes even exceeding 100% of GDP)—the Netherlands, the United Kingdom, the USA, and Canada.
- c) The countries with a relatively low share of pension assets compared to the GDP and relatively low growth of the pension funds' assets, for example, in Portugal, where it is explained by the assets transfer from the funded system to the pension plan of the state.
- d) The countries with the highest share of investment compared to the GDP and low levels of investment limits—the USA, Canada, the UK, and Ireland (Fig. 2).

We also need to take into account that the growth rate of assets in relation to the GDP may be higher than the average, but the question is, at what level the growth starts—the effect of the "low base", which is applicable to Italy, Germany, and France. In the 2003-2013 period, for the countries under study, the investment share growth compared to the GDP increased 1.4 times on the average.

The lower relative growth in pension funds' assets and their behavior pattern compared to the GDP in some cases was due to regulators' changes. For example, in Portugal, it was due to the assets transfer from storage systems to the state pension plans.

2. 3. We performed an analysis of the pension funds' investment activity with the existing limitations.

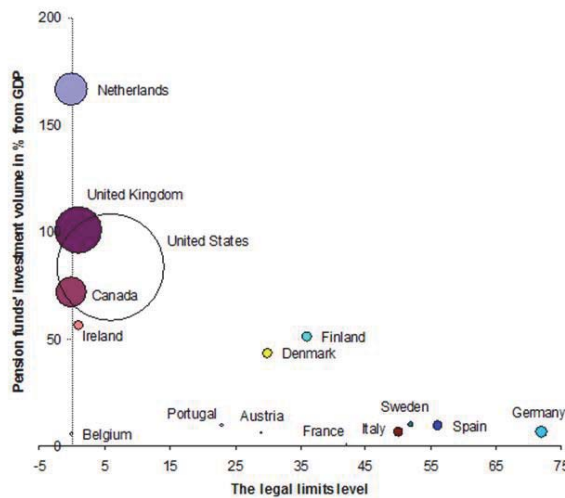


Figure 2. Total investment of pension funds compared to the GDP versus the level of legislative limits

The established limits on the pension funds' investment are very important, but it is not the only factor influencing on the pension funds' investment activity. Figure 2 demonstrates a much larger share of pension funds' assets compared to the GDP in the countries with the least limits on the pension savings investment and/or their absence (except for Belgium).

Figure 2 clearly shows the following groups of the countries under study:

1. The Netherlands, the UK, the USA, and Canada—with the least limits and the largest share of the pension funds in the economy;
2. Ireland, Denmark, and Finland—with a relatively high role of the pension funds in the economy despite the differences in the limits;
3. Germany—a high role of the pension funds in the economy despite the significant limitations;
4. All other countries—with a low investment concerning to the GDP, regardless of the limits level.

In Figure 3, which shows the share of the pension funds' direct investments in shares, compared with the permissible volume of investment in this instrument as a percentage of the portfolio, the maximum use of the pension

funds' capacity to invest in shares in the most of the selected countries is reflected. In 9 of 16 countries (Finland, the USA, Canada, the UK, Italy, the Netherlands, Sweden, Spain, and Belgium), where they are allowed (in all except Luxembourg), the investments in stocks are at maximum level permitted by the law. This instrument is least used in Germany, Greece, Portugal, and is not fully used in Denmark and Austria.

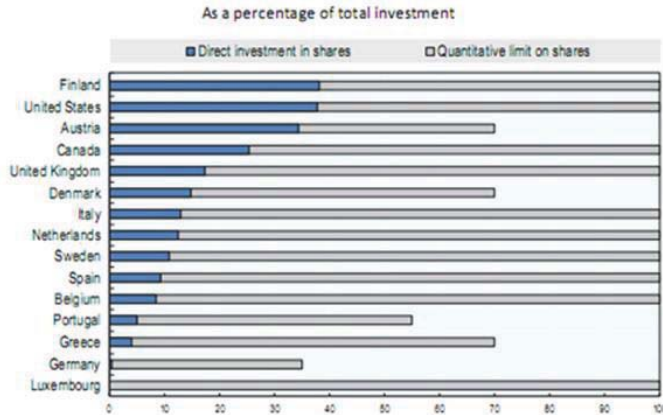


Figure 3. Portfolio limits on the pension fund investment in shares in selected OECD countries, 2013
Data source: www.oecd.com

The data on the share of the pension funds' direct investment in bonds, compared to the permissible volume of investment in this instrument, as a percentage from the portfolio, are shown in Fig. 4. In some countries, there may be some limits for the investment in corporate bonds, but investing in government bonds is not limited. For example, in Greece, pension funds having clients with defined contributions may not invest more than 70% of their assets in corporate bonds, but the investments in government bonds are not limited. In Finland, the pension funds' investment in bonds of the OECD member countries is not limited, and for the rest of countries, the limit is 10% of the portfolio. In Spain, there is a limit of 30% for the investment in bonds, which are admitted to the exchange trades.

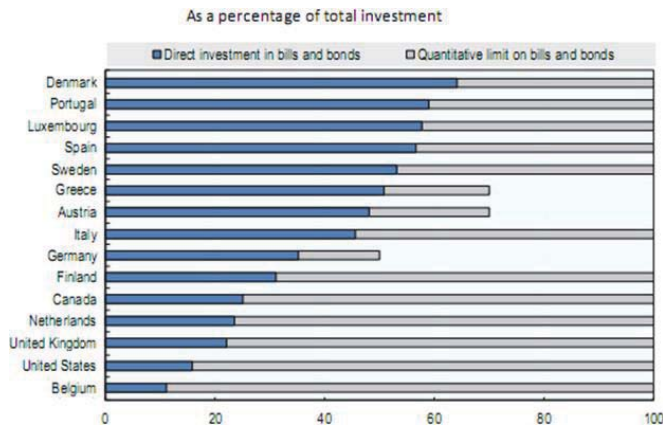


Figure 4. Limits on the pension funds' direct investment into bonds in the selected group of OECD countries in 2013.
Data source: www.oecd.com

Out of the 15 countries discussed in this article, for which there are comparable data, the investments in bonds in 12 of them are at the maximum permissible level, while in Germany, Austria, and Greece, this instrument is used to a lesser degree.

3. Conclusion

The period of the late XX–early XXI century is marked in the world practice with more widespread use of the pension savings as an investment resource, at the same time improving the mechanism of the process regulation. The research showed that the state regulation of pension funds is an influential factor in their investment policy.

On the one hand, the increasing level of the pension openness to the impact of the market mechanisms increases its dependence on the changes in the economic conditions and requires more sophisticated instruments of state regulation in this sphere. Portfolio limits that reduce the investment risks and limit distribution of profits prevent the need for the state intervention in the future, in the case of high-risk operations. On the other hand, the excessive limits hamper the effective use of the pension savings and ultimately limit the selection of the future pensioners.

The ranking of countries calculated by the authors according to the level of the state regulation capacity of the pension funds in investing in various types of assets shows the significant differences in the degree of regulation by countries (from 0 to 72 out of 100 points). In the post-crisis period, there was a general reduction of the limits on the pension funds' investment activities intended to promote the greater diversification of their portfolios. Still, some countries, such as Ireland, introduced stricter rules for investing in risky assets, and Portugal transferred the assets from storage systems to state pension plans.

Comparing the limits on the investments of pension funds with the share of the pension funds' investment compared to the GDP of the countries showed a much higher share of the pension funds' assets compared to the GDP in the countries with the least limits on the pension savings investment and/or where there are no limits (except for Belgium). In the countries, which have more liberal legislation on the pension funds' investments, their investment activities are more intense, including compared to the GDP.

However, in some countries, including Ireland, Denmark, Finland, Germany, the role of the pension funds' investment is very high in the economy, despite the significant limitations.

Canada, the UK, and the USA have similar structures of portfolios, where in addition to the low-risk instruments, such as bonds and bank deposits; a significant proportion of assets is invested in corporate shares.

As for investing in fixed-used instruments—shares, bonds—in the most of the selected countries, pension funds use the opportunities to invest in shares, compared with the acceptable scope of investment in this instrument. At the same time, there are countries, in which pension funds invest less in shares, than it is allowed.

Freer investment rules for the pension funds' investment, of course, contribute to the diversification of portfolios, but softer investment limits do not necessarily mean the more diversified portfolio. In some countries (Germany, Portugal, and Greece), the government significantly reduces the capacity of a flexible investment policy of the pension funds by establishing the quantitative limits, thus limiting the use of certain instruments in the investment activity. At the same time, there are some exceptions. In spite of the high level of limits, such as limits on investing in bonds, their share in the portfolios of pension funds in Germany is more than 2/3. Finland is the leader in the share of shares in the structure of the pension funds' assets in the group of considered countries, despite the existing limits on this instrument.

It should also be noted that despite the importance of the regulation of the pension funds' activities by the government, the key role in the medium term investment strategy is directly played by the funds themselves, as well as by conducting a balanced investment policy the funds, which allows taking into account the risks and diversify the portfolio. The selection of high-quality investment assets, regardless of their type, allows balancing the portfolio and stabilizing the rates of income in the medium and long term, which is particularly relevant for the pension funds.

Pension savings can be an important source of the long-term predictable investment, and ultimately reduce the pressure on the public pension system. However, the use of the pension savings in the investment process requires the state regulation of the possibilities and the pension funds' investment limits, taking into account the financial and economic situation in each country.

4. Acknowledgements

This article was prepared with the financial support of the Russian Foundation for Humanities, project 15-07-00002 (a) "The public policy role in increasing the pension savings efficiency as an investment resource in the globalization era."

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