OPERATIONAL EFFICIENCY OF CROATIAN MANDATORY PENSION FUNDS

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ABSTRACT

The article presents the activities of Croatian mandatory pension funds in the past 14 years, since their establishment. The effective returns achieved by them are compared to the returns achieved by pension funds from other countries, primarily to the returns achieved by funds from comparable Central and Eastern European countries, but also to the returns achieved by funds in other countries. The returns are also compared to the returns achieved during the same period by Croatian balanced open-end investment funds. Thanks to the availability of relevant information, a comparison is also made in relation to the risks assumed. The article then proceeds to compare the fees payable to Croatian mandatory pension funds by their members, which are further compared to the fees charged by funds in other countries. The paper aims to determine the operational performance of Croatian pension funds to date and establish whether or not the fees charged by them are acceptable.

Introduction

Mandatory pension funds have operated in Croatia for 14 years. They constitute the so-called 2nd pillar of the Croatian pension system established in 2002 as a result of a pension reform. All employed citizens of the Republic of Croatia who were younger than 50 in 2002 pay them ¼ of their total pension contributions, i.e. 5% percent of their gross salaries. In early September of 2016, the existing four mandatory pension funds had a total of 1.77 million members with total assets of approximately USD 11.8 billion [2]. These assets account for approximately 24% of Croatia's gross national income.

The pension system reform was implemented in Croatia because the former intergenerational solidarity system (state owned pay-as-you-go system) was becoming increasingly unsustainable as a result of an unfavorable ratio between employed and retired persons, and the amount of money paid from the budget to absorb the difference between the pension contributions collected and pensions paid grew. Today, the ratio between employed and retired persons is only 1.19 : 1 [1].

However, due to a poor state of public finance and high public debt, which was also the case in other Central and Eastern European countries, Croatian mandatory pension funds have often been under pressure from certain political circles and the corporate community. They have been accused of providing poor returns, charging high fees and the like for the purpose of canceling payments to the 2nd pillar and returning the overall pension system under government control. Something like this has already been done in Poland and Hungary, while some other countries reduced and canceled payments to the 2nd pillar during the crisis years and insured persons were returned to the state owned pay-as-you-go system.

As the pension system is, in addition to the healthcare system, presently the most important or one of the most important and demanding segments of public finance in Croatia and most other countries, the operation of pension funds must be assessed objectively. This paper therefore aims to present the past operating results of Croatian mandatory pension funds, compare them to the operating results achieved by funds in other countries and to the operating results of comparable Croatian investment funds, and compare the fees charged by them to the fees charged by similar funds. The article should provide a basis for future effective discussions and more informed contemplations of the operational efficiency of Croatian mandatory pension funds. The authors also hope the article will arouse greater interest in this topic among researchers and encourage them to conduct new research.

Mandatory pension funds – the returns achieved and fees charged

Between the year 2002 and September of 2016, the average annual return achieved by Croatian mandatory pension funds was 5.85%. If the average annual inflation rate in the same period is subtracted from this figure, the real annual return is 3.31%.
At the time the legislative foundations were laid for the establishment of mandatory pension funds in Croatia and the investment limits were defined, their intended return was 2% above the inflation as something that should ensure that the investment objectives are met in the long term. Therefore, the figures achieved to date exceed the intended targets.

The returns achieved by the local mandatory pension funds may also be assessed more objectively, by disregarding the preferences and ambitions of the pension reform designers. The generally accepted method of assessment is to make comparisons with the results achieved by similar funds, which is probably a good way to make a more objective assessment. This is why the average returns achieved by the Croatian mandatory pension funds are compared to the achievements of pension funds in other countries, and then to the operating results achieved by comparable Croatian open-end investment funds. As most of the pension funds in other countries only have information about their average annual real returns available, while information about the value of their units is mostly unavailable, the standard indicators showing the ratio between risks and returns cannot be used, so the paper only presents a comparison between the effective returns earned which is also a good indicator of what average pension funds provide to their members in a particular country. A more accurate analysis taking into account the risks assumed may be provided for Croatian pension and investment funds because all necessary information is available.

A comparison to the operating results achieved by pension funds in other countries

The comparison between the operating results achieved by Croatian mandatory pension funds and the operating results achieved by pension funds in other countries begins with a comparison to funds in our surrounding transition countries that are relatively similar to the Republic of Croatia, which is then followed by a broader presentation.

Table 1 shows that only the Romanian pension funds achieved returns a little above the average real annual return achieved by the Croatian mandatory pension funds, while lower average annual real returns were achieved by pension funds in Macedonia, Latvia, Slovenia, Bulgaria, Serbia, Estonia, Czech Republic and Slovak Republic. The Croatian mandatory pension funds achieved the highest average real return for the 10-year period. Table 2 places these figures in the European context.

Table 1: The average annual real returns achieved by pension funds in Central and Eastern European countries in the past 5 and 10 years, respectively

Country	5-year average	10-year average
Romania	5.6	-
Croatia	**5.5**	**2.4**
Former Yug. Rep. Of Macedonia	3.9	-
Latvia	2.7	-
Slovenia	2.7	-
Bulgaria	2.6	-0.8
Serbia	2.5	-
Estonia	0.9	-1.7
Czech Republic	0.6	0.3
Slovak Republic	0.3	-

Source: OECD Pension Markets in Focus 2015

Table 2: The average annual real returns achieved by European pension funds in the past 5 and 10 years, respectively

Country	5-year average	10-year average
United Kingdom	8.4	6.5
Netherlands	7.8	4.8
Denmark	7.1	5.4
Romania	5.6	-
Croatia	**5.5**	**2.4**
Belgium	5.0	4.0
Norway	4.9	4.2
Switzerland	4.8	3.3
Iceland	4.5	1.7
Former Yug. Rep. Of Macedonia	3.9	-
Spain	2.9	-
Germany	2.9	2.6
Luxembourg	2.8	-
Latvia	2.7	-
Slovenia	2.7	-
Bulgaria	2.6	-0.8
Serbia	2.5	-
Austria	2.4	1.4
Italy	2.4	2.0
Portugal	1.3	2.3
Estonia	0.9	-1.7
Czech Republic	0.6	0.3
Slovak Republic	0.3	-

Source: OECD Pension Markets in Focus 2015

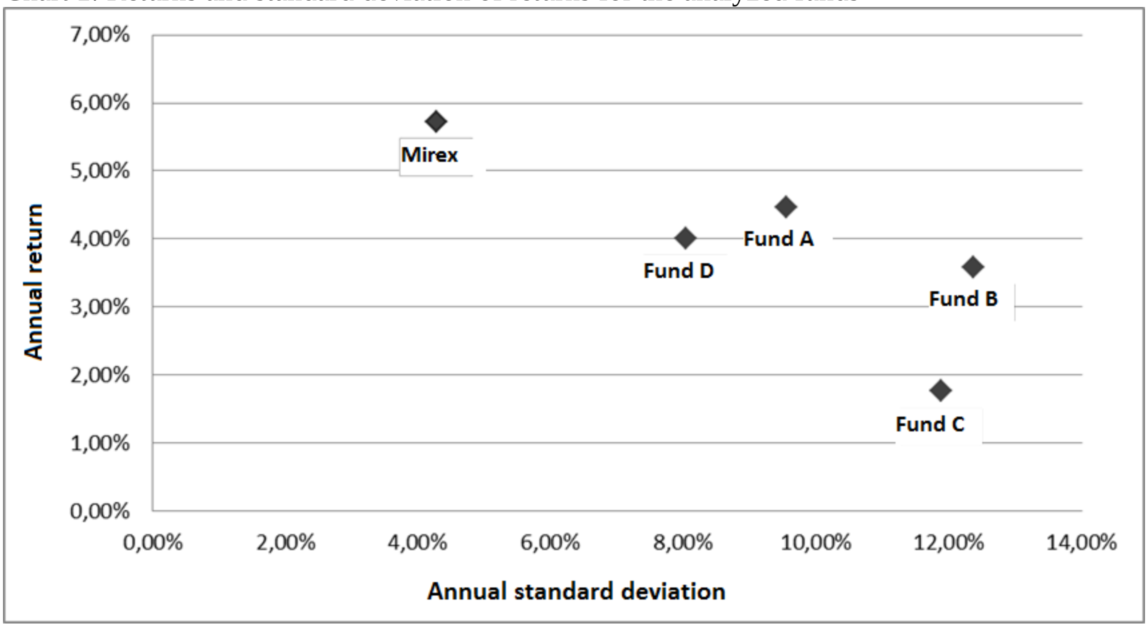
In addition to Romania, the pension funds in the UK, The Netherlands and Denmark were the only European pension funds that achieved higher average annual real returns in the past 5 years, while lower average annual real returns were recorded by funds in Belgium, Norway, Switzerland, Iceland, Germany, Portugal, Italy, Austria, Spain, etc. On the global level, higher returns were also achieved by funds in Central and South America, namely Uruguay (8.8%), Dominican Republic (7.6%) and Colombia (7.0%), followed by Namibia (7.2%), South Africa (6.5%), Pakistan (6.1%), Australia (6.0%),

Canada (6.9%), and New Zealand (6.3%). Lower returns were achieved by funds in Chile (3.7%), the United States (3.9%), and Japan (1.8%). [4]
Between the time they began to operate in 2002 and September of 2016, the Croatian mandatory pension funds achieved an average real annual return of 3.31%, which places them among the highest-earning funds.

A comparison to the operating results achieved by Croatian balanced open-end investment funds with a public offer

The Croatian balanced open-end investment funds with a public offer are a type of investment funds offered to Croatian individuals and institutions. In terms of their business rationale, these funds are most similar to pension funds. Croatian mandatory pension funds and open-end balanced investment funds with a public offer invest in very similar instruments and apply very similar rationales for designing their portfolios, i.e. they seek to earn returns by investing in bonds, stocks and, to a lesser degree, in money market instruments, and also have very similar operating histories. Due to these similarities, the paper continues to compare the operating results achieved by mandatory pension funds and four open-end balanced investment funds with a public offer for which information about the history of value of their units is available for the 08/31/2012 to 08/31/2016 period. The analysis provides figures for four Croatian mandatory pension funds based on the MIREX index (weighted average for four Croatian mandatory pension funds' units) and for four Croatian balanced open-end investment funds. The ratio between their returns and risks is clearly shown in the chart below.

Chart 1: Returns and standard deviation of returns for the analyzed funds



Source: Authors

Statistical data on returns and risk measures and quantile risk and return measures for MIREX and four open-end investment funds is provided in Tables 3 and 4.

Table 3*: Statistical Data on Returns and Risk Measures for MIREX and Funds A, B, C and D in the period from August 30, 2002 until December 31, 2010*

	Average Annual Return	**Annual Standard Deviation**	**Percentage of Negative Months**	**Greatest Monthly Decrease**	**Maximum Continuous Decrease**	**Cumulative Return for the Period**
MIREX	5.717	4.271	29	- 4.30%	-16.38	118.79
Fund A	4.468	9.551	35	- 11.22%	-47.43	85.07
Fund B	3.582	12.369	33	- 16.74%	-60.54	64.15
Fund C	1.760	11.883	42	-16.43%	-57.94	27.86
Fund D	4.006	8.035	36	-7.76	-37.32	73.87

Source: Authors

Table 4*: Quantile Risk Measures and Return Measures per Unit of Risk Assumed for the funds in the period 2002 – 2010 period*

	VaR (95%)	**CVaR (95%)**	**Sharp Ratio**	**Modified Sharp Ratio**	**Sortino Ratio**	**STARR**
MIREX	1.412	2.272	1.135	0.865	1.413	0.616
Fund A	3.465	5.913	0.377	0.354	0.435	0.176
Fund B	4.010	7.330	0.219	0.209	0.233	0.107
Fund C	3.681	7.109	0.075	0.074	0.086	0.036
Fund D	3.212	5.533	0.390	0.363	0.465	0.164

Source: Authors

All the selected indicators clearly show operational superiority of the pension funds compared to the open-end investment funds. The greatest average annual return, much lower annual standard deviation, significantly higher cumulative return and, consequently, better Sharp, Sortino and STARR ratios and much lower VaR and cVaR, clearly demonstrate the returns and risks of mandatory pension funds compared to achievements of comparable investment funds.

Fees and comparisons to pension funds in other countries

When Croatian mandatory pension funds began to operate in 2002, the Mandatory and Voluntary Pension Funds Act defined that these funds are allowed to charge an entry fee of up to 0.8% (a fee collected from each contribution payment to the pension fund) and a management fee of 1.2% (a fee applied to the total assets of the fund under management), and it also defined a certain fee for exiting a fund and a success fee. After two years, the success fee was discontinued and, as the funds' assets increased, the management fee was reduced on several occasions. In 2014, pension funds were allowed to charge an entry fee of up to 0.8% and a management fee of up to 0.45%. These two fees, combined with the custodian fee, resulted in a total expense for each member of approximately 0.55% (the expense ratio).

The proportions of these fees may be better understood by comparing the management fees charged by comparable pension funds. Table 5 presents these fees by country for countries that have such information available for 2012.

Table 5 shows that only the Polish pension funds charged lower management fees that the Croatian pension funds among the nine countries for which this information was available.

Table 5: The fees charged by pension funds in different countries, 2012

	Country	Management fee	Entry fee	Success fee
1.	Poland	0.38	0.11	0.03
2.	Croatia	0.45	0.8	-
3.	Hungary	0.53	-	-
4.	Macedonia	0.53	0.72	
5.	Slovakia	0.59	0.11	0.19
6.	Turkey	0.71	0.27	-
7.	Bulgaria	0.79	0.70	0.08
8.	Spain	1.08	-	-
9.	Estonia	1.73	-	-

Source: Pension Markets in Focus 2013, OECD

In Western European countries, pension funds are often not mandatory but associated with a particular job or profession. Their comparison with respect to fees with mandatory pension funds such as those existing in Central and Eastern European countries is not quite adequate. Still, such a comparison may be useful after all. The regulators in Western European countries normally do not define the amounts of fees payable to pension funds by their members. However, professional audiences and the media have lately focused more and more on the issue of fees, especially in The Netherlands and Switzerland [3]. In the UK, the regulator has already defined that the maximum expense to be charged by a pension fund may not exceed 0.50% [3]. This means that the Croatian pension funds would not be expensive even in the UK that has a long history of pension funds and a highly developed financial market, as well as huge amounts of assets being managed.

In 2016, the total expense for a member was reduced to 0.52% and, according to the legally defined yearly management fee reduction, this expense will be reduced to 0.47% in 2017.

4. Conclusion

The foregoing leads to the conclusion that, during the analyzed period of 14 years, the Croatian pension funds achieved returns higher than originally expected by the pension reform administrators. They are higher than the returns achieved by pension funds in most Central and Eastern European countries. They are among the highest ones even on the global level. Also, the fees are among the lowest ones in relation to the comparable countries.

Such good performance figures are probably a result of good reform preparation, which included appropriately set quantitative investment limits. The reduction of fees to the present, reasonably low levels may be attributed to learning from the experiences of countries that had already implemented their pension reforms and introduced mandatory pension funds because this eliminated the high initial expenses of obtaining members, so the fees could be rapidly reduced without compromising the operations of pension fund management companies.

Thanks to such good results and acceptable operating costs, it looks like it will be easier for the Croatian mandatory pension funds to overcome the problems concerning the high public debt and slow growth of the national economy in Croatia than it was for pension funds in Poland and Hungary.

References

[1] Croatian Pension Insurance Fund’s Statistical Information, number 3/2015, October 2015

[2] HANFA Report, September 2016.

[3] Investment & Pension Europe, October 2014.

[4] Pension Markets in Focus 2015, OECD, http://www.oecd.org/daf/fin/private-pensions/Pension-Markets-in-Focus-2015.pdf