Long-Term and Pension Savings

The Real Return

2020 Edition



The European Federation of Investors and Financial Services Users Fédération Européenne des Épargnants et Usagers des Services Financiers

Pension Savings: The Real Return 2020 Edition

A Research Report by BETTER FINANCE

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Acronyms

AIF	Alternative Investment Fund
AMC	Annual Management Charges
AuM	Assets under Management
BE	Belgium
BG	Bulgaria
Bln	Billion
BPETR	'Barclay's Pan-European High Yield Total Return' Index
CAC 40	'Cotation Assistée en Continu 40' Index
CMU	Capital Markets Union
DAX 30	'Deutsche Aktieindex 30' Index
DB	Defined Benefit plan
DC	Defined Contribution plan
DE	Germany
DG	Directorate General of the Commission of the European Union
DK	Denmark
DWP	United Kingdom's Governmental Agency Department for Work and Pensions
EBA	European Banking Authority
EE	Estonia
EEE	Exempt-Exempt Regime
EET	Exempt-Exempt-Tax Regime
ETF	Exchange-Traded Fund
EIOPA	European Insurance and Occupational Pensions Authority
ES	Spain
ESAs	European Supervisory Authorities
ESMA	European Securities and Markets Authority
EU	European Union
EURIBOR	Euro InterBank Offered Rate
EX	Executive Summary
FR	France
FSMA	Financial Services and Market Authority (Belgium)
FSUG	Financial Services Users Group - European Commission's Expert Group
FTSE 100	The Financial Times Stock Exchange 100 Index
FW	Foreword
GDP	Gross Domestic Product
HICP	Harmonised Indices of Consumer Prices
IBEX 35	Índice Bursátil Español 35 Index
IKZE	'Indywidualne konto zabezpieczenia emerytalnego' – Polish specific Individual
	pension savings account
IRA	United States specific Individual Retirement Account



IT	Italy
JPM	J&P Morgan Indices
KIID	Key Investor Information Document
LV	Latvia
NAV	Net Asset Value
Mln	Million
MSCI	Morgan Stanley Capital International Indices
NL	Netherlands
OECD	The Organisation for Economic Co-Operation and Development
OFT	United Kingdom's Office for Fair Trading
PAYG	Pay-As-You-Go Principle
PIP	Italian specific 'Individual Investment Plan'
PL	Poland
PRIIP(s)	Packaged Retail and Insurance-Based Investment Products
RO	Romania
S&P	Standard & Poor Indexes
SE	Sweden
SK	Slovakia
SME	Small and Medium-sized Enterprise
SPIVA	Standard & Poor Dow Jones' Indices Research Report on Active Management
Scorecard	performances
TEE	Tax-Exempt-Exempt Regime
TCR/TER	Total Cost Ratio/ Total Expense Ratio
UCITS	Undertakings for the Collective Investment of Transferable Securities
UK	United Kingdom



Pension Savings: The Real Return 2020 Edition

Country Case: Croatia

Croatian summary

Hrvatska je stvorila tipični mirovinski sustav s tri stupa, gdje se državni organizirani mirovinski stup na temelju PAYG-a (preraspodjela doprinosa radno sposobnog starijeg stanovništva) nadopunjuje obveznim financiranim mirovinskim sustavom (II. Stup) i subvencionira se (izravno kao i neizravno) dobrovoljni mirovinski sistem štednje (III. stup).

Povećavajući omjer obuhvata radnog stanovništva od strane II. stub nadoknađuje slaba pokrivenost unutar III. stup. To bi moglo donijeti rastući problem niskog životnog standarda za umirovljenje populacije u budućnosti, jer I. stup pruža samo 30% stopu zamjene, a preostala dva stupa neće moći dodati značajne izvore za pojedince tijekom umirovljenja. Iako su izvedbe oba financirana stupa prilično solidne, prilično mali doprinosi i nizak omjer pokrivenosti III. Stup postavlja pitanja o adekvatnosti mirovinskog sustava u Hrvatskoj.

Summary

Croatia has created a typical 3-pillar pension system, where the state-organised pension pillar (pillar I) is based on the PAYG principle ("Pay As You Go", meaning the redistribution of contributions from the working population to the elderly population) and is supplemented by mandatory funded pension schemes (pillar II) and subsidised (directly as well as indirectly) voluntary pension saving schemes (pillar II).

The increasing coverage ratio of the working population by the occupational pillar (pillar II) is offset by the low coverage within the voluntary pension pillar (pillar III). This might lead to an increasing problem of low living standards for the retiring populutation in the future as the state pension only provides a 30% retirement replacement rate and the remaining two pillars will not be able to add significant sources for individuals at retirement. Even if the performance of both funded pillars is quite solid, rather small contributions and low coverage ratio of the third pillar raises questions about the adequacy of the pension system in Croatia.

Introduction

Since 2002, the Croatian pension system is since 2002 designed on the conventional World bank 3-pillar model. The system was reformed as of 1 January 1999 by introducing a mixed public-private pension system consisting of three pillars of pension insurance:

- First pillar compulsory pension insurance based on generational solidarity;
- Second pillar compulsory pension insurance based on individual capitalized savings;
- Third pillar voluntary pension insurance based on individual capitalized savings.



Introductory Table - HR Pension System Overview					
Pillar I	Pillar II	Pillar III			
Pension Insurance Act	Mandatory Pension Funds Act	Voluntary Pension Funds Act			
Croatian Pension Insurance Institute (HZMO)	Croatian Financial Services Su	pervisory Agency (HANFA) ¹⁰³			
Mandatory state pension insurance PAYG principle Coverage: 99%	Mandatory DC-based funded pensions Individual accounts Coverage: 62.55%	Voluntary fully funded DC Individual accounts Coverage: 11.63%			
Managed by the Social Insurance Company	Managed by Pension Asset Management Companies				
Contribution rate: 15.00%; Replacement ratio: 30.6%; Average pension: €320	Contribution rate: 5.00% 12 pension funds (3 risk-reward classes)	8 open-ended pensions funds 20 closed pension funds			
	NAV: 15,135 mil. Eur Members: 2,010,403	NAV: 836.23 mil. Eur Members: 365,102			
Quick facts					
Retirement age – 65 years for men; 62 years and 4 months for woman (2019)					
A relatively	high old-age dependency ratio of 3	2.4% in 2019			
An average gros	ss pre-retirement income replaceme	ent ratio of 30.6%			

Source: authors' composition, data valid for the year 2019

The following table summarises the returns of Croatian pension funds' returns (pillar II and III) based on standardized holding periods.

Summary Return Table. Croatian pension system					
	Mandatory F	Pension Funds	Voluntary Pension Funds		
Lielding Deried	Net Nominal	Real Net	Net Nominal	Real Net	
Holding Period	Performance	Performance	Performance	Performance	
1-year	9.32%	8.06%	9.83%	8.57%	
3-years	5.85%	4.68%	4.75%	3.58%	
5-years	7.04%	6.25%	5.58%	4.79%	
7-year	6.38%	5.77%	5.69%	5.07%	
10-years	6.16%	4.91%	5.83%	4.58%	
Since inception	5.58%	3.59%	5.86%	3.88%	

<u>Source</u>: Tables HR 6 and 8

First pillar – PAYG scheme

The first (state) pillar of pension insurance is called a pillar of generational solidarity based on pay-asyou-go (PAYG, redistributional) principle as persons who work pay contributions for pension insurance, whereas such contributions are redistributed as pensions to current pensioners. In addition to contributions collected from insured persons, the first pillar is also funded from the state budget. According to the Pension Insurance Act¹⁰⁴, insured persons are compulsorily insured for retirement in accordance with principles of reciprocity and solidarity for the event of ageing, reduction of working

¹⁰³ https://www.hanfa.hr/pillar-ii-and-iii-pensions-and-pension-payments/

¹⁰⁴ https://zakon.hr/z/91/Zakon-o-mirovinskom-osiguranju



capacity with remaining working capacity and partial or total loss of working capacity, and the members of their families in the event of an insured person's or pension beneficiary's death (right to an old-age pension, early retirement pension, disability pension, temporary disability pension, survivors' pension, minimum pension, basic pension).

Funding: the system of generational solidarity is a defined-benefit (DB) system. The Contribution Act¹⁰⁵ prescribes the obligation to pay contributions for the funding of compulsory insurance, including contributions for pension insurance. Contributions are collected by the Tax Administration and the contribution rate for insured persons who are insured only in the first pillar amounts to 20% of gross salary, while the contribution rate for persons who are insured in both compulsory pillars (I. and II. pillar) amounts to 15%.

The implementation of pension insurance based on generational solidarity falls within the competence of the Croatian Pension Insurance Institute¹⁰⁶. The Croatian Pension Insurance Institute (HZMO) is the competent institution for exercising the right exclusively from pension insurance based on generational solidarity (state pillar).

The right to an old-age pension payable from the state pillar is acquired by an insured person who has reached 65 years of age, if he/she has completed at least 15 years of qualifying periods. Women working and insured in the period between 2014 – 2019 are to retire earlier, starting at the age of 61 (if the 15 years vesting period is fulfilled), where the age requirement for each calendar year increases by 3 months until 2029. By way of exception, raising the retirement age by 4 months every year was stipulated by the law that was in force from 1 January to 31 December 2019. However, amendments to the law that entered into force on 1 January 2020 introduced a transitional period for women under more favourable conditions again. The raising of the retirement age is reduced from 4 to 3 months every year, with an exceptional raise by 2 months in 2020 in relation to 2019. As of 1 January 2030, women and men can exercise the right to old-age pension benefit under the same conditions, having reached the age of 65 and 15 years of pensionable service, irrespective of the gender of the insured person.

The amount of old-age pension is calculated by multiplying personal points with a pension factor and the actual value of a pension. The pension factor is determined by the type of pension to be realised, and the actual value of the pension is determined by the Governing Board of the Croatian Pension Insurance Institute (HZMO), based on the data of the Croatian Bureau of Statistics, no later than two months after the end of each half-year. Personal points are calculated by multiplying the average value point with achieved qualifying periods and the initial factor. The initial factor affects the amount of pension in case of old-age pensions and early retirement pensions, so that:

• An old-age pension is increased for insured persons who are granted a pension for the first time after the age of 65, and have 35 years of qualifying periods, by 0.34% for each month after reaching the prescribed age for acquiring the right to an old-age pension, but not longer than 5 years,

¹⁰⁵ https://zakon.hr/z/365/Zakon-o-doprinosima

¹⁰⁶ https://www.mirovinsko.hr/



• An early retirement pension is reduced for the insured persons by 0.2% for each month of early retirement before reaching the statutory retirement age of the insured person for the acquisition of the right to an old-age pension.

The average value point is calculated based on salaries earned over the entire working life in relation to the average annual salary in the Republic of Croatia.

The right to an early retirement pension is acquired by an insured person who has reached 60 years of age and completed 35 years of qualifying periods. There are again we find some exceptions for women. The amount of the old-age pension is permanently reduced for each calendar month of the earlier exercise of entitlement, up to the completed years of life of the insurer prescribed for the acquisition of the right to an old-age pension, linearly by 0.2% for each month of early retirement, i.e. 2.4% per year up to a maximum of 12% for a maximum of 5 years prior to retirement.

Paid old-age pensions are adjusted twice a year in relation to economic trends in the Republic of Croatia. The adjustment rate, applied from 1 January 2015, is determined by the variable ratio of the consumer price index and gross salaries of all employees in the Republic of Croatia in the previous year, compared to the year preceding it (70:30, 50: 50 or 30:70, whichever is preferred). From July 1, 2019, it is aligned as follows: from January 1 to July 1 each calendar year according to the 70:30 or 30:70 model.

Second pillar - mandatory pension funds

The second pillar (also referred to as the *occupational pillar* or pillar II) has been effectively introduced starting January 2002. The second pillar represents individual capitalised savings. Individual savings refer to personal assets of insured persons and the fact that paid funds are recorded in personal accounts, while capitalised savings refer to returns on investments achieved upon payment to the selected compulsory pension fund. This form of pension insurance was introduced to expand the source of funding in relation to compulsory pension insurance based on generational solidarity, which sought to achieve greater individual responsibility for the safety of the elderly.

The occupational pillar includes compulsory insured persons of up to 40 years of age. The rate of contributions to the second pillar amounts to 5% of the gross salary, whereby insured persons may themselves choose a compulsory pension fund and compulsory pension fund category to which they will contribute the said amount. Persons compulsorily insured in the first and second pillars and insured persons who voluntarily chose the second pillar have the right to choose in which system the pension will be calculated, in other words to choose the system which is more favorable for them (opt-out system). As such, insured persons can:

- Leave the second pillar (after the age of 40) and get the pension exclusively from the public (state) pillar;
- Continue in the second (occupational) pillar and get the pension from both pillars (in this case, the pension from the first pillar is determined for the years of service completed by December 31, 2001, with a supplement of 27% and for the years of service completed from January 1, 2002, with a supplement of 20.25 %, determined by the factor of basic pension (0.75%).



The management of savings within the occupational pillar is carried out through "compulsory pension management companies" offering pension funds, while the payout phase is carried out exclusively through pension insurance companies. The pension system based on capitalised savings is regulated by two statutory regulations, depending on whether they refer to the phase of accumulation and capitalisation of contributions regulated by the Act on Compulsory Pension Funds¹⁰⁷ or the phase of pension payouts (*deccumulation*) regulated by the Act on Pension Insurance Companies¹⁰⁸. The Central Register of Insured Persons (REGOS) is the competent institution for insurance based on individual capitalised savings (second pillar).

A compulsory pension fund is established by a pension company that manages such fund on its behalf and for the joint account of pension fund members. Pension funds may fall under categories A, B or C, and are managed by the same pension company. Pension funds of different categories have different investment strategies and vary according to membership limitations (considering life expectancy of savers/members), investment strategy and investment limitations. The risk profile should be the lowest in category C funds, and the largest in category A pension funds.

The right to pension and based on individual capitalised savings – Pillar II is realized based on the Decision on Retirement Benefits issued by the Croatian Pension Insurance Institute (HZMO). From January 1, 2019, all insured persons who are insured in both pension pillars can, when they apply for old-age or early old-age pension, select whether they want to receive a pension only from Pillar I or from both pillars through a personal statement to the Central Register of Insured Persons (REGOS).

For a member of the fund to choose a more favourable pension, REGOS will collect informative pension calculations from the Croatian Pension Insurance Institute (HZMO) and the Pension Insurance Company (MOD) and submit them to the home address. If a member of the fund opts for a pension only from the compulsory pension insurance based on generational solidarity (pillar I), the HZMO will determine the pension as if the insured was only insured in the state pillar. The selection of this pension means that a member of the fund wants to leave the second pillar, i.e. compulsory pension insurance of individual capitalised savings, and the total capitalised funds from the personal account of the member of the fund are transferred to the state budget. If a member of the fund opts for a combined pension from both the state and occupational schemes, HZMO will determine the basic pension from compulsory pension insurance for generational solidarity and submit to REGOS the data from the Decision. Upon receipt of the Decision, which is provided to REGOS by HZMO, REGOS checks the data from the Decision regarding the status of the future pension beneficiary. It is checked whether the personal account of the future pension beneficiary is opened and whether he or she has exited from the second pillar. After selecting the pension insurance company, REGOS will close the personal account of the member of the fund and transfer the overall funds to the pension insurance company which will contact than the beneficiary for the conclusion of the pension agreement. The compulsory pension company that manages the compulsory pension fund has a deadline of five working days from the date of initiating the closing of the personal account to allocate funds to the payment account for Pillar II contributions. Upon settlement of the obligation by the custodian bank, the following working day it is verified whether the funds have been transferred to the account of the legal recipient of funds - the Raiffeisen

¹⁰⁷ https://www.zakon.hr/z/708/Zakon-o-obveznim-mirovinskim-fondovima

¹⁰⁸ https://www.zakon.hr/z/712/Zakon-o-mirovinskim-osiguravaju%C4%87im-dru%C5%A1tvima



Pension Insurance Company (currently the only MOD) that will pay the pension on the basis of individual capitalised savings. REGOS informs the Pension Insurance Company electronically on the data from R-POD form and the amount of transferred funds. Upon receipt of the aforementioned information, the pension insurance company will contact the future pension beneficiary regarding the conclusion of the Contract on pension based on individual capitalised savings.

If the old-age pension from Pillar I is higher than 15% of the minimum pension from Pillar I according to the Pension Insurance Act, the future pension beneficiary from Pillar II can decide on a partial, one-time cash payment of 15% in the gross amount of the total capitalised funds allocated to MOD.

Third pillar - voluntary pension funds

Voluntary pension funds were also introduced in 2002 and represent the last component of the threepillar system. The third pillar is a voluntary pension savings DC-based scheme. Voluntary pension schemes are either offered by voluntary pension funds or can be set up by trade unions and employers, making open and closed funds possible. Open-ended pension funds are open for membership to any natural person interested in becoming a member of an open-ended pension fund, whereas closedended pension funds form their membership out of natural persons who are either employed with an employer, or are trade union members, members of associations of self-employed persons. Voluntary pension funds need to have at least 2,000 members two years after being established.

The payment of retirement benefits within the framework of mandatory pension insurance based on individual capitalised savings of members of mandatory pension funds is made by pension insurance companies only. The payment of retirement benefits within the framework of voluntary pension insurance based on individual capitalised savings of members of voluntary pension funds is made by pension insurance companies, but exceptionally, the payment of retirement benefits on a temporary basis may be made by voluntary pension funds under the conditions laid down in the Act on Voluntary Pension Funds.

The collection of funds within the framework of Pillar III of pension insurance is carried out through voluntary pension funds, while payouts of pensions are made by pension insurance companies, and, exceptionally, pension companies, that may carry out temporary pension payouts from voluntary pension funds. Pension reform, which entered into force on January 1, 2019, has also introduced the possibility of pension payments by life insurance companies.

There are no limitations on membership. Also, there are no time restrictions on the duration of membership. A member may choose the amount, duration, and dynamics of payments to the fund. Payments are not compulsory and depend solely on payer's current capabilities. The membership in the fund is not terminated by termination of payments or irregular payments. All paid funds are personally owned by a member, no matter who their payer is, and they can be inherited in full. The only condition for using the funds is reaching 50 years of age.

The Act on Voluntary Pension Funds¹⁰⁹ regulates the establishment and operation of voluntary pension funds, while the Act on Pension Insurance Companies regulates the establishment and operation of

¹⁰⁹ https://www.zakon.hr/z/709/Zakon-o-dobrovoljnim-mirovinskim-fondovima



pension insurance companies, pension schemes and pensions and their distribution. HANFA provides supervision over the business of pension insurance companies.

Pension Vehicles

Second pillar – Mandatory Pension Funds

There are 4 mandatory pension asset management companies operating in Croatia in 2019 (HANFA, 2020):

- 1. Allianz ZB d.o.o. društvo za upravljanje obveznim i dobrovoljnim mirovinskim fondovima
- 2. ERSTE d.o.o. društvo za upravljanje obveznim i dobrovoljnim mirovinskim fondovima
- 3. PBZ CROATIA OSIGURANJE d.d. za upravljanje obveznim mirovinskim fondovima
- 4. Raiffeisen društvo za upravljanje obveznim i dobrovoljnim mirovinskim fondovima dioničko društvo

There are 12 mandatory pension funds offered to savers, while each mandatory pension company manages 3 pension funds with different investment strategy:

- 1. Type "A" mandatory pension fund with a riskier investing strategy. Members of this fund can be persons who are at least 10 years old until the age requirements for acquiring the right to an old-age pension are met. At least 30% of the fund's net assets are invested in bonds of the Republic of Croatia, EU or OECD countries. Maximum 55% of the fund's net assets are allocated to shares of issuers from the Republic of Croatia, EU member states or OECD countries and at least 40% of the fund's net assets are denominated in kuna.
- 2. Type "B" mandatory pension fund balanced investment strategy. Initially, all members will be members of this fund, unless they choose Fund A or C themselves. At least 50% of the fund's net assets are invested in bonds of the Republic of Croatia, EU or OECD countries. Maximum 35% of the fund's net assets are invested in shares of issuers from the Republic of Croatia, EU member states or OECD countries and at least 60% of the fund's net assets are denominated in kuna.
- 3. Type "C" mandatory pension fund conservative investment strategy. It is suitable for older members of the fund who have less than 5 years left to meet the age requirements for acquiring the right to an old-age pension. According to this condition, REGOS will automatically transfer policyholders from the category B fund to the category C fund. At least 70% of the fund's net assets should be allocated to bonds of the Republic of Croatia, EU member states or OECD countries. Investment in shares is not allowed, and exposure to investment funds is limited to 10%. At least 90% of the fund's net assets are denominated in kuna.

Portfolio structure of the mandatory pension funds is presented below.





Source: Own elaboration based on HANFA data, 2020

Considering the portfolio structure of all mandatory pension funds, most of the investments (almost 80%) are allocated to government and municipal bonds.

Third pillar – Voluntary Pension Funds

Voluntary pension savings schemes offer more flexibility for providers. There are 4 voluntary pension asset management companies in Croatia:

- 1. Allianz ZB d.o.o. društvo za upravljanje obveznim i dobrovoljnim mirovinskim fondovima
- 2. CROATIA osiguranje mirovinsko društvo za upravljanje dobrovoljnim mirovinskim fondom d.o.o.
- 3. ERSTE d.o.o. društvo za upravljanje obveznim i dobrovoljnim mirovinskim fondovima
- 4. Raiffeisen društvo za upravljanje obveznim i dobrovoljnim mirovinskim fondovima dioničko društvo

These companies manage mandatory as well as voluntary pension funds. Within Pillar III, the companies can offer open-ended funds to any member as well as closed-ended funds to a predefined range of members. Currently (as of December 31, 2019), there are 20 closed-ended funds and 8 open-ended voluntary pension funds offered to savers. However, open-ended funds manage more than 80% of all Pillar III assets.

The portfolio structure of voluntary pension funds is presented below.





<u>Source</u>: Own elaboration based on HANFA data, 2020

Voluntary pension funds can be considered riskier compared to mandatory pension funds. Almost 20% of assets are allocated into equities and equity based UCITs funds and 60% in government bonds.

Charges

Croatian Pillar II pension funds managed by 4 companies do exhibit regulated fee policy ensuring relatively low level of fees. A detailed structure of fees for mandatory pension funds offered within Pillar II is presented below.

Table HR3. Charges in the Croatian mandatory pension funds				
Fee type	2019			
Management fee	0.30% p.a.			
Exit fee	0.8% in 1 year, 0.4 % in 2 year, 0.2 % in 3 year and than 0%			
Entry fee	0.50%			
Depository fee	0.017% p.a.			
Total cost indicator	0.38%			
Management fee	0.30% p.a.			
Exit fee	0.8% in 1 year, 0.4 % in 2 year, 0.2 % in 3 year and than 0%			
Entry fee	0.5%			
Depository fee	0.017% p.a.			
Total cost indicator	0.36%			
Management fee	0.30% p.a.			
Exit fee	0.8% in 1 year, 0.4 % in 2 year, 0.2 % in 3 year and than 0%			
Entry fee	0.5%			
Depository fee	0.017% p.a.			
Total cost indicator	0.36%			
Management fee	0.30% p.a.			
Exit fee	0.8% in 1 year, 0.4 % in 2 year, 0.2 % in 3 year and than 0%			
Entry fee	0.5%			
Depository fee	0.022% p.a.			
Total cost indicator	0.5173%			
	HR3. Charges in the Fee type Management fee Exit fee Entry fee Depository fee Total cost indicator Management fee Exit fee Entry fee Depository fee Total cost indicator Management fee Exit fee Entry fee Depository fee Total cost indicator Management fee Exit fee Entry fee Depository fee Total cost indicator			



	ERSTE PLAVI OBVEZNI MIROVINSKI FOND KATEGORIJE B	Management fee Exit fee Entry fee Depository fee Total cost indicator	0.30% p.a. 0.8% in 1 year, 0.4 % in 2 year, 0.2 % in 3 year and than 0% 0.5% 0.022% 0.3871%
	ERSTE PLAVI OBVEZNI MIROVINSKI FOND KATEGORIJE C	Management fee Exit fee Entry fee Depository fee Total cost indicator	0.30% p.a. 0.8% in 1 year, 0.4 % in 2 year, 0.2 % in 3 year and than 0% 0.5% 0.022% p.a. 0.3635%
	PBZ CROATIA OSIGURANJE obvezni mirovinski fond - kategorija A	Management fee Exit fee Entry fee Depository fee Total cost indicator	0.30% p.a. 0.8% in 1 year, 0.4 % in 2 year, 0.2 % in 3 year and than 0% 0.5% 0.020% p.a. 0.44%
	PBZ CROATIA OSIGURANJE obvezni mirovinski fond - kategorija B	Management fee Exit fee Entry fee Depository fee Total cost indicator	0.30% p.a. 0.8% in 1 year, 0.4 % in 2 year, 0.2 % in 3 year and than 0% 0.5% 0.020% p.a. 0.37%
	PBZ CROATIA OSIGURANJE obvezni mirovinski fond - kategorija C	Management fee Exit fee Entry fee Depository fee Total cost indicator	0.30% p.a. 0.8% in 1 year, 0.4 % in 2 year, 0.2 % in 3 year and than 0% 0.5% 0.020% p.a. 0.36%
	Raiffeisen obvezni mirovinski fond kategorije A	Management fee Exit fee Entry fee Depository fee Total cost indicator	0.30% p.a. 0.8% in 1 year, 0.4 % in 2 year, 0.2 % in 3 year and than 0% 0.5% 0.020% p.a. 0.38%
	Raiffeisen obvezni mirovinski fond kategorije B	Management fee Exit fee Entry fee Depository fee Total cost indicator	0.30% p.a. 0.8% in 1 year, 0.4 % in 2 year, 0.2 % in 3 year and than 0% 0.5% 0.020% p.a. 0.37%
	Raiffeisen obvezni mirovinski fond kategorije C	Management fee Exit fee Entry fee Depository fee Total cost indicator	0.30% p.a. 0.8% in 1 year, 0.4 % in 2 year, 0.2 % in 3 year and than 0% 0.5% 0.020% p.a. 0.36%
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<u>Source</u>: Own elaboration using funds prospectuses, 2020

Obtaining data for voluntary pension funds is quite challenging and only average cost ratios for all voluntary pension funds are available (see graph below). The fee structure suggests that the total costs are quite dependent on the overall performance and thus the performance-tied fees play a key role in the fee structure of voluntary pension funds in Croatia.





Graph HR4. Cost ratio of Croatian voluntary pension funds

Source: Own elaboration, 2020

Taxation

Taxation of the mandatory pension scheme (second pillar) is of the EET type. Contributions and investment income are tax-exempt, whereas benefits are taxed. The tax allowance for pensioners is 1.7 times higher than for employees, meaning that pensions are only modestly taxed.

At each pension payment, as well as a one-time payment of 15% of the total capitalised funds allocated to MOD, the pension insurance company calculates and pays income tax and surtax on income tax in accordance with the Income Tax Act and pays the net amount to the pension beneficiary. Tax rates for pensioners are reduced and are 12% and 18%, depending on tax brackets. Based on the final income tax calculation that is done by the Tax Administration, the pension beneficiary may be required to pay a tax or may be entitled to a refund of overpaid income tax, depending on the received receipts and the personal deductions used in that year.

Voluntary pension savings (third pillar) are the only form of saving which includes two types of fiscal stimulents: state incentives for funds and tax incentives for employers. Croatia encourages pension savings and approves the incentive to all members of third pillar in the amount of 15% of the annual payment, up to a maximum of HRK 5,000.00 (\leq 672), that is, the highest state incentive can amount to HRK 750.00 (\leq 101). Every resident can exercise the right to receive incentives only during the period that he/she pays compulsory pension insurance – second pillar. The membership in a voluntary pension fund offers its member the option of voluntary pension savings being paid by his employer. All payments made by the employer in III. pillar of pension insurance up to the monthly amount of HRK 500 (\leq 67.2), that is, up to HRK 6,000 (\leq 806.5) a year, are not considered a salary. That amount is considered a tax-recognized expense or employer's expense. Paid pension benefits are subject to personal income tax. Therefore, we can say that the taxation scheme for third pillar pension savings is EET with exceptions.



Pension Returns

Mandatory pension funds (second pillar)

Mandatory pension funds have beaten inflation over the analyzed period of 2002 - 2019. The graph below shows the cumulative performance of mandatory pension funds compared to the inflation.





Source: Own elaboration, 2020

The table below presents the annual nominal as well as real performance of mandatory pension funds in Croatia.

	Table HR6. Nominal and	Real Returns	of Man	datory pension f	unds ir	n Croatia	
2002		8.77%				5.92%	
2003		7.33%			5.18%		
2004		7.66%				5.70%	
2005		7.77%	7.77%		3.79%		
2006		6.64%				4.52%	
2007		7.03%				1.62%	
2008		-13.88%				-16.72%	
2009		9.84%			•	8.00%	
2010	charges, before inflation and taxes	charges, before inflation and taxes 12.05% 7.63% 5.58% charges and inflation and before taxes	ter -	5.89%	2 500/		
2011			ation	-4.34%	3.59%		
2012			xes	7.65%			
2013		3.63%				3.18%	
2014		5.90%				6.00%	
2015		7.50%				7.80%	
2016		10.21%				9.50%	
2017		6.50%				5.23%	
2018		1.86%				0.86%	
2019		9.32%		8.06%			
<u>Source</u> :	Own calculations, 2020						



Also relevant are the annualized average returns of pension vehicles based on standardised holding periods (1 year, 3 years, 7 years, 10 years and maximum data available) in order to foster comparison with other types of pension plans or schemes. The table below summarises the nominal and real net returns of mandatory pension funds in Croatia.

Table HR7. Annualized returns of mandatory pension funds						
Dase	based on standardised holding periods					
Holding Period	Net Nominal Returns	Real Net Returns				
1-year	9.32%	8.06%				
3-years	5.85%	4.68%				
5-years	7.04%	6.25%				
7-year	6.38%	5.77%				
10-years	6.16%	4.91%				
Since inception	5.58%	3.59%				
Source: Own computations based on Table HR5 data						

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Voluntary pension funds

Voluntary pension funds have achieved slightly higher cumulative performance when compared to the Pillar II peers. This could be attributed to the more riskier investment strategy. However, when inspecting the performance on a fund level, there are differences attributed to the different investment strategies.

Chart HR8. Cumulative performance of voluntary pension funds in Croatia 200% 180% 160% 140% 120% 100% 80% 60% 40% 20% 0% 2010 2012 2012 2013 2014 2015 2016 2017 2018 2004 Closed-ended fund cumulative return Open-ended fund cumulative return Nominal cumulative performance ······ Cumulative inflation - Real cumulative performance

The graph below presents the cumulative performance of all voluntary pension funds in Croatia.

Source: Own elaboration, 2020

The table below presents the nominal and real annual returns of voluntary pension funds offered in Croatia.



	Table HR9. Nominal an	d Real Retur	rns of Vo	luntary pension fund	ls in Croatia	
2002		6.29%			3.44%	
2003		2.22%			0.07%	
2004		7.71%			5.76%	
2005		9.96%			5.98%	
2006		9.14%			7.03%	
2007		11.24%			5.83%	
2008		-9.35%			-12.18%	
2009	Nominal roturn after	11.69%	Real return after 5.86% charges and inflation	Real return after	9.85%	2 0 0 0/
2010	charges before inflation	8.53%			6.80%	
2011	and taxes	-2.16%		-4.30%	5.8870	
2012	and taxes	12.72%			8.32%	
2013		2.43%			1.97%	
2014		9.63%			9.73%	
2015		5.73%			6.03%	
2016		7.94%			7.23%	
2017		4.12%			2.85%	
2018		0.52%			-0.48%	
2019		9.83%			8.57%	

Source: Own elaboration, 2020

Overall, both mandatory and voluntary pension funds were able to beat inflation on a cumulative basis and can be considered attractive for savers. The average returns of the third pillar pension funds over different standardized holding periods are presented in the table below.

Table HR10. Average r	Table HR10. Average nominal and real net returns of Croatian III. pillar pension funds				
Holding Period	Net Nominal Return	Real Net Return			
1-year	9.83%	8.57%			
3-years	4.75%	3.58%			
5-years	5.58%	4.79%			
7-year	5.69%	5.07%			
10-years	5.83%	4.58%			
Since inception	5.86%	3.88%			

Source: Own elaboration, 2020

Conclusions

Croatian pension system offers rather low replacement rates from the state organized I. pillar. This leaves the working population to rely on individual savings and thus the importance of mandatory as well as voluntary pension savings will rise over time and will play a significant role of one's income during the retirement.

Mandatory as well as voluntary pension funds have provided the savers with solid returns over the last 17 years. II. pillar is compulsory for the working population and thus the coverage ratio will be expected to rise in future. The problem could be seen in rather low coverage ratio within the III. pillar, where only 12% of working population saves for retirement.



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Policy recommendations

Understating weak points of Croatian pension system (low coverage ratio and relatively low contribution rates for funded schemes), the pension system could be improved by:

- 1. allowing for additional voluntary contributions for mandatory pension pillar on top of 5% contribution rate envisaged by the current law as the II. pillar offers quite solid performance with low cost ratio;
- 2. increase indirect state support and further enhance the tax exemption for III. pillar contributions in order to increase the coverage ratio.

Overall, the performance of Croatian pension funds could be considered solid, compared to other peers in other countries. However, the performance is driven mostly by bond yields of domestic issuers, which would not hold for the longer period.



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