

Potential investments of pension funds in long-term care for the elderly: the case of Croatia

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Article**

JEL: G23, H51, I18, J11

<https://doi.org/10.3326/pse.48.1.3>

* The authors would like to thank two anonymous reviewers for their valuable help in completing this article.

** Received: June 1, 2023

Accepted: January 10, 2024

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Abstract

Contributions to pension funds are placed on the capital market. To invest in a better old age for those who set aside those funds, it is necessary to adjust the system. The paper analyzes the problem in the long-term care system faced by private care homes, the outlook for the building of additional homes, and the interest of pension funds in investing in the long-term care system. The problem is becoming more and more significant as the population is growing older. The authors interviewed sixteen respondents. The aim was to collect views on the current possibilities and perspectives for the development of the long-term care system in Croatia. The results indicate that pension funds do have an interest in investing, but before that, the system of homes for the elderly needs to be reorganized.

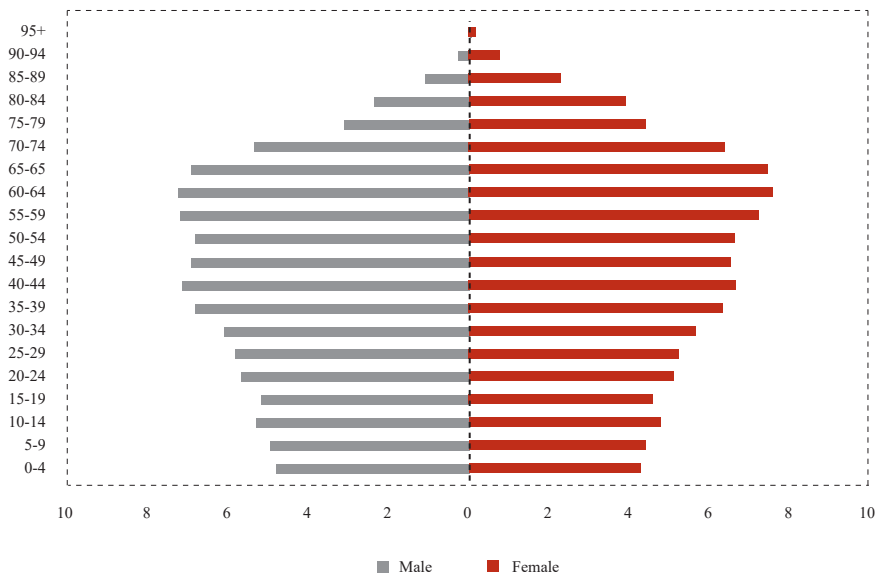
Keywords: homes for the elderly and infirm, long-term care, investment, pension funds, restrictions, Croatia

1 INTRODUCTION

Long-term care for the elderly is a topical subject worldwide and in Croatia, primarily due to the trend of population aging. According to the results of the population census, Croatia had a population of 3.87 million in 2021 (CBS, 2023).

CHART 1

Age-sex pyramid according to the 2021 census



Source: Authors (CBS, 2023).

The current age-sex pyramid shown in chart 1 is of the constrictive type. This type is generally characterized by low fertility, low mortality, long life expectancy and an overall aging population (Saroha, 2018). In the current pyramid, these features can be observed, with special emphasis on the significant number of the mature population.

TABLE 1*Average age of population in Croatia, 1971-2021*

	1971	1981	1991	2001	2011	2021
Women	35.5	37.1	38.7	41.0	43.5	45.9
Men	32.4	33.8	35.4	37.5	40.0	42.5
Total	34.0	35.4	37.1	39.3	41.8	44.3

Source: Authors (CBS, 2022).

The average age of the population of Croatia shown in table 1 is increasing. From 1971 to 2021, the average age of men increased by 10.1, for women by 10.4, and the total by 10.3 years. In 2021, it was 42.5 years for men, 45.9 years for women, with a total average age of 44.3 years (CBS, 2022).

CHART 2*Ageing index 1971-2021 (in %)**Source: Created by the authors (CBS, 2022).*

One of the best indicators of the age of the population is the ageing index shown in graph 2, which shows the ratio of the numbers of inhabitants over 60 and under 20. The critical limit of the ratio is 40 and therefore Croatia has been classified as a country with an old population since 1971 (Obadić et al., 2017). Croatia already achieved the value of 47% of old people in 1971, which grew to 156% in 2021 (CBS, 2022). Because of the trend of population aging, the need for long-term care grows every single day.

Traditionally, older members of the household were taken care of by younger members of the family. The modernization of society led to changes in family habits and roles, which led to an increase in the popularity of homes for the elderly and infirm (below referred to as homes) where they are provided with medical care, all-day supervision, and the possibility of socialization with peers, on condition of payment of fees. There are currently three groups of homes in Croatia: owned by the state, decentralized and homes owned and run by other founders, legal or natural persons, religious communities, and commercial companies (Bađun, 2017).

According to MROSP (2022), Croatia is currently the founder and owner of three institutions for long-term care: the Majka Marija Petković Home for elderly and gravely ill adults in Blato on Korčula; the Home for adults and rehabilitation in Metković and the Home for the elderly in Oklaj. Decentralized homes (45 of them) are those owned by units of regional self-government, i.e. counties, including the City of Zagreb. The third group consists of privately owned homes (121 of them) whose owners are natural or legal persons, religious societies, organizations, etc.

TABLE 2

Type, number, and total accommodation capacity of homes in 2022

Type	Number	Total accommodation capacity
State	3	171
Decentralized	45	10,869
Private	121	8,421
In total	169	19,461

Source: Authors (MROSP, 2022).

Currently, there are large disparities among the needs and capacities of long-term care facilities. The pressure is especially felt in homes owned by the state, regional self-government units and the City of Zagreb. The charges of private and state-owned homes differ significantly, so in the private sector, due to higher prices, the disparity between supply and demand is significantly lower. Prices in state and decentralized homes range between 266 and 796 euros per month, and in private homes between 995 and 1,593 (Gelo, Matanić and Matanić Vautmans, 2021). It is important to point out that the prices partly depend on the level of service, type of diet, number of beds per room, etc. Primarily because of the difference in prices, accommodation in government owned homes tends to be preferred.

Long-term care can be financed from public and private sources. The state finances the accommodation of clients partly from the state budget, while the client or family finances the rest. According to the Social Welfare Act (Zakon o socijalnoj skrbi), a person who uses social services must contribute with income and assets that are not necessary for their life or the lives of the other members of the household (Art. 121, paragraph 1). Croatia allocates a certain amount every year to finance the social welfare system and exposes itself to certain losses that represent a burden on the working population and raises doubts concerning the long-term sustainability of such a system. The share of state expenditures for social protection and expenditures for social protection benefits in GDP in 2021 is 22.3%, most of which is allocated to expenditures for old age (7.5%) and sickness/health care (7.8%) (CBS, 2023).

The mandatory pension fund collects the contributions of pension fund members and then invests them to increase the value of the pension fund's assets. A pension fund is an asset without legal personality, owned by its members whose individual ownership rights are determined as a proportion of the funds in the individual's personal account, while investment options are prescribed in accordance with the

accompanying legislation, the Act on Mandatory Pension Funds (Zakon o obveznim mirovinskim fondovima) and the Regulations on Permitted Investments and additional restrictions on investments of the mandatory pension fund (Pravilnik o dozvoljenim ulaganjima i dodatnim ograničenjima ulaganja obveznog mirovinskog fonda). Pension funds invest on the capital market in financial instruments that must be listed on the official market. Regarding the riskiness and profitability of investments, pension fund investments are classified according to categories A, B or C. The most risky, but also the most profitable investments, are part of the category A fund, the less risky and profitable is fund B, and the least risky and least profitable is fund C. Asset investments of mandatory pension funds of different categories are legally limited by the definition of the permitted forms and instruments of investment/property; investments with regard to the type of investment/asset; with regard to the net value of the pension fund's assets, and the currency and maturity compatibility of the assets. Investing in the system of long-term care for the elderly from the perspective of pension funds is currently not possible, because the property values of the homes are too low and are not listed on the stock market.

The primary goal of this research is to examine the current problems of the long-term care system for the elderly and the possibilities of its more appropriate financing. The point of this paper is to draw attention to the current demographic trends and propose a more adequate and long-term sustainable organization for that system. The hypotheses were defined according to the current problems of the business model of existing homes, the challenges, and the perspectives in the construction of privately owned homes through the willingness of pension funds to invest. The research showed that there is a lack of capacity in the homes, with long waiting lists and a lack of educated personnel. Stress, low wages, and high workloads contribute to the long-term care system not being considered an attractive workplace. When building a home in private ownership, one encounters several problems such as strict legal regulations, insufficient interest of the state in cooperation through a public-private partnership (PPP) and the constant growth in real estate prices. For investment by pension funds to be profitable and sustainable in the long term, it is necessary to consolidate existing or build new multi-site operator homes the overall possible profit of which could be acceptable to pension funds. Sixteen people were interviewed in the research (seven directors of all three types of homes, three academics, three representatives from two pension fund management companies, one person from the Ministry of Labour, Pension System, Family and Social Policy (referred to as the Ministry) and one from a private investment company). The triangulation process used in the research was chosen so that the opinions of different experts would indicate the current problems in the long-term care system, the perspectives, and potentials for improvement that the system has, and the prerequisites that the reorganization of the system must meet for pension funds to be able to invest in it. The first part of the paper offers an introduction in which the demographic trends and demographic characteristics of Croatia are explained, and the specifics of the homes in Croatia and the characteristics of mandatory pension funds (method of business, problems in business, ownership) are described. The second part contains an overview of the existing literature, and the third part presents and describes

methodological framework in more detail. The fourth part offers the results and is divided into several areas in which the current problems of the business model of existing homes, challenges in building privately owned homes, perspectives in building homes and the willingness of pension funds to invest in long-term care for the elderly are presented. At the end, there is a conclusion and a proposal for reorganization of the system of homes, which would open the possibility for pension funds to invest.

2 LITERATURE REVIEW

Pension funds are investors in the capital market. According to Olgjić Draženović and Kusanović (2016) the capital market is an important source of financing for sustainable investment projects and further economic development. The growth of institutional investors through the accumulation of individual savings is particularly important for the development of the capital market in the transitional countries of Central and Eastern Europe, including Croatia. Accumulating citizens savings by investing in institutional investors is considered a safe investment because citizens are an inexhaustible source of savings that is renewed again and again. According to Krišto, Stojanović and Pavković (2014) institutional investors encourage liquidity and activities. They point out that institutional investors, especially pension funds – due to their long-term investment strategy – have a positive impact on financial stability, thus contributing to economic growth and competitiveness. Novaković (2015) expands the possibilities of measuring performance in active portfolio management. The mentioned economic growth is possible with appropriate regulation, which determines the way in which pension funds as investors achieve returns. Stewart, Despalins and Remizova (2017) consider regulatory barriers to long-term investment, suggesting the expansion of investment into foreign markets. Peksevimi (2021) points out that it helps portfolio diversification and improves the delivery of safe, adequate pensions in certain countries of Central and Eastern Europe. The capital market is expanding and the liquidity of invested financial instruments is encouraged, which makes for more adequate investment. In addition, South Africa's largest pension fund, GEPF, is described; it allocates 5% of its asset to social investment and "SelfIES" are mentioned as a pension bond that offers periodic coupon payments to its participants as pension payments. By adjusting investments, it is possible to access the market of health care arrangements that have a positive effect on the development of the economy. Bali and Asher (2012) through the positive connection of health and pension arrangements in costs, exposure to risks and influence on political decisions suggest better coordination for simpler management of the cost of aging. Health care is broadening the horizons of investment and the usefulness of saving for old age.

Allocating resources to pension funds will meet the goal of more adequate care in old age with additional sources of funds, which Yessentay et al. (2020) want to achieve through financial support for the modernization of health institutions using the resources of pension funds. On the other hand, Tanaka (2016) advocates replacing the system of automatic adjustment of pension benefits with a system that predicts the specific levels of care required. In this way, the financial adjustment of

long-term care insurance and public pensions would be ensured so that if a long-term beneficiary reaches a certain level, his required care benefit will have to be expanded, which increases the individual cost. A similar approach is proposed by private sector products such as “qualified longevity contract” in the US and “living pensions” in the UK. Bađun (2017) predicts that the future financing of elderly care will be achieved through a combination of private and public sources of funds, because the prices of homes will rise in order not to operate at a loss. Currently, beneficiaries’ families are also largely involved in the financing of living in the homes. Hlebec and Filipovič (2018) thus emphasize that future policies must consider that the financing of life for the elderly should also take cognizance of the financial difficulties of the family. Currently, there are no papers that present investment models of pension funds in long-term care for the elderly, either in Croatia or worldwide.

3 METHODOLOGY

The research was conducted in the form of semi-structured interviews during May and June 2022. It was approved by the Ethics Committee of the Faculty of Medicine of the University of Zagreb. The interviews were transcribed and analyzed using a qualitative method. The research uses a triangulation process. A complex and connected group of similar concepts, assumptions and notions is united by qualitative research (Halmi, 2013). Good research practice obliges the researcher to triangulate, that is, the use of multiple methods, data sources, and researchers’ findings (Flick, 2018). It often features a combination of several qualitative data. At the same time, it is more broadly focused on what is being combined – several theoretical approaches or several types of data (Mathison, 1988). The concept of triangulation is used in the measurement process of assessing the veracity of research results. There are alternative perspectives on the use of triangulation whose goals seek a deeper understanding of different results by placing them in a mutual relationship (Mertens and HesseBieber, 2012).

Sixteen respondents participated in the research. Directors from two state owned homes, two private homes, two county homes, including the City of Zagreb, and one over which the City of Zagreb has founding rights. As for academics, a professor from the Faculty of Economics of the University of Zagreb, a professor from the Faculty of Medicine of the University of Zagreb from the Andrija Štampar School of Public Health and a senior research associate from the Croatian Institute of Public Finance were included. In order to represent the regulators, an interview was conducted with a person from the Croatian Financial Services Supervision Agency. From the perspective of investors, three high-ranking representatives from the Pension Fund Management Company participated, as well as a representative of a private investment company that has the practice of investing in homes in the territory of Croatia, and a representative of the Ministry. All participants were contacted by e-mail with an invitation letter explaining the aim and purpose of the study and a list of questions. Homes from various parts of the country were contacted to determine possible regional differences in their operations. The interviews with the homes were conducted by telephone, with the presence of both authors, with parallel

writing and recording of the telephone conversation after obtaining verbal consent, except for two respondents who answered the questions in writing, via e-mail. The interview with the representatives of one pension fund was conducted via an online video platform, while the representative of the other answered in writing, via e-mail. The meeting with the representative of the private investors was also organized via an online video platform. Other interviews with experts were conducted in their institutions, also with the presence of both authors. The interview consisted of 5 questions. The first question was intended for all participants – about the main problems of the existing business model of homes and, in general, the adequacy of the functioning of the system. The second question was intended primarily for directors of privately owned homes and representatives of private investors – to point out the existing problems of establishing a long-term care institution in Croatia. The third question was intended to find out the participant's opinions about the need to build new homes and their market potential. The fourth and fifth are intended to examine the views of investors, that is, pension funds, on how possible it was for them currently to invest in the long-term care system, and how willing they might be. The respondents were asked to express their views and opinions on the questions posed, and were free to follow up on topics that seemed to them related to the topic in question, and the authors of this text, in accordance with the natural flow of the conversation, asked additional sub-questions to better clarify the mentioned topic.

TABLE 3
Questions to respondents

-
1. What do you think are the potentials/problems of the business model of existing homes for the elderly (systems for the elderly)?
 - a. Who or what influences these potentials or problems?

 2. Can you list the challenges in building long-term care facilities for the elderly in private ownership?
 - a. Do these challenges change over time?
 - b. Do they become more or less intense in response to the environment in which they are located?

 3. Do you think there are prospects in the construction of homes for the elderly and what are their market potentials, looking
 - a. from the perspective of private homes for the elderly as an export product
 - b. from the perspective of investment in infrastructure
 - c. from the perspective of potential arrivals of large international companies dealing with homes for the elderly?

 4. What are the advantages/disadvantages for, and is there a willingness on the part of, pension funds to invest in homes for the elderly?
 - a. Why don't they invest right now?
 - b. What are the preconditions for them to invest more significantly (the development phase of the market for homes for the elderly)?
 - c. Do you think there should be a regulatory change in pension fund investments?
 - d. What are the risks and gains from the perspective of pension investments?

 5. Are you planning or considering investing in homes/are you planning to invest in a home from a finance institution side?
 - a. Do you have any indication of significant new investments in homes for the elderly?
-

Source: Authors.

In table 4, the research results are grouped according to key categories.

TABLE 4
Research results

Key categories	Topics	Quotation
The current business model problem of existing homes	Capacity	“The problems are insufficient space, or lack of capacity.”
	Waiting list	“We currently have 270 people on the waiting list and many people who applied while they were still mobile...”
	Personnel – shortages and the disconnection of different professions	“And this fragmentation and lack of coordination worsens the shortage and lack of human resources in the institution.”
Challenges in the construction of privately owned homes	Strict legal regulations and non-transparent criteria for obtaining accommodation in a state/county home	“It is a long-term battle and struggle because you have to meet all technical standards, conditions, so there are special regulations for the construction of such facilities.”
	Real estate market and problems in construction	“The construction industry is affected by the lack of labor, as well as by rising costs.”
	Cooperation in the form of PPP	“So, if one user has thousands of kuna, and our private home is the only home in the area to accommodate this type of user, the public sector should compensate him for the difference.”
Perspective in building homes	Demographic need	“It is simply a need that will develop more and more, we have more and more old population and we are increasingly becoming an older nation.”
	Export product	“If we look at Croatia as some kind of tourist destination, a country that bases its economy on the industry, then it could be our export product.”
Investment of pension funds in homes	Current investments	“Given that there is currently no company that is listed on the regulated market, whose primary branch of activity is the management of homes in the territory of the Republic of Croatia, we are not able to invest in it.”
	Prerequisites	“When investing, ensure that such investment is in accordance with the nature and size of the pension fund’s obligations. Take into account the specific risk and return characteristics of such investment on the overall risk profile of pension funds and impact of that investment on the liquidity of the pension fund.”
	Legislation	“Although in principle we welcome changes in the regulations that result in an easier flow of capital between investors and recipients of funds, we believe that the current regulations do not prevent investments by pension funds...”
	Risk, profitability and readiness	“We are ready to enter the project if it is concluded that it meets all the criteria. In this particular case, we believe that a relatively higher risk in the mentioned type of investment would also imply a relatively higher level of yield.”

Source: Authors.

4.1 CURRENT PROBLEMS OF THE BUSINESS MODEL OF EXISTING HOMES

After the analysis of the data obtained from the respondents, it can be concluded that the existing system of long-term care for the elderly faces many problems.

Primarily, there is a lack of capacity aligned with real needs in Croatia, which entails substantial waiting lists. On 31 December 2021, the total number of requests for accommodation in state homes that were turned down was 130, and in decentralized ones as many as 6,148 (MROSP, 2022). It should be considered that these figures only show currently interested users, that is, those who are immediately ready to be placed in a home, and not the total number of applicants, which is assumed to be many times higher. Therefore, the question arises as to what extent waiting lists reflect the real demand for long-term care. Four interviewees point out that the current number of people on waiting lists also depends on the perception of senior citizens about the homes. Namely, in Croatian society, there is still the idea of families taking care of the elderly members and refusing to place them in a home until they “fall off their feet”, that is, when the family can no longer adequately care for the needs of their elderly members. “We currently have 270 people on the waiting list, and large part of those who applied while they were still mobile...” points out the director of a county home. Potential users pre-register on the list even if they don’t really want accommodation yet, and if a place appears users reject it, thus adding to the burden on the lists. Owners of private homes do not highlight this as the main disadvantage, stating that people prefer state and decentralized homes because of the lower costs of accommodation. One home founded by the county states that they have lists of about 270 interested parties, while in a private home there are only about twenty of them.

Both private and state homes, as well as experts point out the lack of educated staff, primarily nurses and caregivers. The director of a private home states that “It is impossible to find staff (especially high quality staff) on the Croatian labor market, and there are no indications that the education system will adapt...” The director of a county home points out that already in high school there is a kind of recruitment of the future workforce. Everyone agrees that the labor shortage is further aggravated by the emigration of health workers. From the year Croatia joined the EU until 2020, 926 nurses left Croatia, and another 1,829 have sought confirmation of their work license (Stašević, Škalec and Ropac, 2020). When retaining workers, the limiting conditions are low pay, stressful working conditions, while staff often do not have a sufficient level of education for the work they are expected to perform (OECD, 2020). Due to the positive economic growth in the last few years, the long-term care sector in Croatia is improving, but is still significantly below the standards in developed EU countries (European Commission, 2021). There is also no proper connection between doctors and carers. An expert in public health points out that “Long-term care is a 24-7-365 concept of care. It must cover everything: activities of daily life, housing and interventions some of which are therapeutic, rehabilitative and even a social life. But right now everything is torn apart in its little houses. Chaos reigns.” “Croatia has a lot of

services, defined procedures that you do for someone: you bathe them, wash them, change their diapers, give them medicine. These are services and you have everything in Croatia, but services cannot replace care.” He concludes: “And this fragmentation and lack of coordination worsens the shortage and lack of human resources in the institution. And the work in the institution is difficult, it cannot be paid adequately, it is not organized...”

4.2 CHALLENGES IN BUILDING PRIVATELY OWNED HOMES

In Croatia, there is an interest of individuals and private investment companies in investing in long-term care, but some of the rules and laws are relatively difficult to implement, and with the slow and extensive bureaucracy, a certain number of investors find themselves in stalemate. Directors of both private homes interviewed agree with the above. “Construction of a facility for the care of the elderly and infirm has many challenges when it is done according to the law within the Ministry’s system. There are many parameters that must be taken into account and that require a certain definition of the business process flow before anything is built.” The academic states, “It is a long-term battle and struggle because you have to meet all the technical standards, conditions, special regulations for constructing such a building”. About the problematic bureaucracy and specific legislation, the representative of private investors says, “The investor spends so much time from one step to the next, and then the investor is in the status quo. He cannot do anything else because he is waiting for the decision of the previous step.”

According to the Ordinance on criteria for classifying homes (*Pravilnik o mjerilima za razvrstavanje domova za starije i nemoćne osobe*), for a category I home, it is prescribed that the door at the exit from the premises must be at least one hundred centimeters wide (Art. 16, paragraph 2), corridors must be at least one hundred and eighty centimeters wide (Art. 16, paragraph 22), and the dining room must have an area of at least two square meters per mobile user (Art. 16, paragraph 2). The Ordinance also defines how many and which professions must be employed with regard to the number of users, the type and equipment of auxiliary premises, and the scope and quality of services provided to individual users. The academic points out that the state sets the regulatory framework, while at the same time it neglects the long-term care system and the existence of the problem of unclear criteria on the basis of which the possibility of placing a person in a state/county home is determined. “...the state subsidizes accommodation in state and county homes, covering losses caused by the price of accommodation, which was not economically determined.” It follows from this that the state makes it much more difficult to operate and establish private homes, but also tries to protect the oldest and most vulnerable members of the community through strict regulations and provide them with a dignified remainder-of-life.

In EU countries, the model of financing public sector services through PPP is increasingly common (Marenjak et al., 2007), which is mentioned here because of the possibility of reducing the prices of private homes. PPP is a form of

cooperation between local or central government and the private sector for the purpose of fulfilling public needs (Persoli, 2007). The academic notes that there are various models based on which the state could participate more actively and adequately in the social welfare system. “The state will have to do something, it will probably encourage private entrepreneurs, co-finance, to increase capacity, for example through PPP.” The representative of private investors denies that there is any current interest of the state and any financial institutions in PPP, which would make private homes available to a larger number of citizens. “The problem with institutions is that the institution as such should actually receive help from the public sector in such a way that, not to us, but to them, those who are in need, they provide compensation for the difference in price. So if one user has three thousand kuna, and our home is the only one in the area to accommodate this type of user, the public sector should compensate him for the difference.” Not a single form of PPP in the field of institutional care for the elderly has yet been applied in Croatia (Gelo, Matanić and Matanić Vautmans, 2021).

In Croatia, the market prices of real estate imposed by the construction sector are also increasing, which is directly reflected in the increase in the price of accommodation in private homes, thereby further reducing the interest of citizens in private homes. Private investors note that “At the moment, we are faced with the fact that one offer is valid for maybe only a week due to constant maneuvers on the European, but also on the world market.” Some of the reasons for the increase in the price of real estate are the low supply of real estate in the desired location, the assumed further increase in the market price that leads to a real increase and credit expansion (Mustać, 2019). The academic’s comment “The construction industry is affected by the lack of labor, but also by rising costs. So, in general, all the costs of some kind of investment have increased, and now, in anticipation of the rise in interest rates, this disincentivizes the market even more and will surely create pressure on public housing...”

4.3 HOME BUILDING PERSPECTIVES

Perspectives in the construction of homes do exist, respondents agree, primarily due to the trend of population aging. “It is simply a need that will develop more and more, we have more and more of an elderly population and we are increasingly becoming an older nation”, says the director of a county home. According to the definition of the Croatian encyclopedia (b.d.), aging is “a process of gradual and spontaneous changes in the organism, which is characterized by the progressive weakening of physiological functions, the deterioration of tissues and organs, and thus the organism as a whole; it leads to the cessation of vital functions.” Biological changes in the organism, together with the cognitive and psychological changes that aging entails, lead to an increased need for its adequate, increased socialization and design of an environment satisfactory for older people, respecting their biological and psychological needs. In the last ten years alone, the number of residents over the age of 65 has increased by more than one hundred thousand. The total life expectancy in Croatia in 2021 was 76.7 years (Eurostat, 2023). The assumption is that by

2050, the share of residents over the age of 65 in the total population of Croatia will grow to 31% (Akrap, 2015). In addition to the above, there is a higher incidence of various diseases in old age. In terms of long-term care, the greatest emphasis is placed on dementia, that is, the syndrome of progressive weakening of cognitive functions due to which the patient becomes dependent on others when performing usual daily activities (Bansal and Parle, 2014). The most common and well-known form is Alzheimer's disease, and it is estimated that by 2040, more than eighty million people in the world will suffer from it (Ferri et al., 2005). Respondents put special emphasis on increasing the capacity of specialized accommodation for seriously ill users. The academic says "If someone is demented a little now, I'm speaking roughly, it will be a lot in three years. If someone lives alone in a house with help, they will be dependent on someone else in fifteen years." The Ministry says on this topic, "There is demand, but mostly for one person who is severely disabled, unable to take care of himself." The director of a private home agrees with this and describes an institution that would be ideal "A home that is structurally adapted to people suffering from the consequences of certain diseases, whether heart attack or stroke or any other cause of severe immobility. This dementia is the disease of the future." Also, Croatia is known for numerous natural beauties, including the sea, which cannot be boasted of by a certain number of highly developed countries in the neighborhood. "Health tourism expertly and under supervision uses natural medicinal agents and/or procedures of physical and rehabilitation medicine in order to preserve and improve health and/or improve the quality of life." (Ivanišević, 2016). The scientist points out that the Croatian economy is largely oriented towards tourism. "If Croatia is viewed as some kind of tourist destination, a country that bases its economy on the tourism industry, then it could be our export product, that is, the export of services for foreign citizens, primarily residents of other EU members, whether it is permanent accommodation or temporary accommodation ..." By building homes on the coast, thanks to the beauty of nature and the health benefits of seawater, Croatia can offer an extremely attractive export product. Aging Europeans could be offered lower prices for long-term care services in Croatia than in their countries, favorable climatic conditions and tourist infrastructure (Bađun and Krišto, 2021). The academic says, "If someone manages to find an adequate workforce and a business model to build a home above Primošten with a view of the Adriatic Sea and pay care workers there, then it is likely that people with serious mobility problems will come and be there." The representative of private investors also points out that many foreigners have a higher purchasing power, so he proposes the formation of a working group that would examine the desire of foreigners to grow old in Croatia, with a special emphasis on returnees to Croatia. "The Office for Croats outside Croatia can also help us with this. They could collect information about who would like to grow old here, and accordingly, private investors could build homes of this nature and then ensure that Croatia is recognizable in that sense as well."

4.4 PENSION FUNDS – WILLINGNESS TO INVEST

Pension funds are showing interest in investing in long-term care for the elderly. There is an investment option where they would invest in venture capital funds, so those funds would invest in long-term care. Before that, the long-term care system needs to be reorganized so as to form networks of multiple homes in order to optimize operations.

According to the knowledge of the interviewed representatives of pension fund management companies, no one in Croatia has yet dealt with this idea in depth and presented a proposal for their investment in long-term care. By law, this is not possible for them because pension funds can only be invested in instruments that are listed on the regulated market. “Given that there is currently no company that is listed on the regulated market, which is the primary branch of home management in the territory of the Republic of Croatia, we are not able to invest in it.” According to Art. 3, St. 24 of the Capital Market Act (Zakon o tržištu kapitala), financial instruments are transferable securities, money market instruments, shares in entities for joint investments and derivatives. Therefore, it is concluded that care institutions do not fall into any of these categories. The representative of the regulatory bodies explains in detail the method of investing pension funds in infrastructure projects, along with a written explanation of the procedure, which was additionally explained to us orally at the meeting. Regarding the conditions for investment, they say, “It is an investment in transferable equity and/or debt securities that are used for financing or securitization of infrastructure projects in the territory of the Republic of Croatia” and “These securities have long-term, stable and predictable cash flows, so that they correspond to the maturity of obligation of the pension fund while respecting the principles of security, prudence and caution.” So, pension funds cannot invest in real estate, i.e. in homes. Citizens are obliged to pay part of their income into pension funds, which ensures the payment of their pension. The obligation of citizen participation involves two key items. First, there is strict legislation that controls pension fund investments. Apart from the already mentioned legally regulated possibility of investing only in financial instruments, any investments on their part must not be so risky as to threaten the function and activity of the fund itself. There are also obligations that must be fulfilled, “When making an investment, we have to ensure that such investment is in accordance with the nature and size of the pension fund’s obligation. Also, we need to take into account the specific risk and return characteristics of such investments, the impact of the investment on the overall risk profile of pension funds and the impact of that investment on the liquidity of the pension fund.” Thus, pension funds must not, when making new investments, call into question the sustainability of their obligations to other existing projects.

The representatives of the company for the management of pension funds point out that “The prerequisite is the economic profitability of such an investment, which has the ultimate goal of increasing the value of our members’ investments.” They also note that “The goal is also to minimize the risks when investing in such

a class of assets, as well as the risks during construction, that is why we are interested only for those projects that are fully built or are in a very high stage of construction, while we tend not to enter into projects that are in the beginning of construction or where construction has not yet started.” The real estate and capital that pension funds have at their disposal are extremely big. Thus, for example, according to publicly available information on the respective websites, one of the four pension funds in Croatia has a net asset value of almost EUR 183 billion in the least risky category – C (Erste plavi pension fund, 2023).

For investment in long-term care to be acceptable, revenues must be much higher than those that just one institution can generate. With this goal in mind, they propose that institutions for long-term care be merged, that is, consolidated and unified, with the optimization of management, which will be led by “one manager, not fifty of them”. From their viewpoint, this kind of reorganization is a feasible managerial task. They presented the idea of establishing a company of the type that would interest venture capital funds, and then the pension funds would indirectly invest in that company through the venture capital funds. Private equity funds or venture capital funds belong to the group of alternative investment funds for which the investment instrument does not need to be listed on a regulated market, and the regulations do not determine permitted investments, but the choice and method of investment itself remains with the company that manages the fund. Institutional investors such as pension funds or insurance companies invest in venture capital funds (Derenčinović Ruk, 2020). They give an example of a similar investment they made by investing in venture capital funds, which in turn invested in unified small polyclinics that provide medical and dental services. They also mention that the Croatian home market is small and underdeveloped, and that consolidation at the regional level, which would include homes from neighboring countries, would also be of particular interest to them.

Due to the further elaboration of this reorganization, the director of a private investment company that has a practice of investing in old homes was also included in the research, who expressed great satisfaction with the mentioned reorganization, because “this is the way our company works in all other countries.” From the point of view of long-term sustainability and profitability this person points out that “Long-term profitability would be the level of quality that people seek and deserve. The elderly would know where that money from the pension insurance was invested.” and “...when a home for elderly is opened, for example, in Belgium, it is automatically known that it will be included in the group of homes that will eventually be bought by the pension fund and ultimately be managed by the pension fund. Because a pension fund itself provides greater security to users than a private owner.” Consolidating and connecting several private homes into a network would certainly be profitable and sustainable in the long term, because there would be pension funds as investors, private investment companies as executors, and the elderly population will grow as beneficiaries. The representative of private investors says, “I think that such homes would be full from the start. They would not deal with the

problem of empty places, because it is known that a strong player is involved. So, I think that would be the best solution for Croatia.” The Ministry points out that “Any investment in state homes is quite difficult because they are currently still not profitable.” And here arises the issue of the sustainability and feasibility of reorganisation if state homes were to be consolidated. In the same way, merging state and private homes does not make sense, because users of state homes do not pay the full economic price of accommodation, and in this way, there could not be a single price for identical services. But even they point out that in the future, due to the increase in demand, some unification might be possible.

During their working life, citizens would set aside part of their income for pension funds whose funds, in addition to pensions, would also be invested in their old age in the form of better services and more adequate care. By allocating funds to the pension system, policyholders would feel more secure because they know what their funds have been invested in. In this way, the funds would be invested in better services, and private institutions would not be forced to raise accommodation prices to ensure a higher level of service quality. This would potentially indirectly reduce the costs to private investors for providing the same level of services, which could be reflected in the price of homes. Owners of homes could provide more adequate services, which would make private homes far more interesting to their future users. By consolidating a large number of homes, there would be a greater number of users who would pay for these services, and in this way, the existing single investment of pension funds would be accompanied by a long-term inflow of money.

Representatives of the pension fund management company do not think there need to be regulatory changes, for even if the law did not restrict them in their investments there are still the preconditions mentioned that they have to meet, irrespective of the law, for the fund to have a long-term benefit from a potential investment. “We are ready to enter the project if the project meets all the required criteria. In this particular case, we believe that relatively higher risk in the mentioned type of investment would imply relatively higher levels of yield.”

They also welcome this reorganization model. Respondents from one fund note that such a home market would be extremely attractive from the perspective of risk and profitability, because homes are a “stable business without volatility” as well as low-risk, but potentially very profitable because the population is aging, so the need for this type of care is growing. Both funds are interested in investing. “In principle, we support this type of investment, and if a good opportunity appears on the market for which our in-depth analysis would show the profitability of such an investment, we would be ready to consider entering into such an investment.”

5 CONCLUSION

Pension funds have a large amount of funds at their disposal because citizens are obliged to pay part of their income; by careful and safe investment the funds increase their assets. However, their investments are strictly regulated by law, and they cannot invest in real estate, only in instruments that are listed on a regulated market. In principle, the conceptual solution for the undercapacity of nursing homes is the construction of new institutions. For pension fund investments to be profitable and sustainable in the long term, the idea of consolidating existing or building new homes in a multiple site operation whose overall profit would be acceptable is suggested. The consolidation process itself is a job for management. The establishment of a company that would bring together several institutions would open the possibility of investment by venture capital funds, whose investments are not as strictly regulated as those of pension funds but depend on the assessment of the companies that manage them. Pension funds, on the other hand, as institutional investors would invest in venture capital funds and thus indirectly invest in the long-term care system.

State-owned homes are not economically profitable, and the state incurs a financial loss with them, so the construction of new homes, state-owned or decentralized, does not appear to be an ideal solution for the implementation of this type of reorganization of the long-term care system. So, when the construction of homes in which pension funds would invest is considered, it is primarily a matter of a network of homes in private ownership. Private investors are interested, they believe that it would be an ideal solution primarily because homes would not be forced to raise prices, and they would achieve a higher level of quality. The representatives of the company for the management of pension funds are also interested; they emphasize the stability of such investments due to the disproportion between supply and demand.

By building one such network of institutions, the circle would be closed. Private investors use initial capital to build a network of homes. During their working life, future users of homes allocate part of their income to pension funds, which invest in the network of homes. By investing in pension funds, owners of retirement homes can provide better and more adequate services, which makes them more interesting to future users. By allocating funds to the pension system, insured persons would feel more secure because they know that their funds have been invested not only into pensions but also into the provision of better care in old age. In the long term, due to the increasing number of users, pension funds would profit.

Of course, this paper also has its limitations. Papers regarding the investment of pension funds in long-term care for the elderly do not exist in Croatia, and they are also rare globally. The conclusions of this research are a logical consequence of the conducted qualitative methodology, that is, interviews conducted with a sufficient sample of experts who deal with various types of long-term care for the elderly. In further research, one could focus on the possibilities offered by pension

funds and their preferences in the placement of funds, because their interest in this form of investment would encourage additional returns on the capital market, and thus the strengthening of the financial system. However, a more detailed elaboration of the possibilities and methods of unifying the system and the potential profitability of investing pension funds in long-term care is recommended.

Disclosure statement

The participants in the research, as well as the authors, are not connected in any way, and there was no promotion of their own thoughts or conflicts of interest during the creating of the article.

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