THE FUTURE OF THE GEORGIAN PENSION REFORM

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Authors:

Mikheil Kukava
Mariam Saghareishvili
Lana Zhamurashvili
Nino Alibegashvili

Edited by:

Levan Avalishvili

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1. Main Challenges

Pension reform in Georgia began in 2018. Finding instances of effective pension reform in emerging economies, even those with extensive experience in implementing such reforms, proves to be challenging. The top ten countries for retirement[1] are, for the most part, the richest countries on the planet[2], and Georgia falls far behind these. In these countries, comfortable retirement standard is based on the sustainability of their pension systems. The sustainability is in turn determined by the wealth of these countries.

The country is not wealthy enough to allow the initiated pension reform to fail. . Namely, economically developed countries can make up for mismanagement of pension assets with taxpayers' money, but not Georgia.

The following report analyzes:

- The main challenges in pension asset management and reform as a whole, namely, the riskiness of investing now and in the future, the independence of asset management, etc.;
- International experience;
- recommendations.

The four main challenges facing the pension reform are:

1. **Independence of the Pension Agency:** Investment decisions for pension savings should be made by the Pension Agency rather than the government.

   The Pension Agency is tasked with maximizing pension savings through sound portfolio management (primarily to protect savings from inflation), rather thanof the capital market development.. The latter can be considered as a side effect of the pension reform, just as, for example, economic growth is for the National Bank of Georgia. The development of the local capital market and the management of pension savings oriented towards maximum growth can constitute competing aims, that is, one can interfere with the other, just as halting inflation can inhibit economic growth.

2. **Riskiness of investments and amendments to the law on pensions:** In October 2022, amendments to the law "On Funded Pension" were initiated, providing for the expansion of investment opportunities. However, the proposed changes do not address the main limitation: the fund can invest only 20% in global instruments, and therefore only 20% of the portfolio can be denominated in dollars, while the rest is intended for the local market. As such, more than GEL2.5[3] billion (more than 970 million US dollars) are required to be invested in Georgia, at a time when the local capital market, especially for equity securities, is so underdeveloped. Georgian business industry tries to raise funds through bank loans and not through financial instruments.

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[1] https://www.im.natixis.com/sg/research/2022-global-retirement-index#:~:text=Now%20in%20its%20tenth%20year,retirement%20security%20around%20the%20world.

[2] Norway, Switzerland, Iceland, Ireland, Australia, New Zealand, Luxembourg, Netherlands, Denmark, Czech Republic.

[3] As of February 28, 2023, the net value of pension assets amounted to 3.14 billion GEL, 80% of which should be invested in Georgia.

The Pension Agency, can invest in financial instruments but not issue loans. For details on these changes, see Chapter 3.

2.1. Inflation: The riskier the pension investment, the higher the return. As this risk increases, so do the risks of losing retirement savings. However, with low-risk investments, pension fund managers are unable to keep pace with inflation, which is compounded by the pandemic and war-induced inflation.

Thus, pension fund managers face dilemma between choosing low-risk and high-risk retirement savings investments. From the establishment of the Pension Agency until August 2023, pension assets can only be invested in a less risky investment portfolio, although within this limitation it is still possible to make relatively riskier investments. In August 2023 the five-year restriction period expires . The restriction requires that pension assets be invested only in a less risky investment portfolio.

The future of Georgia's pension funding depends on how the Pension Agency manages the major tradeoff between risk and growth that the pension funds of many countries are facing. It should also be considered that in wealthy countries there is a tangible fiscal resource backing the pension funds, but in Georgia, it is so scarce that it is impossible to compensate the pension savings with taxpayers' money. This is why the cost of mistakes by pension asset managers in poor countries is much higher than in rich countries.

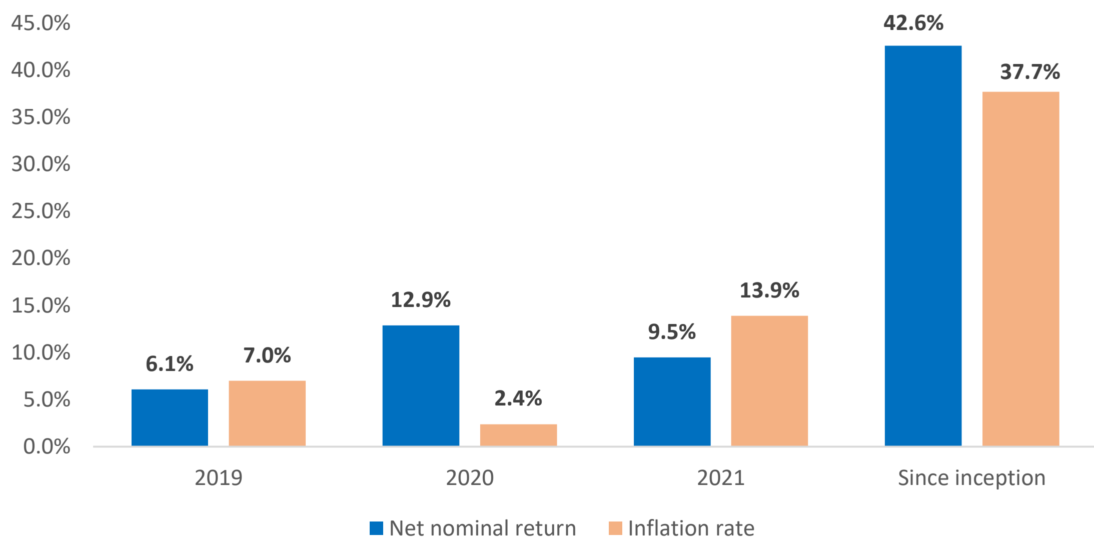
Since the start of the reform , the actual growth of Pension Agency assets has been 3.56% (annualized 0.84%)[4], which would have been higher if the portfolio consisted of assets with higher risks, meaning higher premiums. This is prohibited by the law until August 2023. (see figure below).[5]

Figure 1: Net Nominal Fund Revenue and Inflation[6]

[4] https://back.pensions.ge/uploads/docs/investment-activity/monthly-reports/2023/Monthly_Performance_Report_GEO_28_02_2023.pdf

[5] As shown in the graph below, the difference between net nominal return and inflation is 4.9%, which, after accounting for the real rate, comes down to 3.56%.

[6] Source: Pension Agency, Institute for Development of Freedom of Information



3. **Retirement age:** The retirement age in Georgia is 65, although women can retire once they reach the age of 60.

   In 2012-2022, the number of retirees in Georgia increased by 18% (125.4 thousand people), while the country's population decreased by 50.7 thousand people during the same period, which is a 1% decrease in the population.

   According to the explanatory card of the funded pension law, by 2030 the total number of pension and social assistance recipients will reach 1.1 million. By 2060, the expenses on pensioners will be about 30% of budget revenues, if current 18% replacement rate[7] is maintained. These expectations raise concerns regarding the sustainability of the social pension system.

   It should be noted that a rising number of countries are realizing that the increase in the number of retirees burdens the economy and hinders its development. For example, in October 2021 in the USA, according to the St. Louis Federal Reserve Board, there were 3.3 million more retirees in the country than 20 months earlier. According to the Pew Research Center (think tank based in Washington), more than half of Americans over the age of 55 have left the workforce, up from 48% in the third quarter of 2019.

   In several countries, along with the growing number of retires:

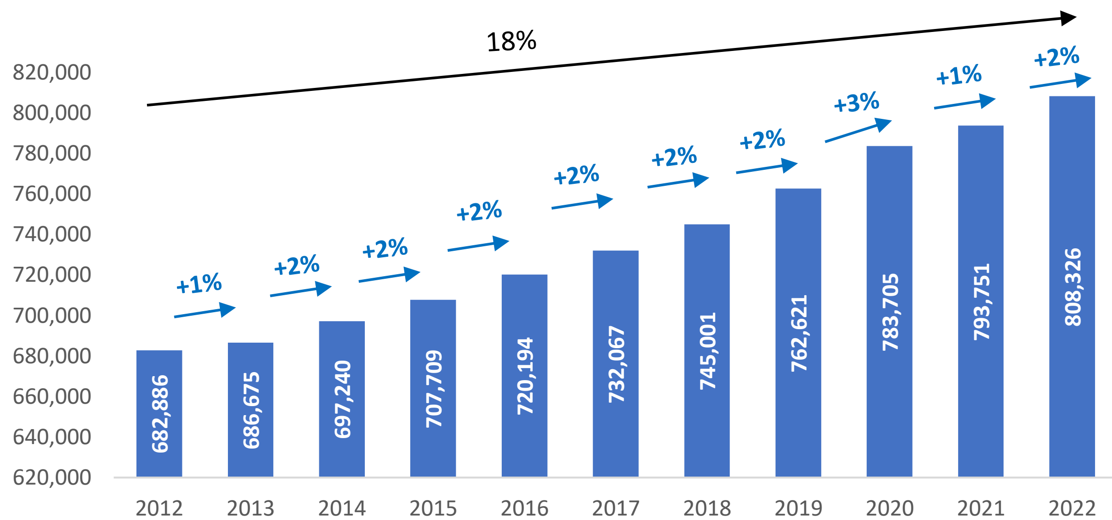
- The retirement age was raised. For example, in the Netherlands, between 2013 and 2022, the retirement age has slowly increased from 65 to 67 years. Moreover, due to the increase in life expectancy, the retirement age is planned to increase even more[8]; in Denmark in 2019-22, it was

[7] Represents the ratio between pension and average salary
[8] The Netherlands to raise retirement age to 67 years and 3 months

raised from 65 to 67[9] years; In France, from 62 to 64 years, although the efforts to raise the retirement age have sparked widespread national opposition and paralyzing strikes.[10]

- The move towards increasing the retirement age began in earnest, for example, in Germany, Sweden, Belgium, Japan, Spain[11].
- Changes to pension rules to encourage retirees to return to work are actively being considered, e.g. in the UK, Ireland. In the UK, the current state pension age (66 years for both men and women) will rise to 67 in 2028 and 68 years in 2046. For those born after April 6, 1978, the state retirement age limit will be 68 years.

Figure 2: Number of Persons Receiving Pensions in Georgia, 2012-2022.[12]

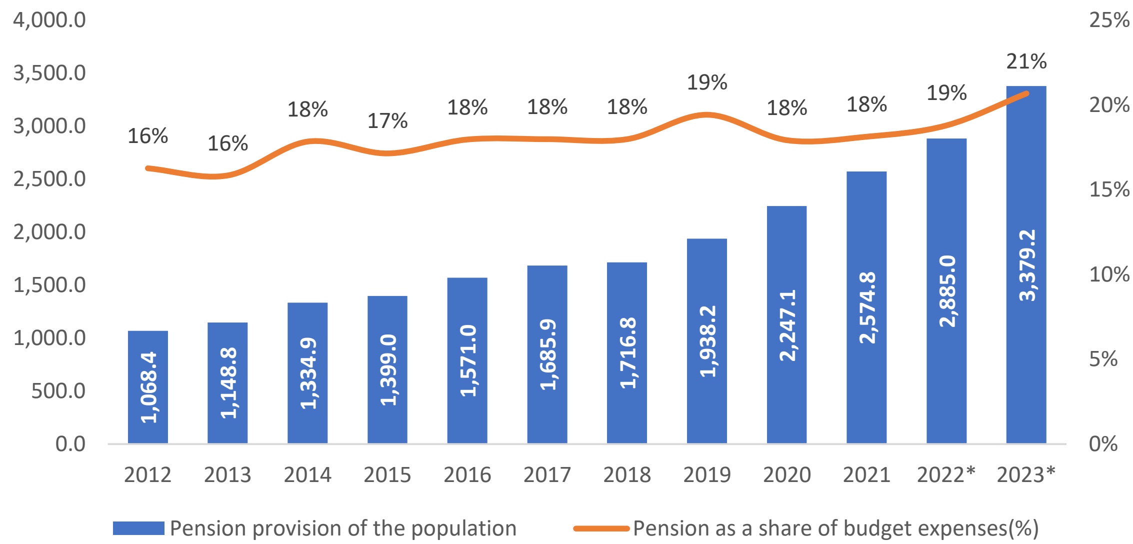


Between 2012 and 2022, the number of retiree pension recipients in Georgia increased by 125,440 (18.3%), and pension as a share of budget expenditures increased from 16% to 19% (1.817 billion GEL) and will reach 21% of expenditures in 2023.

Figure 3: Pension Provision of the Population (Millions GEL) and the Share of Pension in Budget Expenditures (%), 2012-2023.[13]

[9] https://www.oecd-ilibrary.org/docserver/pension_glance-2017-10-en.pdf?expires=1676535433&id=id&accname=guest&checksum=63B62BAFA460B7779B46C5015DA64953
[10] https://www.economist.com/europe/2023/03/09/france-is-in-a-stand-off-against-emmanuel-macrons-pension-reform
[11] https://www.schroders.com/sk/insights/economics/world-pension-ages-on-the-rise-when-will-you-retire/
[12] Source: Geostat, Institute for Development of Freedom of Information

[13] Source: Ministry of Finance of Georgia, Institute for Development of Freedom of Information
*Planned expenses



4. **The burden of state pension provision:** Pension reforms in every country had common concern – the realization of what would happen without them. Without reforms:

- The social (basic) pension will continue to grow, which will hinder economic growth: The rationale behind the funded pension system is that when state pension recipients also become beneficiaries of the funded pension system, the state pension should either stay the same or grow at a a slower pace compared with what would have occurred without the pension reform. The constant increase of social (basic) pension along with the increase of tax revenues hinders both economic growth and development.
- The increase in social (basic) pension costs will be a burden on the taxpayer. Under the conditions of the alternative, i.e. funded pension system, costs should increase at a lower rate than without it and, accordingly, the burden should be lightened.
- Individuals remain without adequate financial security in the face of old age, especially when the incomes do not allow them to save, and those who have the means are not culturally geared to saving[14].
- People remain dependent on the state, i.e. taxpayers, when they could depend on their own funds saved during their productive years.

It should be noted that the majority of successful pension reforms were ones where the country's population was convinced in the necessity of the reform. This conviction was preceded by the cultivation of the awareness that you cannot depend on the state pension.

[14] According to The Guardian, it is unsurprising that, given the high cost of living, only 25% of millennials plan post-retirement period https://www.theguardian.com/commentisfree/2023/mar/06/millennials-older-pensions-save-own-home

2. The Reform until Now

The pension reform in Georgia began in 2018,with the establishment of the Pension Agency. From January 1, 2019, the collection of funds for the participants of the mandatory funded pension system started. The funded pension system is built on the principle of 2%[15] from the employer + 2% from the employee + 2% from the state.

Pension savings can be invested by the Pension Agency and the asset management company selected by agency based on the corresponding investment policy document. This document is a framework for pension asset management and provides a long-term asset allocation strategy. Asset investment is monitored by the Pension Agency's Investment Board, which includes five members elected by Parliament. The Investment Board also selects a specialist depository and asset management company for the funded pension system. The National Bank of Georgia regulates and supervises the Pension Agency's investment activities, as well as the authorization/recognition and supervision of asset management companies and specialized depositories.

According to the law, participation in the pension system is mandatory for employed citizens under the age of 40, which means that 2% of the salary must be applied to the pension contribution. In addition, the employer is obligated to transfer 2% of the employee's salary to the individual pension account of the employee, while the state is obligated to transfer an additional 2% (up to 24,000 GEL per year, i.e. up to USD 9,000) or 1% (from 24,000 to 60,000 GEL per year, USD9,000 to 22,570 [16]) of the salary to the individual pension account of the employee.

Retirement assets can be invested in three different risk portfolios. These are:

- Low risk, the investment horizon of which should not be less than 5 years;
- Medium-risk, the investment horizon of which should exceed the investment horizon of the low risky options;
- High-risk, with a longer investment horizon than the medium risk options.

The differences between them are summarized in Table 1. The participant can choose the investment portfolio within one month of joining the system. If the participant does not exercise this right, then the assets will be invested as follows: the assets of a participant under the age of 40 will be placed in a high-risk portfolio, the assets of a participant between the ages of 40 and 50 will be in the medium-risk portfolio, and those of a participant over the age of 50 will be in the low-risk portfolio. Within 5 years after the implementation of the law, the Pension Agency can invest its savings only in less risky assets, and this period expires in August 2023.

Table 1. Investment limits of assets with different risks[17]

	Low-risk	Medium-risk	High-risk
Cash and deposits	Up to 75%	Up to 50%	Up to 25%
Debt securities	Up to 100%	Up to 75%	Up to 50%

[15] 2% of the untaxed salary

[16] https://www.matsne.gov.ge/ka/document/download/4280127/3/ge/pdf

[17] Source: Legislative Herald of Georgia, Institute for Development of Freedom of Information

Equity securities	Up to 20%	20%-40%	40%-60%
Other assets	-	Up to 10%	Up to 10%
Foreign currency	Up to 0%-20%	0%-40%	0%-60%

Investments can be made in the following financial instruments denominated in either the national or a foreign currency:

- In cash, including bank accounts in commercial banks licensed by the state banking regulator;
- In state securities (municipal securities in the case of national currency);
- In debt securities issued by international financial institutions;
- In corporate debt securities registered by the relevant regulator and placed through a public or private offering;
- In company shares;
- In open stock instruments;
- In securities issued by the state, municipality, or a state agency, if it is duly guaranteed by the relevant state (denominated in foreign currency only);
- Other financial instruments and/or nonfinancial instruments that may be allowed for investments by the National Bank.

In addition to cash and bank deposits, only 5% of the Pension Agency's savings can be invested in securities issued by one issuer (this limit is 15% for 5 years after the law comes into force). In addition, it is not allowed to own more than 10 percent of the securities in circulation from one issuer. However, these restrictions do not apply to securities issued by international financial institutions with at least AA (or its equivalent) credit rating.

At the moment it is prohibited to invest pension savings in assets such as real estate, physical assets, derivatives (options, futures, and forward contracts), except for derivatives that serve to reduce risks, assets that are not allowed to be sold by law, or paid securities issued by a Pension Agency or a person related to it.

The Investment Council develops a benchmark portfolio, which encompasses assets the acceptable norms of the target indicators of the placement of asset classes and deviations from these norms. The benchmark portfolio for the less risky investment portfolio is shown in Table 2.

Table 2: Benchmark portfolio[18]

Asset Class	Placement target indicators	Acceptable norms of deviation from the target indicators, by asset class
Treasury bonds of Georgia	20%	+/- 10 percentile points
Deposits/deposit certificates in GEL	60%	+/- 10 percentile points

[18] Source: Investment Policy Document, Institute for Development of Freedom of Information

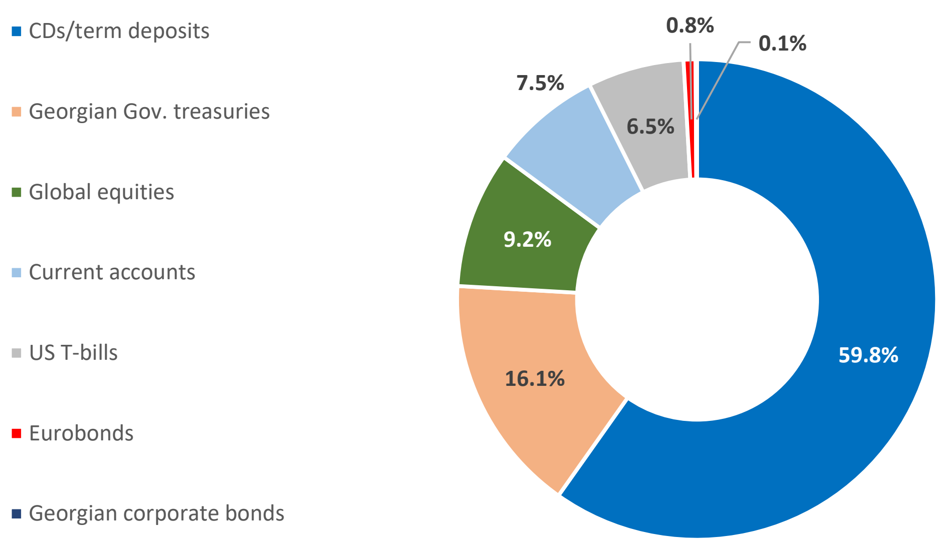
Foreign stocks	20%	- 10 percentile points

2.1 Overview of the Allocation of Pension Assets

As of March 10, 2023, 1.378 million persons have joined the pension system, and the total value of pension assets is 3.15 billion GEL (1.22 billion USD) [19].

As of February 28, 2023, the largest part of the investment portfolio is deposit certificates and fixed deposits, which make up 59.8% of the portfolio. Georgian treasury bonds make up 16.1% of the portfolio, while foreign bonds make up 7.3%, of which 6.5% comes from US bonds and only 0.8% from Eurobonds. 9.2% of retirement savings are accumulated in global stocks, 7.5% in current accounts, and 0.1% in domestic corporate bonds.

Figure 4: Distribution of assets by investment instruments, February 28, 2023[20]



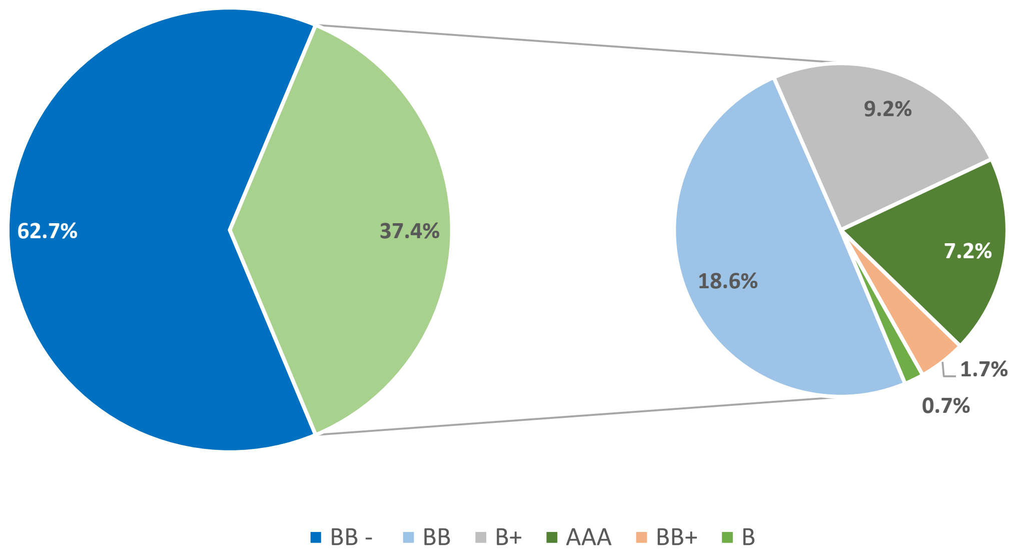
As for the distribution of assets by rating, most of the assets (62.7%) are BB - rating assets, risky and with low credit worth compared to the investment grade. Only 7.2% of savings are placed in investment grade (AAA) assets.

Figure 5: Distribution of assets by credit ratings, February 28, 2023[21]

[19] https://pensions.ge/ka/public-information/news/Statistics-of-the-pension-agency-for-march-10-2023

[20] Source: Pension Agency, Institute for Development of Freedom of Information

[21] *Source: Pension Agency, Standard & Poor's, Fitch Ratings, Scope, Moody's, Institute for Development of Freedom of Information*



3. Planned Changes to the Law and the Agency's Vision: Expanding the Investment Mandate

With the changes planned to the law on funded pension and the investment policy document and the vision of the Agency[22], the investment opportunities of the Agency will be expanded and specified, namely:

- The investment ban no longer applies to real estate, real estate investment funds, and physical assets. Assets can also be invested in mortgage-backed bonds issued by commercial banks (MBS).
- It becomes possible to invest in equity, debt or loan offering with international financial institutions with co-participation of up to 33 percent.
- From August 2023, the participants will have the opportunity to choose the level of risk of the portfolio in which they want to invest their savings. Participants will also be able to change the selected portfolio, subject to certain terms.
- The limit of investing in securities in circulation of one company is increasing from 10% to 25%.
- In the case of a less risky investment portfolio it will be possible to invest pension savings in other assets with a limit of up to 10%. Meanwhile, in the case of medium and high-risk portfolios, the limits of investing in other assets are increasing (Table 3). In addition, the class of other types of

[22] https://info.parliament.ge/file/1/BillReviewContent/308540? - Package of changes
https://info.parliament.ge/file/1/BillReviewContent/308570? Explanatory note

assets will be further specified[23], adding such instruments as covered bonds and investment funds units (REITs).

- It is important to consider the securities issued by companies with a rating lower than the sovereign or lower by two, not one level, which is provided for by the decree[24] of the president of the National Bank of Georgia and the investment policy document.
- From January 1, 2025, pension system participants will be able to choose an asset management company to manage their savings instead of the Pension Agency. Private asset management companies need to appear on the market before that.
- According to the current law, investment decisions and risk response are made by the Investment Council. With the amendments, if a participant chooses the asset management company himself, the company will make the investment decisions instead.

It is also important that the Pension Agency's risks are reduced by the law On Investment Funds, and in particular, the fact that the open-end fund instrument[25], which the Pension Agency and/or asset management company will use for investment, must be licensed by the relevant regulator.

Table 3. Limits for placement in assets carrying different risks[26]

	Low-risk	Medium-risk	High-risk
Cash and deposits	Up to 75%	Up to 50%	Up to 25%
Corporate debt securities	Up to 100%	Up to 75%	Up to 50%
Equity securities	Up to 20%	20%-40%	40%-60%
Other assets	Up to 10%	Up to 15%	Up to 20%
Foreign currency	0%-20%	0%-40%	0%-60%

[23] Other assets mean:

- Participation in equity, debt, or loan offering organized and co-financed by private offering denominated in local and foreign currency by international financial institutions;
- Investment fund units licensed by the relevant state regulator and recognized by the National Bank of Georgia;
- Investment fund units authorized/registered by the National Bank of Georgia;
- Other financial instruments, non-financial assets, only in the case of high-risk investment portfolios - units of real estate investment funds, which may be allowed for investment by the National Bank.

[24] Decree No. 160/04 of September 8, 2020 of the President of the National Bank of Georgia on the "Approval of the Rule on Requirements for the Minimum Permissible Credit Rating of Investment Financial Instruments of the Funded Pension Scheme and the Methodology for Calculating the Value of Assets of the Funded Pension Scheme"

[25] According to Article 2(ჶ) of the Funded Pension Law, an open stock instrument is an investment through a person or instrument that is organized and operates as an investment company or investment fund and is authorized to issue an unlimited number of equity participation units or share price paper. It also includes open-end mutual funds, investment funds, or other investment instruments defined by the legislation of another state that operate on the basis of aggregation.

[26] Source: Legislative Herald of Georgia, Institute for Development of Freedom of Information

As such, on the one hand, the changes are aimed at diversifying the investment portfolio and increasing investment opportunities, and on the other hand, they give the system participants an opportunity to participate in the management of their own investment portfolios.

4. International Practice of Managing the Risk of Pension Assets Placement

This chapter analyzes the risk-taking practice and risk-taking outcomes of pension asset placement in different countries. Some of the selected countries take much higher risks compared to the Pension Agency of Georgia.

The purpose of the overview is to present what acceptable risks can be taken with the growth of the yield and to propose a framework for more varied/diversified opportunities for the Pension Agency, on the basis of which the net present value (NPV) of savings at retirement age may exceed the amount previously accumulated.

The risk level associated with pension assets investment can be assessed based on the limitations on certain types of assets. For example, Canada, Sweden, and New Zealand have 100% caps on both high and low-risk assets, meaning they have no limit and can invest 100% of their savings in these assets, which is inapplicable for Georgia . Poland has no restrictions on investing in shares, although, for example, up to 40% of assets are allowed to be invested in bonds issued by the public and private sectors, while investment in real estate is not allowed.

In the 2010s, bond yields in developed countries declined, such that many funded pension systems began investing in riskier assets, such as so-called leveraged loans, private equity, venture capital, and even cryptocurrencies. An example of the latter is the Ontario Teachers' Pension Plan (OTPP) holding a stake in FTX.[27]

Similar to Georgia, relatively low risks are taken by Lithuania, Croatia, and Armenia, which have different categories of limits on investing in high-risk assets (see Annex 2, Table 2). Some of the selected countries invest in shares of retail and private investment funds. Estonia, Sweden, Canada, and New Zealand have no restrictions in this regard. While limits vary from 10 to 50%, Georgia , does not invest in high-risk assets at all. The legislation of some countries completely prohibits investments in real estate, private investment funds, or loans. Direct investment in real estate is not allowed in Lithuania, Poland, Armenia, Croatia (for pension funds), and Georgia (for the mandatory[28] pension fund). However, in the majority of the listed countries, only direct investments are prohibited, while indirect investments in real estate through bonds and shares of real estate companies may be allowed.

Only a few countries do not set any specific limits by asset class due to the expectation of efficient management . The list of such countries includes Canada, the Netherlands, and New Zealand. In addition, to the mentioned countries, Sweden, Lithuania and Estonia do not set specific limits on investments in foreign assets either..

[27] FTX is a crypto market that was previously valued at $32 billion, but subsequently collapsed completely.
[28] Unlike mandatory funds, this limitation does not apply to voluntary pension funds.

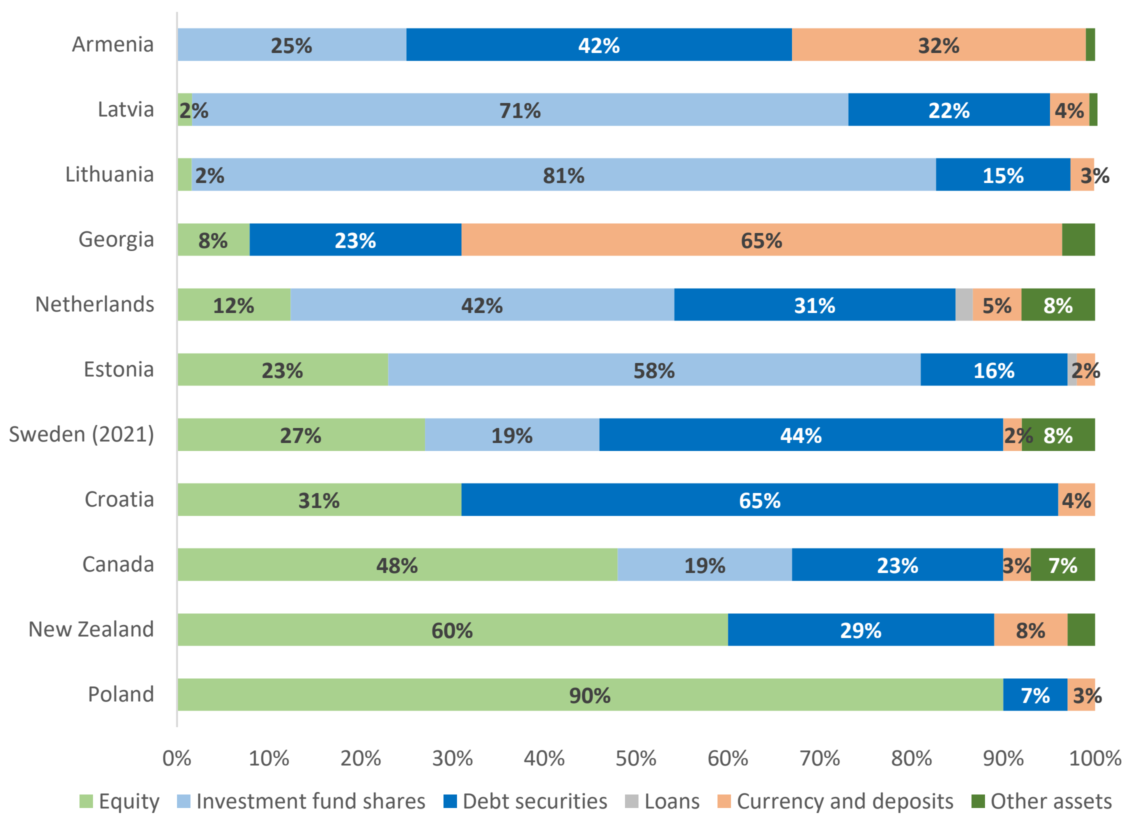
4.1 Risk Factor of Placement according to Selected Countries

Investment risk is the risk of loss caused by adverse changes in interest rates and other market prices. Pension fund investment risk can arise when pension fund returns lag behind inflation (i.e. real returns are negative). The risk of concentration may also arise - that is, the risk that the portfolio of the pension fund is not sufficiently diversified and is concentrated in one asset or issuer[29].

The main asset classes that pension funds invest in are stocks, bonds, and cash. Compared to bonds, investing in stocks is associated with higher risks, which is why pension fund investors expect higher returns from these assets in the long term[30].

In terms of placement risk, Poland has the riskiest policy. As can be seen from the graph, according to the data of the second quarter of 2022, 90% of the assets of the pension funds in Poland were placed in shares. Georgia had the least risky policy. However, since March 2022, because cash can be invested in foreign currency, the situation has changed, albeit slightly (as of February 28, 2023, 9.2% is invested in shares).

Figure 6: Asset distribution of pension funds in selected investment categories, second quarter of 2022[31]



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[29] https://www.oecd.org/daf/fin/private-pensions/46864889.pdf

[30] https://www.pensionsauthority.ie/en/lifecycle/investment_risk_and_reward/investment_asset_classes/

[31] Source: European Central Bank, Institute for Development of Freedom of Information

Since defined contribution (DC) schemes are designed in such a way that the amount of pension to be received depends on the investment returns generated by the pension funds, the objective of the funds should be to maximize these returns. Achieving high returns requires high-risk investment, an example of which is the addition of venture capital funds (funds that invest in a high-potential company at an early stage of its development, then develop it and take it to an IPO) to asset classes. For example, the pension funds of Costa Rica and Slovenia can invest only 5% of their assets in venture funds, Turkey - up to 20%, Estonia - 50%, and in Croatia only voluntary pension funds can be invested in European venture funds[32]. As traditional portfolios of bonds and stocks are no longer as efficient, some countries' pension funds are investing in non-traditional and high-risk assets such as cryptocurrencies. For example, in the United States, 94% of public pension schemes, 62% of corporate defined benefit (DB) schemes, and 48% of corporate DC schemes stated that they invest in cryptocurrencies[33]. Meanwhile, in Sweden, four public pension funds invested more than 200 million Swedish kroner (19 million USD) in a cryptocurrency trading company, the shares of which were later devalued by 87%[34]. It is precisely because of the volatility of the cryptocurrency that Canada's largest pension fund decided not to invest in this asset category[35]. Pension funds in most countries avoid investing in such high-risk and unstable assets.

Besides cryptocurrencies there are high-risk strategies such as investing in early-stage and high-growth companies, as well as infrastructure projects that are exceedingly risky, making it unadvisable for the Pension Agency to allocate its funds to such investments. This is how British pension funds behave. However, according to British research[36], for example, if a 22-year-old scheme participant puts 5% into a venture fund when they join, their pension savings can be expected to grow by 7-12%. Therefore, in contrast to the traditional mix of bonds and stocks, the addition of venture capital funds to pension fund asset classes can significantly improve pension fund growth.

4.2 Performance Table according to Selected Countries

In order to evaluate the outcomes of investing pension assets, it is necessary to analyze nominal and real yield rates. Table 4 presents the rate of net nominal (before inflation and taxes) and real (after inflation and before taxes) yields . The column titled "Maximum Available Data" does not refer to the same reporting period for all listed products and should not be used for the purposes of comparison.

In 2021, Poland (-3.47%) and Latvia (-1.01%) had negative real growth rates along with Georgia (-2.65%), while Sweden (25.76%) and Lithuania (5.97%) had the highest growth rates.

[32] Annual Survey of Investment Regulation of Pension Funds and Other Pension Providers
[33] https://blogs.cfainstitute.org/investor/2022/08/04/pensions-crypto-and-trust-digital-assets-and-retirement-funds/
[34] https://english.news.cn/20221204/28233505b6274a409dff32b0599b2c1c/c.html
[35] https://www.reuters.com/business/canadas-biggest-pension-plan-cppi-ends-crypto-investment-pursuit-sources-2022-12-07/
[36] https://www.economist.com/britain/2022/12/06/small-pension-funds-are-britains-likeliest-source-of-growth-capital

Table 4: Nominal and real yields according to country and time period, as of November[37]

Country	Type of Scheme	Yield Rate	2021	2019-2021	2017-2021	2015-2021	2012-2021	Maximum Available Data
Croatia	II pillar pension funds	Gross nominal	7.75%	5.40%	4.90%	6.01%	6.35%	5.37%
		Gross real	2.55%	3.38%	3.24%	4.76%	5.01%	3.34%
Estonia	Mandatory pension funds	Gross nominal	13.33%	8.85%	5.47%	4.73%	5.11%	4.38%
		Gross real	1.30%	4.57%	1.88%	1.86%	2.60%	0.73%
Latvia	State-funded pension funds	Gross nominal	6.89%	6.23%	3.49%	3.05%	3.78%	3.83%
		Gross real	-1.01%	3.05%	0.64%	0.66%	1.96%	-0.13
Lithuania	II pillar pension funds	Gross nominal	16.67%	12.99%	7.74%	6.83%	6.94%	5.30%
		Gross real	5.97%	8.61%	4.05%	3.95%	4.60%	1.95%
Poland	Employee pension funds	Gross nominal	4.26%	5.34%	4.55%	3.39%	4.57%	5.80%
		Gross real	-3.47%	0.54%	1.15%	0.90%	2.59%	3.37%
Netherlands	Pension funds	Gross nominal	7.31%	10.15%	6.68%	6.06%	6.99%	4.90%
		Gross real	0.85%	6.58%	3.96%	3.94%	4.99%	2.80%

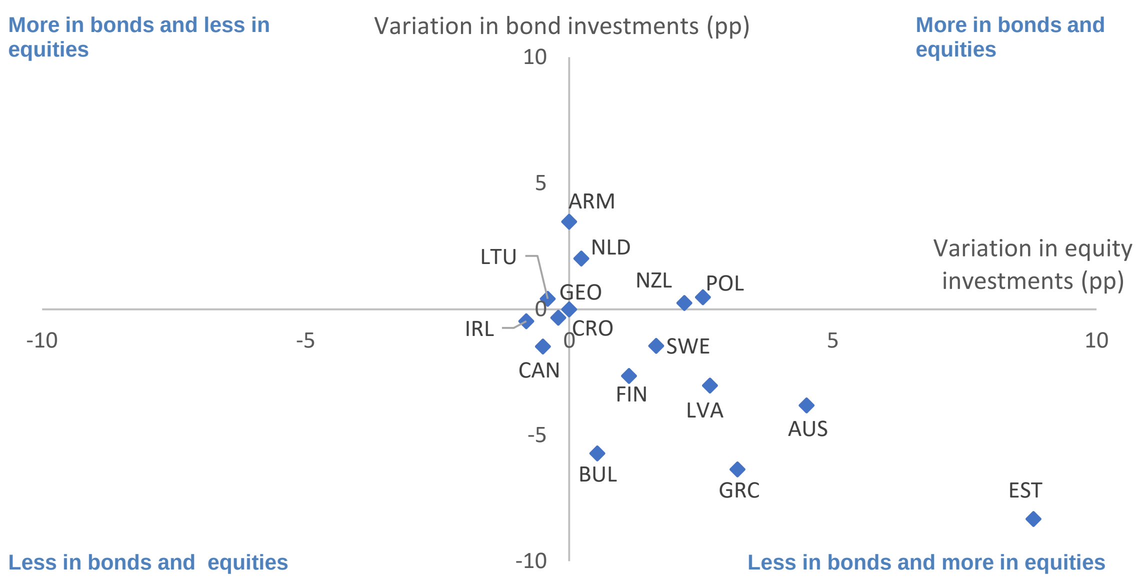
[37] Source: BETTER FINANCE, Armenia Securities Exchange, KiwiSaver Scheme returns, Institute for Development of Freedom of Information

Sweden	Premium pensions (AP7 Safa)	Gross nominal	31.42%	21.89%	15.41%	15.31%	17.18%	9.58%
		Gross real	25.76%	19.19%	13%	13.19%	15.47%	7.78%
Georgia	Funded pension plan	Gross nominal	10.93%					8.93%
		Gross real	-2.65%					0.37%
Armenia	AMUNDI	Fixed income fund	-3.23%	2.69%	4.79%			6.55%
		Balanced fund	-8.01%	2.15%	4.17%			6.91%
		Conservative fund	-6.81%	2.45%	4.46%			6.75%
	C-Square	Fixed income fund	-4.12%	2.20%	5%			7.48%
		Balanced fund	-7.25%	2.90%	5%			6.91%
		Conservative fund	-6.74%	2.55%	5%			6.79%
New Zealand	kiwisaver	Cash fund	1.63%	0.88%	1%	1.59%	2.09%	2.74%
		Conservative fund	-7.38%	-0.99%	2%	2.68%	3.72%	4.12%
		Medium-risk fund	-8.38%	-0.35%	2%	3.70%	5.07%	4.59%
		Balanced fund	-9.19%	1.48%	4%	5.42%	7.02%	5.28%
		Growth fund	-9.82%	2.59%	5%	6.76%	8.62%	5.66%

		Positive impact fund	-15.31%	1.47%				1.07%

The graph below shows how the pension assets of our selected countries are distributed between bonds and stocks. Most of the pension funds of these countries choose to pursue a relatively high-risk investment policy.

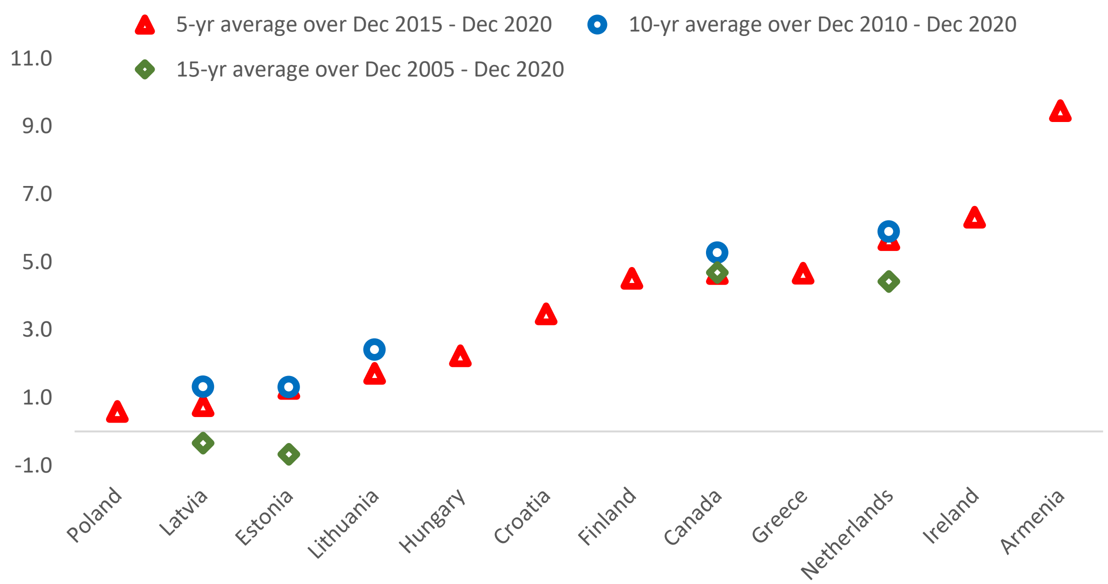
Figure 7: Distribution of investments according to assets class, 2019-2020[38]



The graph below shows the annual geometric real growth of pension savings, showing how the countries' pension funds are invested and the growth of these investments over a 5, 10, and 15-year time period. For example, the Netherlands and Latvia have the most diversified portfolios, while the countries with short-term investment policies (Ireland, Greece, Finland) have the highest yields.

Figure 8: Real average annual IRR in 5, 10 and 15-year periods[39]

[38] Source: OECD Pension-Markets-in-Focus-2021
[39] Source: OECD – Pension Markets in Focus 2021



5-yr average over Dec 2015 - Dec 2020
10-yr average over Dec 2010 - Dec 2020
15-yr average over Dec 2005 - Dec 2020
11.0
9.0
7.0
5.0
3.0
1.0
-1.0
Poland
Latvia
Estonia
Lithuania
Hungary
Croatia
Finland
Canada
Greece
Netherlands
Ireland
Armenia

5. Recommendations

1. **With the consideration of best international practices, the investment mandate of the Pension Agency should be further expanded and the riskiness of the investments should be increased within reasonable limits**: otherwise, it is difficult to imagine keeping up with inflation[40]. Obviously, this comes with additional risks, but the main question here is what pension scheme participants will get with and without this expansion.

   According to the capital market development strategy of Georgia for 2023-2028[41], in 2025, the total value of pension fund assets is planned to increase 6.55 billion GEL, 3.25 times the value from 2021. In 2028, it will reach 12.1 billion GEL, which means an increase of 6.02 times the value from 2021. Growth at such a rate requires investing in assets with a higher risk than the existing ones, in particular:

   1.1. **Increase or remove the limit on investments in foreign assets**, so that the management determines the share of foreign assets in investment portfolio.

   It should be noted that even within the limits of existing investment opportunities, the Pension Agency can take higher risks. For example, according to the current law, in a less risky portfolio, up to 20% of assets may be placed in foreign currency, including equity securities (shares). If the assets to be placed in foreign currency are fully directed to the purchase of shares or other relatively high-risk instruments, it will be possible to increase the returns. However, from August 2023, the law will already allow high-risk placements, which will make it possible to increase the yields of medium and high-risk portfolios. Starting with the same period, it is important to change the volume of pension assets placed in deposits, which is 59.8% at the moment. None of the countries selected/assessed by us have placed such a high volume of pension assets in bank deposits.

   The main advantages of investing in the assets of foreign companies are:

   - The opportunity to diversify investments;
   - High yields (risk-discounted);
   - Companies that, do business in countries with stable economies, unlike that of Georgia, indirectly create an opportunity to import the results/potential there to Georgia.

   1.2. **The Agency should be given more flexibility in setting limits for placement in low-risk, medium-risk, and high-risk assets to reflect the changing situation**, such as, for example,

[40] According to the Pension Agency's February 2023 Investment Portfolio Report, the pension fund's net returns between the fund's launch (January 1, 2019) and January 2022 were 42.64%, and real returns (adjusted for inflation) were 3.56% over the same period. As of February 28, 2023, the net value of pension assets amounted to 3.14 billion GEL. In this, the net proceeds obtained as a result of investment activity amounted to 477 million GEL. The pension fund started buying USD from March 2022 and as of February 28, 18.5% of the investment portfolio is in USD and 81.5% in GEL.

[41] https://matsne.gov.ge/ka/document/view/5683209?publication=0

bonds being considered relatively less risky assets. This is reason the funds of people approaching the retirement age are mainly placed in bonds, even though they can also carry some risk. For example, since January 2022 in the USA, the value of the investment portfolio has decreased by 17%, and the 10% inflation has further reduced the amount of the annual pension[42].

Giving preference to one instrument, such as investing primarily in bonds or bank deposits, especially in the face of rising inflation, cannot ensure stable real yields and a "decent" pension at retirement age.

Not only that, but traditional portfolios of stocks and bonds are no longer as efficient as they once were. The main challenges facing pension funds[43] around the world are a low level of diversification, rising inflation, and declining real incomes. Pension funds are struggling to achieve planned returns, and investors are asking for investments in novel and potentially riskier products. Obviously, fund managers assess these requirements in the context of their obligations. Faith in the pension system can be undermined not only by specific facts of payment delays/less than expected returns, but also by mere assumptions and doubts. These delays/reductions can occur due to both increased and decreased risk-taking.

To cover potential yield shortfalls and unfunded liabilities, pension funds choose to invest in higher-risk instruments, such as digital assets and their supporting infrastructure. According to the investor confidence survey, 94% of state and government pension schemes, 62% of corporate-defined benefit (DB), schemes and 48% of corporate-defined contribution (DC) schemes stated that they invest in cryptocurrencies[44].

In the interest of fairness, it should be mentioned that many pension asset managers refrain from investing in cryptocurrencies, although they make this decision based on their own research and not on the basis of subjective attitudes. For example, Canada's largest pension fund, CPP Investments, based on its own research on investment opportunities in the volatile crypto market, decided that it would not invest directly in cryptocurrency[45]. Four Swedish public pension funds, meanwhile, have invested more than 200 million Swedish kroner ($19 million) in the cryptocurrency trading company Coinbase, which lost 87% of the value of its shares[46].

2. **On the basis of corresponding modeling and raising the awareness of the population**

- **Prepare a decision to stop the provision of social (basic) pension for participants of the funded pension system if their savings exceed a certain threshold**. There will come a time when the majority of basic (social) pension recipients will be simultaneously beneficiaries of the funded

[42] https://www.economist.com/finance-and-economics/2022/12/05/can-you-afford-to-retire
[43] For both defined benefit (DB) and defined contribution (DC) funds
[44] Pensions, Crypto, and Trust: Digital Assets and Retirement Funds By Ryan Munson https://blogs.cfainstitute.org/investor/2022/08/04/pensions-crypto-and-trust-digital-assets-and-retirement-funds/
[45] Canada https://www.reuters.com/business/canadas-biggest-pension-plan-cppi-ends-crypto-investment-pursuit-sources-2022-12-07/
[46] Sweden https://english.news.cn/20221204/28233505b6274a409dff32b0599b2c1c/c.html https://cointelegraph.com/news/millions-of-swedish-savers-have-exposure-to-bitcoin-via-state-pension-fund

pension system, while those who remain in the basic (social) pension scheme will be the people who voluntarily withdrew from the funded pension scheme (currently, 170,111 employees). The state has a reduced obligation towards those who have withdrawn. The main purpose of the funded pension system is to reduce the burden on taxpayers. Giving an additional social pension to the participants of the funded pension system will make it impossible to achieve this goal.

- **Determine the period** from which the increase of the social (basic) pension, including through indexation, will be stopped. By January 1, 2019, when the funded pension system came into force, people who had already reached retirement age could not join the scheme. The state has an obligation towards these people. However, there will come a time when the majority of basic (social) pension recipients will not be the people who could not join the funded pension scheme due to their age, but those who withdrew from the funded pension scheme. For these recipients, the continuation of the increase of the basic pension, as we mentioned above, will be a completely unjustified burden, especially since the majority of them consciously opted out of the funded pension scheme in anticipation of their own self-sufficiency in the future.

The two main justifications for the funded pension system are that:

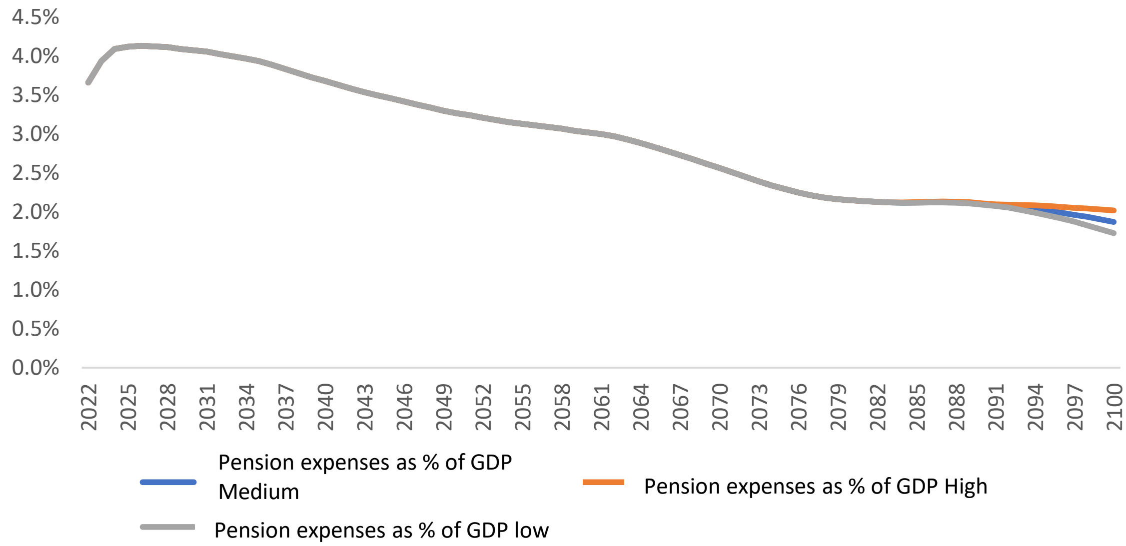
- The basic pension should increase at a lower rate under the funded scheme than without it, and therefore put less of a burden on taxpayers. 3.38 billion GEL is spent on pension provision in 2023, which is 21% of expenses. Carrying this burden significantly hinders the development of the country.

- The country has not had a culture of saving

It should be noted that according to the pension cost modeling found in the 2023 state budget fiscal risk document of the Ministry of Finance, despite the increase in GDP, the ratio of basic pension to GDP will remain around 3.9% from 2022 to 2034, which will be a heavy burden on the economy.

Figure 9: Ratio of basic pension expenses with the GDP[47]

[47] The 2023 fiscal risks document of the state budget



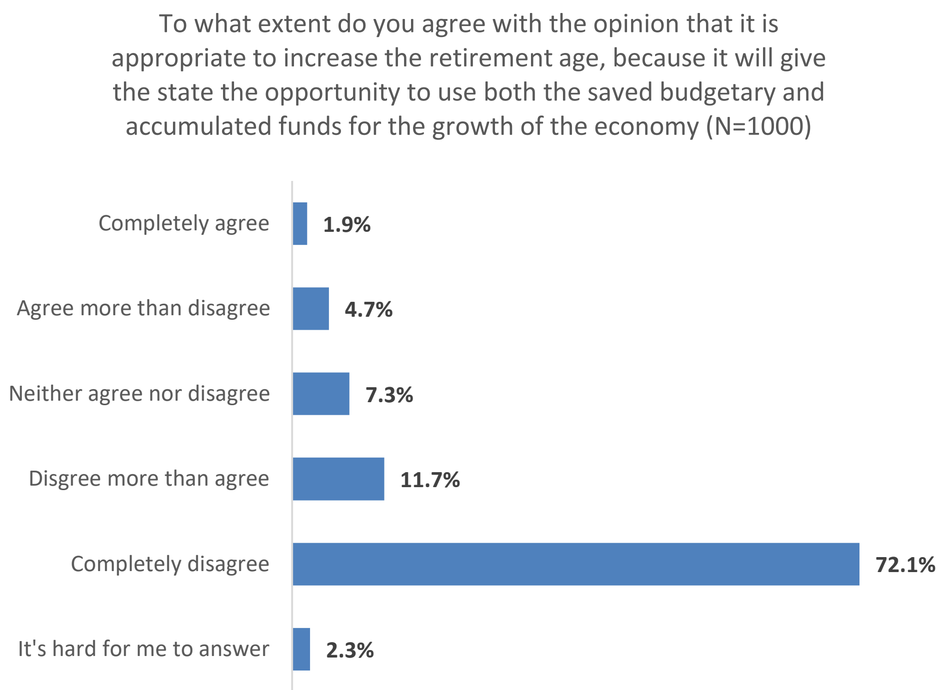
3. **In order to maintain the country's fiscal stability against the background of a growing number of pensioners, it is important to start working on preparing public awareness in anticipation of increasing the retirement age.**

   Against the conditions of the existing scarce fiscal resources, the significant increase in the number of pensioners in Georgia and, accordingly, the share of pension expenses in the budget significantly hinders the focus towards the country's development.

   The increase in the retirement age in Georgia does not elicit as much resistance as in some other countries. For example, according to the survey of the Institute for Social Research and Analysis regarding the population's attitudes on the reform of the pension system[48], the question of how appropriate it is to increase the retirement age, which will give the state the opportunity to use the saved budgetary funds, as well as the funds accumulated by the citizens, 27.9% of respondents do not oppose raising the retirement age, and 72.1% categorically oppose it, while, for example, a much larger part of the population in France opposes Macron's pension reform, which entails an increase in the retirement age from 62 to 64 years.

Figure 10: Attitude of the population towards the pension system reform[49]

[48] https://library.fes.de/pdf-files/bueros/georgien/14583.pdf
December 2017
[49] Source: Survey of the Institute of Social Research and Analysis of the population's attitude towards the reform of the pension system, 2017.



4. **Invest pension savings in financial instruments** (securities, banking products) and not, for example, in infrastructure projects, such as the construction of Khudoni[50] or Anaklia[51], as has been discussed by the government.

   Financing investment in infrastructure is, in essence, the job of banks. Where governments take such risks, they also assess the potential harm that such decisions may bring. Pension asset managers are strongly opposed to investment ideas dictated by public policy objectives[52], e.g. the UK government's decision to shift billions of pounds of pension savings into long-term investments such as start-ups and infrastructure, i.e. illiquid assets[53]. It is worth noting that pension savings are more often invested in infrastructure by corporate pension schemes. For example, Liechtenstein's defined benefit pension funds can invest 30% of assets directly in real estate, and 10% in foreign (outside the European Economic Area and Switzerland) real estate[54].

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[50] https://business-partner.ge/ekonomika/khudonhesi-shesadzloa-sapensio-fondshi-akumulirebuli-tankhis-natsilitats-ashendes?fbclid=IwAR2UdG4-3BVDndDFBaRS_XIYJWaMTVqr3e6S9DhwlxIQGDYisGisTM3tpd8
[51] https://www.ambebi.ge/article/287492-ra-pinansuri-resursit-gegmavs-saxelmcipo-anakliis/?fbclid=IwAR3iglC4i2q1KR8rp-iSrxduHD0xmljvfqVoNjWx5wGdtD5KpyY0GKGRsgM
[52] https://www.ft.com/content/2171f933-e308-4ae2-a01c-5776d15823b1
[53] https://www.ft.com/content/6cb12c6c-0c5a-485a-b185-b91341875c47?desktop=true&segmentId=d8d3e364-5197-20eb-17cf-2437841d17841mystantentt:
[54] https://www.oecd.org/daf/fin/private-pensions/2021-Survey-Investment-Regulation-Pension-Funds-and-Other-Pension-Providers.pdf

5. **Begin expanding the pension scheme to increase the effects of economies of scale:** It is important to entice back into the pension scheme at least some of the 170,111 employees who left it between 2019 and 30 June 2022. A large-scale return of those who withdrew from the pension scheme is possible with the measures of popularizing the funded pension scheme applied by many countries more or less comparable to Georgia in their efforts to expand their own defined benefit schemes[55]. These promotional activities were based on simple modeling of pension benefits for potential participants of all age groups, as illustrated below, e.g. by advertising through different channels for different age groups.

Table 5:[56] Modeling pension benefits[57]

Assumptions[6] 1	
Average salary	900
Contribution (% of salary)	6%
Real interest	4%
Real salary growth	5%
Years in retirement	15

Average salary **(GEL)**	
After 10 years	1,466
After 20 years	2,388
After 30 years	3,890
After 40 years	6,336

For example, if an initial salary of an employee is 1000 GEL, in 20 years, he will accumulate 34,940 GEL, which means she/he can receive 262 GEL monthly for 15 years, which is 11% of the average salary in 20 years.

Pension (GEL)		Initial salary **(GEL)**					
		500	**800**	**1000**	**1500**	**2000**	**2500**
Years of work	**10**	42	67	84	126	168	211
	20	131	210	262	393	524	655
	30	306	489	611	917	1,222	1,528
	40	634	1,015	1,269	1,903	2,537	3,172

Accumulated funds (GEL)		Initial salary **(GEL)**					
		500	**800**	**1000**	**1500**	**2000**	**2500**
Years of work	**10**	5,619	8,990	11,238	16,857	22,476	28,095
	20	17,470	27,952	34,940	52,411	69,881	87,351
	30	40,769	65,230	81,538	122,307	163,076	203,845
	40	84,633	135,413	169,266	253,899	338,532	423,165

Replacement coefficient		Initial salary **(GEL)**					
		500	**800**	**1000**	**1500**	**2000**	**2500**
Years of work	**10**	3%	5%	6%	9%	11%	14%
	20	5%	9%	11%	16%	22%	27%
	30	8%	13%	16%	24%	31%	39%
	40	10%	16%	20%	30%	40%	50%

Note: The above calculations are based on 2015 average monthly nominal salary, which was 900 GEL. According to Geostat data, in 2022, in the 4th quarter, the average monthly nominal salary in Georgia amounted to 1,773.7 GEL, although according to the data, in 2021, the median salary of hired employees was 900 GEL, which is the same as the 2015 average monthly nominal salary. Therefore, the calculation of accumulated funds is still relevant.

[55] 170,904 employees withdrew from the pension scheme and 793 employees rejoined it. 874 employees withdrew in the period from January 1, 2022, to June 30, 2022. https://www.pensions.ge/ka/public-information/agency-activity-reports/2022-6-months-report

[56] The table calculates, with assumptions on separate parameters and depending on what salary the employee has in the current period and how many more years they will work before retirement, how much money they will have accumulated upon reaching retirement age, how much monthly pension they will receive for the rest of their life, and what percentage of the average salary of the last year of work is this pension is In comparison, i.e. the substitution coefficient (SC).

[57] Davit Utiashvili, Mandatory Funded Pension System: Challenges and International Practice https://www.pmcresearch.org/policypapers_file/f2c15c8fbd2f45878.pdf

Sources:

1. Risk governance framework, September 2020, https://www.pensions.ge/ka/risk-control/risk-governance-framework
2. Investment policy document, December 2021, https://www.pensions.ge/ka/investment-activity/investment-policy-document
3. Presentation of the investment policy document, September 2020, https://www.pensions.ge/ka/public-information/news/investment-policy-document-presentation-file
4. „On Funded Pension“, August 2018, https://www.matsne.gov.ge/ka/document/view/4280127?publication=3
5. On amendments to the law of Georgia „On Funded Pension“, June 2022, https://info.parliament.ge/file/1/BillReviewContent/308540?
6. Explanatory note on amendments to the law of Georgia „On Funded Pension“, June 2022, https://info.parliament.ge/file/1/BillReviewContent/308570?
7. Yearly survey on investment regulation of pension funds and other pension providers, 2021 წ. https://www.oecd.org/daf/fin/private-pensions/2021-Survey-Investment-Regulation-Pension-Funds-and-Other-Pension-Providers.pdf
8. Pension funds online, country profiles, https://www.pensionfundsonline.co.uk/content/country-profiles/
9. "Small pension funds are Britain's likeliest source of growth capital", December 2022, https://www.economist.com/britain/2022/12/06/small-pension-funds-are-britains-likeliest-source-of-growth-capital
10. Statistics of the Pension Agency for March 10, March 2023, https://www.pensions.ge/ka/public-information/news/Statistics-of-the-pension-agency-for-march-10-2023
11. Monthly investment report, February 2023, https://back.pensions.ge/uploads/docs/investment-activity/monthly-reports/2023/Monthly_Performance_Report_GEO_28_02_2023.pdf
12. 6-month report of 2022 of the Pension Agency, https://www.pensions.ge/ka/public-information/agency-activity-reports/2022-6-months-report
13. "Khudonhes" may be built in part with the funds accumulated in the pension fund, December 2022 https://business-partner.ge/ekonomika/khudonhesi-shesadzloa-sapensio-fondshi-akumulirebuli-tankhis-natsilitats-ashendes?fbclid=IwAR2UdG4-3BVDndDFBaRS_XIYJWaMTVqr3e6S9DhwlxIQGDYisGisTM3tpd8
14. What financial resources does the Government plan to use in its co-participation of the building of the Anaklia port, December 2022 https://www.ambebi.ge/article/287492-ra-pinansuri-resursit-gegmavs-saxelmcipo-anakliis/?fbclid=IwAR3iglC4i2q1KR8rp-iSrxduHD0xmljvfqVoNjWx5wGdtD5KpyY0GKGRsgM
15. Polish Financial Supervisory Commission (KNF), monthly data on the pension fund market, https://www.knf.gov.pl/en/REPORTS_AND_ANALYSIS/Pension_system/Monthly_data_pension_funds_market
16. Polish stock exchange, https://www.gpw.pl/list-of-companies
17. Bank of Lithuania, aggregated balance sheet of pension funds https://www.lb.lt/en/aggregated-balance-sheet-of-pension-funds
18. Bank of Estonia, https://statistika.eestipank.ee/#/en/p/3370/r/3373

19. Pension reform in Estonia, January 2021, https://www.lhv.ee/en/pensionreform#:~:text=If%20you%20have%20not%20yet,33%25%20of%20your%20salary).
20. Restructuring second pillar of funded pension, December 2021, https://www.fin.ee/en/restructuring-second-pillar-funded-pension
21. Central Bank of Armenia, https://www.cba.am/en/SitePages/statfinorg.aspx
22. Funds accumulated in the pension funds of Armenia, https://hetq.am/hy/article/135780
23. ახალი ზელანდიის სარეზერვო ბანკი https://www.rbnz.govt.nz/statistics/series/non-banks-and-other-financial-institutions/kiwisaver-assets-by-sector
24. KiwiSaver: New Zealand's new subsidized retirement savings plans, https://www.ssa.gov/policy/docs/ssb/v67n4/67n4p113.html
25. KiwiSaver: returns to investors, https://www.asb.co.nz/documents/kiwisaver/returns-to-investors.html
26. KiwiSaver: Annual report, 2022, https://www.fma.govt.nz/assets/Reports/KiwiSaver-Annual-Report-2022.pdf
27. Inflation - Annual increase in consumer prices, https://data.worldbank.org/indicator/FP.CPI.TOTL.ZG
28. European Central Bank, https://sdw.ecb.europa.eu/reports.do?node=1000006464
29. Pension at a glance, Latvia country profile, 2019, https://www.oecd.org/els/public-pensions/PAG2019-country-profile-Latvia.pdf
30. Returns of the pension scheme, https://betterfinance.eu/pensions-dashboard/
31. Pension Markets in Focus, 2021, https://www.oecd.org/daf/fin/private-pensions/Pension-Markets-in-Focus-2021.pdf
32. Pension adequacy report, 2021, https://op.europa.eu/en/publication-detail/-/publication/4849864a-cd83-11eb-ac72-01aa75ed71a1
33. Pension Reform in South-East Europe, December 2008, https://elibrary.worldbank.org/doi/abs/10.1596/978-0-8213-7558-7
34. IMF, Introduction of a Three-Pillar Pension System, https://www.elibrary.imf.org/display/book/9781557759689/ch03.xml
35. https://www.investopedia.com/
36. OECD/IOPS Good practice for pension fund risk management systems, January 2011, https://www.oecd.org/daf/fin/private-pensions/46864889.pdf
37. Employee capital plan (PPK), https://www.santander.pl/ppk/dokumenty#lang=1
38. Investment: Risk and Reward, https://www.pensionsauthority.ie/en/lifecycle/investment_risk_and_reward/investment_asset_classes/
39. Performance of INVL II pillar pension funds, https://www.invl.com/en/private/pension/ii-pillar-pension/performance-of-invl-ii-pillar-pension-funds/invl-pensija-1996-2002-index-plus/
40. Estonian pension system, https://www.seb.ee/en/private/savings-and-investments/pension/estonian-pension-system
41. Latvian pension system, https://www.seb.lv/en/private/savings-and-investments/pension/pension-system-latvia
42. II pillar pension in Latvia, https://www.seb.ee/en/private/savings-and-investments/pension/second-pension-pillar
43. Daily statistics of the funded pension scheme in Estonia, https://www.pensionikeskus.ee/en/statistics/ii-pillar/funded-pension-daily-statistics/

44. Latvian pension system, https://www.manapensija.lv/en/pension-system/pension-system-2/
45. Croatian pension system, https://hrmod.hr/en/croatian-pension-system/
46. Contributions to the Canadian pension scheme, December 2021, https://www.canada.ca/en/services/benefits/publicpensions/cpp/contributions.html
47. Canadian Pension Plan (CPP), https://www.cppinvestments.com/
48. Investments in CPP, June 2022, https://www.cppinvestments.com/public-media/headlines/2021/cpp-investments-net-assets-total-541-5-billion-at-second-quarter-fiscal-2022
49. Swedish pension system, https://www.ap7.se/english/
50. Pension Savings: Real Return, 2021, https://betterfinance.eu/wp-content/uploads/Sweden-The-Real-Return-Long-Term-Pension-Savings-Report-2021-Edition.pdf
51. Pension Funds, 2021, https://www.oecd.org/finance/private-pensions/Pension-Funds-in-Figures-2021.pdf
52. Pension at a glance, Netherlands country profile, 2021, https://www.oecd.org/els/public-pensions/PAG2021-country-profile-Netherlands.pdf?fbclid=IwAR01goV5DYk4dviWlf7spuR5pW24woY1d1vgfDrxr7Ciadg9cg7MOvhPPvc
53. Netherlands pension system: highlights and characteristics, https://www.pensioenfederatie.nl/website/the-dutch-pension-system-highlights-and-characteristics#:~:text=There%20is%20no%20mandatory%20membership,pension%20scheme%20through%20their%20employer.
54. Retirement age in the Netherlands, December 2022, https://www.iamexpat.nl/career/employment-news/netherlands-raise-retirement-age-67-years-and-3-months#:~:text=The%20Netherlands%20to%20raise%20retirement%20age%20to%2067%20years%20and%203%20months,-Facebook&text=The%20Dutch%20government%20has%20announced,born%20in%20or%20after%201961.
55. Employee capital plans, January 2019, https://www.tgc.eu/en/publications/employee-capital-plans-from-1-january-2019/?fbclid=IwAR2F8zY_SxqNg6eJcJjI6tWY41eGwGAOI09lDSET-cB_yphyxoLLs_1D28c
56. Employee capital plans (PPK), https://www.mojeppk.pl/en.html#:~:text=Employee%20Capital%20Plans%20(PPK)%20are,they%20stop%20being%20professionally%20active.
57. Withdrawing money from the II pillar, https://www.swedbank.ee/private/pensions/my/pensionReform?language=ENG
58. Quarterly fund report, https://www.fktk.lv/en/statistics/pension-funds/quarterly-reports/
59. Croatian pension system, https://hrmod.hr/en/croatian-pension-system/
60. Pension insurance in the Republic of Croatia, https://migracije.hr/pension-insurance-in-the-republic-of-croatia/?lang=en
61. Pension Funds, https://www.oecd.org/finance/private-pensions/Pension-Funds-in-Figures-2021.pdf
62. Statistics of the Financial Services Oversight Agency of Croatia, https://www.hanfa.hr/publications/statistics/#section2
63. Pension amount in Estonia, https://pension.sotsiaalkindlustusamet.ee/en/pension-amount

64. Can you afford to retire?, December 2022, https://www.economist.com/finance-and-economics/2022/12/05/can-you-afford-to-retire
65. Pensions, crypto, and trust: digital assets and retirement funds, August 2022, https://blogs.cfainstitute.org/investor/2022/08/04/pensions-crypto-and-trust-digital-assets-and-retirement-funds/
66. Swedish retirement funds invest in cryptocurrency, December 2022, https://english.news.cn/20221204/28233505b6274a409dff32b0599b2c1c/c.html
67. Canada's biggest pension plan, CPPI, ends crypto-investment pursuit, December 2022, https://www.reuters.com/business/canadas-biggest-pension-plan-cppi-ends-crypto-investment-pursuit-sources-2022-12-07/
68. On the approval of the capital market development strategy of Georgia for 2023-2028 and the action plan of the capital market development strategy for 2023-2024, December 2022, https://matsne.gov.ge/ka/document/view/5683209?publication=0
69. Millions of Swedish savers have exposure to Bitcoin via state pension fund, April 2021, https://cointelegraph.com/news/millions-of-swedish-savers-have-exposure-to-bitcoin-via-state-pension-fund
70. The Pensions Regulator must deal with employers who break the rules, January 2023, https://www.ft.com/content/aa10d9cc-0ac0-49ca-841f-ef57b767aff9
71. Pension funds for the rehabilitation of UK plc, February 2023, https://www.ft.com/content/2171f933-e308-4ae2-a01c-5776d15823b1
72. Illiquid assets and UK pension savers, January 2023, https://www.ft.com/content/6cb12c6c-0c5a-485a-b185-b91341875c47?desktop=true&segmentId=d8d3e364-5197-20eb-17cf-2437841d178a#myft:notification:instant-email:content
73. Importance of pensions, July 2017, https://www.nirsonline.org/wp-content/uploads/2017/07/importanceofpensionsnonss.pdf
74. The UK labor market will not be able to withstand the effects of stagflation for long, February 2023, https://www.theguardian.com/politics/2023/feb/14/uk-labour-market-stagflation
75. Pensions at a glance, 2017, https://www.oecd-ilibrary.org/social-issues-migration-health/pensions-at-a-glance-2017/future-retirement-ages_pension_glance-2017-10-en;jsessionid=thmzrAmquaS71y3lxQOXOaBxigiTZgRJyRkHznCV.ip-10-240-5-94
76. World pension ages on the rise: when will you retire? November 2017, https://www.schroders.com/sk/insights/economics/world-pension-ages-on-the-rise-when-will-you-retire/
77. Pension coaching, February 2023, https://www.ft.com/content/1ecbc941-01f9-48e7-8b20-a470fa6b9548
78. Rich People's Problems: I just haven't got enough money, February 2023, https://www.ft.com/content/98771a87-ff63-498f-8b50-8e1027ca9485
79. Millennials are getting older – and their pitiful finances are a timebomb waiting to go off, March 2023, https://www.theguardian.com/commentisfree/2023/mar/06/millennials-older-pensions-save-own-home
80. Jeremy Hunt's plan, November 2022, https://www.ft.com/content/5cb99420-13a4-4ecd-b06d-16d812377a57
81. France is in a stand-off against Emmanuel Macron's pension reform, March 2023, https://www.economist.com/europe/2023/03/09/france-is-in-a-stand-off-against-emmanuel-macrons-pension-reform

82. Survey of the Institute of Social Research and Analysis of the population's attitude towards the reform of the pension system, December 2017, https://library.fes.de/pdf-files/bueros/georgien/14583.pdf
83. On the approval of the instruction on the issuance of pension and pension assets, February 2023, https://pensions.ge/ka/legislation/legal-acts/approval-of-instruction-on-issuance-of-pension
84. Utiashvili, Mandatory Funded Pension System: Challenges and International Practice, https://www.pmcresearch.org/policypapers_file/f2c15c8fbd2f45878.pdf
85. Monthly Investment Report – February 2023

Appendices

Appendix 1: General Overview of the Pension System

The pension system of countries around the world is based on the so-called Pillar system, which consists of three pillars. Each pension scheme differs from each other both in the principle of financing and in the number of participants.

1. Pension system of the first pillar refers to mandatory state pension, the same as the social (basic) pension based on the principle of solidarity, which is financed from the taxes paid from the income of taxpayers, is universal, and applies equally to all citizens of retirement age.
2. The second column is a funded pension system, which is based on a defined contribution principle. Typically includes voluntary and/or mandatory corporate pension schemes.
3. The third pillar is characterized by a voluntary pension scheme and includes individual contributions as well as private investments in financial institutions.

The purpose of the scheme for each pillar of the pension system is to ensure adequate pension income, fiscal sustainability of pension expenses, and more effective response to demographic changes in the population. In recent years, reforms in terms of funded pension and, accordingly, the role of funded pension schemes have been growing in international practice[58].

At the initial stage, taking into account global practice, when modeling pension schemes, employers and asset management companies offered defined benefits packages to employees, in which the pension to be paid to the beneficiaries would be established in advance.

Certain shortcomings of the mentioned scheme made the countries consider modeling the pension scheme and establishing a system where the risks would be shared by the employees along with the state. Accordingly, defined contribution schemes were formed. The defined contribution scheme was formed accordingly. The participants pay a certain percentage to the pension fund every month and choose the asset management company and the type of investments to be made, while the state is involved in the supervision of the pension funds and the protection of the rights of the beneficiaries[59].

During the saving process, the saver knows only how much he pays each month for future retirement, but the actual amount and level of income in retirement will depend on external factors and be subject to capital market fluctuations, just like any other investment. In other words, the risk to receiving an adequate pension at retirement depends on the investment decisions made by the saver, where the provider is only required to pay the actual net profit before tax earned over the investment period.

[58] IMF, Introduction of a Three-Pillar Pension System
[59] investopedia.com

Appendix 2: International Experience of Pension Schemes

Table 1: Distribution of assets of pension funds of different countries, according to financial instruments[60]

	Lithuania	Estonia	Croatia	Latvia	Sweden (2021)	Netherlands	Poland	Armenia	Canada	Georgia	New Zealand	Euro area
Currency and deposits	**3%**	**2%**	**4%**	**4%**	**2%**	**5%**	**3%**	**32%**	**3%**	**65%**	**8%**	**7%**
Deposits without agreed maturity	3%	2%					3%					
Domestic	3%	2%					3%				6%	
Euro area (excluding domestic)	0%	0%					0%					
Rest of the world	0%	0%					0%				2%	
Debt securities	**15%**	**16%**	**65%**	**22%**	**44%**	**31%**	**7%**	**42%**	**23%**	**23%**	**29%**	**26%**
Up to 1 year	0%										3%	
Over 1 year and up to 2 years	0%											
Over 2 years	15%										12%	
Domestic	5%	6%					7%			13%	15%	
MFIs	0%						3%					
Non-MFIs	4%						4%					
General government	3%						0%	37%			6%	
Other financial intermediaries, financial auxiliaries, captive financial institutions and money lenders	0%						1%	5%				
Non-financial corporations	1%						3%					
Euro area (excluding domestic)	6%	8%					0%			1%		
MFIs	1%						0%					

[60] Source: European Central Bank, World Bank, Institute for Development of Freedom of Information

Non-MFIs	5%						0%					
General government	4%						0%					
Other financial intermediaries, financial auxiliaries, captive financial institutions and money lenders	0%						0%					
Non-financial corporations	1%						0%					
Rest of the world	4%	2%					0%			9%	14%	
MFIs	0%						0%					
Non-MFIs	4%						0%					
General government	3%						0%					
Other financial intermediaries, financial auxiliaries, captive financial institutions and money lenders	0%						0%					
Non-financial corporations	0%						0%					
Loans	**0%**	**1%**	**0%**	**0%**	**0%**	**2%**	**0%**	**0%**			**0%**	**3%**
Domestic	0%	1%	0%	0%	0%		0%	0%			0%	
Euro area (excluding domestic)	0%	0%	0%	0%	0%		0%	0%			0%	
Rest of the world	0%	0%	0%	0%	0%		0%	0%			0%	
Equity	**2%**	**23%**	**31%**	**2%**	**27%**	**12%**	**90%**	**0%**	**48%**	**8%**	**60%**	**9%**
Domestic	1%	2%					79%				20%	
MFIs	0%											
Non-MFIs	1%											
Non-financial corporations	1%											
Euro area (excluding domestic)	0%	2%					0%					
MFIs	0%											
Non-MFIs	0%											
Non-financial corporations	0%											
Rest of the world	0%	18%					11%				40%	
MFIs	0%											
Non-MFIs	0%											

Non-financial corporations	0%											
Listed shares	2%						90%				45%	
Non-listed shares	0%						0%				5%	
Other equity	0%										10%	
Investment funds shares/units	**81%**	**58%**		**71%**	**19%**	**42%**		**25%**	**19%**			**46%**
MMF investment fund shares/units	0%											
Non-MMF investment fund shares/units	81%											
Domestic	1%	7%										
Euro area (excluding domestic)	76%	43%										
Rest of the world	4%	9%										
Equity funds shares/units	71%											
Bond funds shares/units	5%											
Mixed funds shares/units	1%											
Real estate funds shares/units	1%								6.5%			
Hedge funds shares/units	0%											
Other funds shares/units	3%								12.7%			
Financial derivatives	**0%**		**0%**	**0%**		**5%**			**2%**		**2%**	**3%**
Domestic	0%										2%	
Euro area (excluding Lithuania)	0%											
Rest of the world	0%										0%	
Pension fund reserves	**0%**			**0%**		**0%**			**5%**		**0%**	**4%**
Non-financial assets	**0%**			**0%**		**1%**			**0%**		**1%**	**1%**
Remaining assets	**0%**	**0%**	**0%**	**1%**	**8%**	**2%**	**0%**	**1%**	**0%**	**4%**	**0%**	**2%**
Inflation 2021, consumer prices (annual %)	**4.7%**	**4.7%**	**2.6%**	**3.3%**	**2.2%**	**2.7%**	**5.1%**	**7.2%**	**3.4%**	**9.6%**	**3.9%**	**2.4%**
ROE 2021, after tax	**10.49%**	**8.39%**	**8.72%**	**6.52%**	**11.03%**	**7.62%**	**4.65%**	**5.51%**	**14.88%**	**23.52%**	**12.49%**	
ROA 2021, after tax	**0.81%**	**0.99%**	**1.16%**	**0.74%**	**0.76%**	**0.55%**	**0.44%**	**0.71%**	**0.89%**	**3.23%**	**0.10%**	

Table 2: Investment limits of pension funds of different countries[61]

Country	Equity	Real Estate	Bills and bonds issued by public administration	Bonds issued by the private sector	Retail Investment Funds	Private Investment funds	Loans	Bank deposits
Estonia	100% (Total)	40% (Total exposure)	100% (Direct)	100% (Direct)	100% (Direct)	100% (Direct)	10% (Direct) Both borrowing and lending.	100% (Direct)
	Limit for conservative funds 10%; Limit for securities issued by a single issuer 5%; Limit for securities issued by a single group 20%;	10% to single property	There is no absolute limit, but 35% to single country is applied.	Limit if listed 100%; Limit if unlisted 50%; Limit for securities issued by a single issuer 5%;				
Latvia	75% (Total exposure)	0% (Direct)	100% (Direct)	100% (Direct)	100% (Direct)	15% (Direct)	0%	100% (Direct)
	50% (Total exposure) applicable for plans, registered prior to 31.12.2017		Limit for securities issued by a local government 5%	Listed bonds only	UCITS	non-UCITS		

[61] Source: Annual Survey of Investment Regulation of Pension Funds and Other Pension Providers, Institute for Development of Freedom of Information

Lithuania	20% (Total exposure)	0%	100% (Total exposure)	30% (Total exposure):	Pension Asset Preservation Funds can invest to funds investing into: 1) equity – 20 % (Total exposure) 2) bonds issued by the private sector –30% 3) Bills and bonds issued by public administration – 100%	0%	0% Pension funds cannot borrow money or invest to loans directly.	100% (Total exposure) Pension funds can invest only in Deposits with no longer than 12-month term.
Poland	100% (Direct)	0% (Direct)	Treasury bonds are not allowed; Limit for municipal bonds 40%	40% (Direct)	15% (Direct)	0% (Direct)	1.5% (Direct)	20% (Direct)
			100% of the NAV (Direct); At least 30% (for A, 50% for B, 70% for C) of the NAV must be invested in government bonds and money market instruments (MMI) issued by Republic of Croatia, other EU member state or OECD member state.	Limit for corporate bonds & Limit for mortgage bonds 40%; Limit for non-listed mortgage bonds =15%	Limit for open-end funds = 15%; Limit for closed- end funds = 10%			

Croatia	For category A up to 65% (Direct); For category B up to 40%; For category C 0%	0%		For category A 50% of NAV; For category B 30%; For category C 10%	30% (for C 10%) of the NAV (Direct); Total limit for UCITS funds and nonUCITS retail investment funds.	For category A 15% of NAV; For category B 10%; For category C 0%	Pension fund can borrow cash from third parties in the amount up to 5% of the NAV for liquidity purpose	20% of the NAV (Direct)
Sweden	100% (Direct)	100% (Direct)	100% (Direct)	100% (Direct)	100% (Direct)	100% (Direct)	100% (Direct)	100% (Direct)
	If Solvency II does not apply to investments (due to size of the pension fund) the following limits apply: Limit for quoted equity = 100%; Limit for unquoted equity = 10%			If Solvency II does not apply to investments (due to size of the pension fund) the following limit applies: Limit for unquoted bonds= 10%			If Solvency II does not apply to investments (due to size of the pension fund) the following limit applies: Limit for unquoted loans 0.1	
Armenia	For balanced 50% (Direct); For conservative 25%; For fixed 0%	0% (Direct)	80% (Direct)	100% (Direct)	50% (Direct)	10% (Direct);	Pension funds may not grant loans.	40% (Direct)

	Only securities admitted to trading on Armenian or foreign regulated markets.		Total limit for investment in this asset category is 80%. The limit for investment in securities issued or guaranteed by Armenian government, municipal bodies and the Central Bank of Armenia is 50%.	Max 5% of assets in asset-backed securities, issued by securitization entities.	The limit for investment in open-end public standard funds registered in Armenia or foreign open-end public funds, at least 90% of assets of which shall be funded			
Georgia	Up to 20% (Direct); Only shares of enterprises, which are placed through a public offer in the list of stock exchanges licensed in Georgia or other states and the continuous supervision of which is carried out by a relevant regulator; Minimum credit rating for financial investment instruments issued by the resident	0%	Up to 100% (Direct); government securities, securities issued by a self-governing unit.	Up to 100% (Direct); Only debt securities, which are registered by a relevant regulator and are placed through a public or private offer; Minimum credit rating for financial investment instruments issued by the resident entity	0%	0%	0%	Up to 75%: -Only financial resources, including bank accounts in commercial banks licensed by the regulator.

	entity and minimum rating for such an entity should not be less than sovereign credit rating of Georgia			and minimum rating for such an entity should not be less than sovereign credit rating of Georgia				
Canada	100% (Direct)	100% (Direct)	100% (Direct)	100% (Direct)	100% (Direct)	100% (Direct)	100% (Direct)	100% (Direct)
New Zealand	100% (Direct)	100% (Direct)	100% (Direct)	100% (Direct)	100% (Direct)	100% (Direct)	100% (Direct)	100% (Direct)

Poland

From January 1, 2019, the Law on Employee Capital Plans (PPK) came into force in Poland[62]. The PPK plan aims to include 75% of the country's workforce in occupational pension schemes through automatic enrolment. It is mandatory for all employers, and voluntary for employees[63]. Employees contribute at least 2% of their gross salary to the scheme (it is possible to increase the contribution up to 4% on a voluntary basis). Employers must contribute at least 1.5% (it is also possible to increase the contribution to 4% voluntarily), while the state adds a nominal annual bonus of 58 euros[64].

Each participant of the pension scheme is automatically enrolled in a sub-fund according to age. According to investment policy, investment risk decreases with participant age. For a young person, it is possible to invest more funds in stocks, and with increasing age, more and more money can be invested in debt instruments, which are characterized by low investment risk. The principles of the investment policy for each defined sub-fund are described in Table 3 according to the age of the participants.

Table 3. Distribution of fund assets[65]

Sub-funds	Stocks (Capital component)	Bonds (Debt component)
Over 20 years before retirement	60 – 80%	20 – 40%
20 years before retirement	40 – 70%	30 – 60%
10 years before retirement	25 – 50%	50 – 75%
5 years before retirement	10 – 30%	70 – 90%
Retirement age	Maximum 15%	Minimum 85%

As of July 2022, 79% of pension assets are placed in shares of companies traded on the Polish stock exchange, and a small part in bonds and foreign assets, which makes the country's pension system highly risky (see Appendix 2, Table 1).

As of December 6, 2022, securities of 416 companies are listed on the Polish stock exchange. Table 4 shows the 10 largest Polish companies by revenue, the spheres of activity of which differ.

Table 4: 10 largest Polish companies on the stock exchange (by revenue)[66]

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62 https://www.knf.gov.pl/en/

63 https://www.tgc.eu/en/publications/employee-capital-plans-from-1-january-2019/?fbclid=IwAR2F8zY_SxqNg6eJcJjI6tWY41eGwGAOI09lDSET-cB_yphyxoLLs_1D28c

64 https://www.mojeppk.pl/en.html#:~:text=Employee%20Capital%20Plans%20(PPK)%20are,they%20stop%20being%20professionally%20active.

65 Source: https://www.santander.pl/ppk/dokumenty#lang=1, Institute for Development of Freedom of Information

66 Source: Polish Stock Exchange, Institute for Development of Freedom of Information

	Name	Revenue (billions of USD)	Stock price (USD)	Amount of stocks issued	Market value (million zlotys)	Sphere of activity
1	PKN Orlen	43.09495	14.19	1,160,942,049	74,556	Oil and gas
2	PGE Polska	16.41025	1.52	2,243,712,994	15,230	Communal services
3	Powszechny Zakład Ubezpieczeń	10.40469	$7.08	863,523,000	27,546	Insurance
4	KGHM Polska Miedź	7.727243	$26.71	200,000,000	24,080	Mining industry
5	Tauron Polska	7.633126	$0.46	1,752,549,394	3,663	Communal services
6	Jastrzebska Spólka Weglowa	4.124619	$12.60	117,411,596	6,610	Mining industry
7	Dino Polska	4.061657	$78.62	98,040,000	34,451	Retail
8	Asseco	3.843371	$16.53	83,000,303	6,142	Computer technologies
9	PKO Bank Polski	3.67218	$6.43	1,250,000,000	36,063	Banking
10	Inter Cars	3.275031	$98.33	14,168,100	6,227	Automobile services

Lithuania

Lithuania's funded pension system looks as follows: the employee pays 3%, and the government adds 1.5% of the average salary. New participants can choose to save 3% of their salary, to which the government will add 1.5% of the average salary, or to save 1.8% of their salary, to which a contribution of 0.3% will be added from the state budget[67]. Employees who voluntarily contribute more than 3% enjoy tax benefits. Employees under the age of 40 are automatically enrolled in the scheme, with the right to opt out, defer, or temporarily suspend contributions. Over the age of 40, voluntary participation in the scheme is possible without the right to withdraw from the scheme before reaching retirement age.

[67] https://op.europa.eu/en/publication-detail/-/publication/4849864a-cd83-11eb-ac72-01aa75ed71a1

According to the data of September 2022, there are 6 pension companies and 48 pension funds in the country where 1.41 million citizens save funds. The amount of pension fund assets is 5.481 billion euro[68]. As per the investment strategy, the assets of scheme participants up to the age of 47 are invested in equities and other high-risk asset classes. Investments are primarily made in global and Central and Eastern European equities, real estate, and alternative assets. Above 47 years, direct investments are mainly made in bonds[69].

Compared to Polish pension funds, Lithuanian pension funds take fewer risks. According to the data of the second quarter of 2022, 81% of the assets are placed in the shares of investment funds, and 2% in the shares of other companies that are traded on the stock exchange (see Appendix 2, Table 1-2).

81% of the above-mentioned assets are placed in non-cash market funds, which are distributed as follows: 71% - shares of equity funds, 5% - shares of bond fund), 1% - shares of mixed funds, 1% - shares of real estate funds, and 3% - shares of other funds.

Estonia

Since 2002, a mandatory funded pension system has been in operation in Estonia, where 2% of the accrued income is paid by the employee, and 4% by the state from the social tax paid on the employee's salary. Participation in the scheme is mandatory for persons born since 1983[70].

After the pension reform in 2021, participation in the accumulated pension became voluntary, and as such all participants have the right to stop saving at any time and withdraw the amount accumulated in their account at will (in this case, the amount is withdrawn all at once and a 20% income tax, or 10% if the accumulator is of retirement age, is charged[71]).

Since 2021, a new formula for calculating column I has entered into force. Before this change, employees who were not involved in funded pension (column II) accumulated more funds in column I. After the change, the accrual of funds in column II will have minimal impact on the amount accumulated in column I. As such, those who want to accumulate as much money as possible for the future (getting a high pension) should continue to invest in column II[72].

Asset management companies invest in three types of funds based on risk/benefits[73]:

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[68] https://www.lb.lt/en/fs-pension-funds

[69] https://www.invl.com/en/private/pension/ii-pillar-pension/performance-of-invl-ii-pillar-pension-funds/invl-pensija-1996-2002-index-plus/

[70] https://www.seb.ee/en/private/savings-and-investments/pension/estonian-pension-system ;
https://www.seb.ee/en/private/savings-and-investments/pension/second-pension-pillar

[71] https://www.lhv.ee/en/pensionreform#:~:text=If%20you%20have%20not%20yet,33%25%20of%20your%20salary).
https://www.fin.ee/en/restructuring-second-pillar-funded-pension

[72] https://www.swedbank.ee/private/pensions/my/pensionReform?language=ENG

[73] https://www.pensionfundsonline.co.uk/content/country-profiles/estonia

- Conservative (assets are not placed in shares, 100% of the amount is allocated to bonds and cash market instruments)
- Balanced (25% is invested in shares, a minimum of 50% of the amount is allocated to bonds and cash market instruments)
- Progressive (up to 50% is invested in shares, and with no limits to bonds and cash market instruments)

There are 5 pension fund management companies in Estonia, which offer 26 pension funds to users (6 low-risk, 9 medium-risk, 11 high-risk)[74].

According to the data of the second quarter of 2022, 58% of the assets are placed in shares of investment funds, of which 7% come from Estonian, 43% from European, and 9% from investment funds from other countries. 23% of assets are in stocks and 16% in bonds.

Latvia

Since July 2001, a three-column pension system has been operating in Latvia[75]. The first column represents mandatory social insurance contributions, in which all tax-paying citizens participate. The second pillar consists of mandatory social contributions that are invested in the financial market. The profit earned in this way remains part of the accrued pension. The pension system is a defined contribution scheme[76]. Funded pension is mandatory for all citizens born after July 1, 1971. Persons born between July 2, 1951, and July 1, 1971, can voluntarily join the second column[77].

A total of 14 pension schemes operate in Latvia, of which 7 are state-funded (29 investment plans) and 7 are private pension schemes (21 investment plans)[78]. Most of the assets of state-sponsored schemes (71%) are placed in shares of investment funds, 22% in debt securities, and only 2% in stocks (see Appendix 2, Table 1-2).

Croatia

The Croatian pension system is based on the three pillars: of these, the first two pillars are mandatory for all employed citizens, and the third pillar involves voluntary pension savings with state incentives.

[74] https://www.pensionikeskus.ee/en/statistics/ii-pillar/funded-pension-daily-statistics/
[75] https://www.manapensija.lv/en/pension-system/pension-system-2/
[76] https://www.oecd.org/els/public-pensions/PAG2019-country-profile-Latvia.pdf
[77] https://www.seb.lv/en/private/savings-and-investments/pension/pension-system-latvia
[78] https://www.fktk.lv/en/statistics/pension-funds/quarterly-reports/

Since 2002, the contributions of employees in the Republic of Croatia to the mandatory funded pension scheme amount to 5% of their gross salary[79]. Assets accumulated since 2014 can be invested in three categories of assets:

- Category A – Higher-risk category with more opportunities to invest in stock markets (up to 65% in shares)
- Category B – Medium-risk category (Up to 40% in shares)
- Category C – Low-risk category (0% in shares)[80]

From January 1, 2019, all insured persons with mandatory insurance of columns I and II can choose a pension system, that is, which pension they prefer when exercising the right to old age or early retirement. Policyholders can choose from the following:

1. Receive pension only from the column I.
2. Receive a pension from both columns (in which case the pension from column I is determined according to the years worked until December 31, 2001, and with a supplement of 27%, and for the years worked since January 1, 2002, a supplement of 20.25%)[81].

The country's pension funds are managed by private pension companies, which are responsible for the growth of investments. Pension savings belong to the insured and can be inherited[82].

According to the data of the second quarter of 2022, the net assets of the Croatian pension fund amount to 17.8 billion US dollars (129 billion Croatian kuna), of which 0.2 billion USD belonged to A category, 16.3 billion USD – to category B, and 1.3 billion US dollar – to category C pension funds[83].

According to the data of the second quarter of 2022, 65% of the pension fund's assets are invested in debt securities (treasury and corporate bonds), 31% in shares and investment fund assets, and 4% - in deposits.

Canada

Persons over the age of 18 who work in Canada outside of Quebec and whose annual income exceeds $3,500 must join the Canada Pension Plan (CPP). The amount of contributions falls between the minimum and maximum amounts of the employee's annual income. A minimum amount is defined and is set at $3500.

The upper income limit in the CPP (Canada Pension Plan) is set each January based on the average wage increase in Canada. In 2022, the CPP earnings cap was $64,900 and the contribution rate was 11.4%. Half

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[79] https://hrmod.hr/en/croatian-pension-system/

[80] https://www.oecd.org/daf/fin/private-pensions/2021-Survey-Investment-Regulation-Pension-Funds-and-Other-Pension-Providers.pdf

[81] https://migracije.hr/pension-insurance-in-the-republic-of-croatia/?lang=en

[82] https://hrmod.hr/en/croatian-pension-system/#:~:text=Contributions%20of%20all%20employees%20in,the%20third%20voluntary%20pension%20pillar.

[83] CROATIAN FINANCIAL SERVICES SUPERVISORY AGENCY - C-03 Pension funds' net assets and Mirex

of the contribution is paid by the employer and half by the employee, while self-employed persons pay the entire contribution[84].

In Canada, pension funds are managed by the CPP Investment Board, which was established by law. The Board develops an investment strategy that balances risks and gains[85].

According to the data from the second quarter of 2022, the volume of total net assets of CPP decreased by 3.6% and was 509 billion Canadian dollars (373 billion US dollars). In the mentioned period, the net nominal growth of Canadian pension fund investments, according to the average of the last 5 years, was equal to 8.7%[86].

Over the past 5 years, the contribution of CPP investments to the cumulative net income of the pension fund reached 171 billion Canadian dollars (125.2 billion US dollars), and the average net nominal growth was equal to 8.7%, while in the 10-year period, the mentioned figures were 305 billion Canadian dollars (223.4 billion US dollars) and 10.3%, respectively.

As of the second quarter of 2022, 48% of Canada's pension savings are in stocks, with 26.5% in private and 21.9% in public stocks. 19% of pension savings are invested in assets of investment funds, and 23% in government bonds[87].

Sweden

The Swedish pension system is characterized by rather diverse pension savings schemes and includes all three pillars, being a combination of mandatory and voluntary components. Assets under management are worth around €700 billion and are 14 times the cost of monthly pension payments.

The defined benefit component of the country's pension system is being phased out, while the funded pension scheme covers approximately 90% of employees and accounts for 46% of all pension assets. The payment of this type of pension is organized by employees, therefore self-employed persons cannot participate in it. The funded pension system is mainly determined by collective agreements, which in turn include four types of agreements for different sectors. An employee can choose a fund manager in each of these[88].

Like in Georgia, a state pension fund operates in Sweden, presenting an alternative to private pension funds. More than 5 million Swedish citizens have their own funds placed in the fund. The advantage of

[84] https://www.canada.ca/en/services/benefits/publicpensions/cpp/contributions.html
[85] https://www.cppinvestments.com/about-us/our-mandate
[86] https://www.cppinvestments.com/public-media/headlines/2022/cpp-investments-net-assets-total-523-billion-at-first-quarter-fiscal-2023
[87] https://www.cppinvestments.com/wp-content/uploads/2022/08/CPP-Investments-Q1-F2022-Financial-Statements-Aug-11-2022-ENG.pdf
[88] https://betterfinance.eu/wp-content/uploads/Sweden-The-Real-Return-Long-Term-Pension-Savings-Report-2021-Edition.pdf

this fund compared to private funds is that it offers scheme participants higher average income and lower management fees[89].

Since 2001, investment is permitted only in quoted and highly liquid stock market instruments. Direct loans are prohibited. 44% of the country's pension savings are invested in both treasury and corporate bonds, and the percentage of shares is about 27%[90].

Netherlands

The Dutch pension system consists of three pillars: state, funded, and individual savings system pensions. Participation in the pension scheme in the country is not mandatory by law. Employers can decide for themselves whether they want to offer a pension plan to their employees, but given that about 90% of the country's employees are covered by the plan, the Dutch pension system is a good example of a quasi-mandatory system[91].

Under the funded pension system, employees and employers pay a predetermined monthly contribution to an employer-affiliated fund. This fund can work with companies representing a specific industry or serve only a specific company or representatives of one profession[92].

Most pension schemes in the Netherlands are based on the principle of defined benefit and about 89% of employees participate in this scheme.

Dutch pension funds have the second largest pool of assets in Europe and are interesting in terms of the broad asset classes of pension funds and their geographical distribution. Investing in shares is done both through direct and indirect investments[93].

31% of the country's pension savings are invested in bonds (both treasury and corporate), with a significant percentage held by shares of investment funds, which make up 42% of fund assets. In addition, the fund is actively involved in investing in real estate, which is mainly carried out through REITs[94].

Armenia

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89 https://www.ap7.se/english/

90 https://www.oecd.org/finance/private-pensions/Pension-Funds-in-Figures-2021.pdf

91 https://www.oecd.org/els/public-pensions/PAG2021-country-profile-Netherlands.pdf?fbclid=IwAR01goV5DYk4dviWlf7spuR5pW24woY1d1vgfDrxr7Ciadg9cg7MOvhPPvc

92 https://ec.europa.eu/finance/docs/policy/191216-insurers-pension-funds-investments-in-equity/pension-funds/factsheet-netherlands_en.pdf

93 https://www.pensioenfederatie.nl/website/the-dutch-pension-system-highlights-and-characteristics#:~:text=There%20is%20no%20mandatory%20membership,pension%20scheme%20through%20their%20employer.

94 Shares of real estate holding companies

Armenia's Pension Agency pursues the least risky portfolio after Georgia. The funded pension system was launched in Armenia in 2014, after which two pension asset management companies were established. Each of them offers 3 pension funds: Fixed Income (FIX), Conservative (CON), and Balanced (BAL). Participants can choose the pension fund and fund manager as they wish[95].

According to the mandatory funded pension system, 10% of the employee's salary is collected for the employee's pension account, 3.5% of which is paid by the employee, and 6.5% by the state. However, tax changes are planned from 2023, according to which the employee and the state will share the burden of the contribution equally, which means reducing the role of the state in this area[96].

According to the data of the second quarter of 2022, the value of net assets of pension funds is 1.3 billion USD (515.3 billion drams). 42% of retirement savings are invested in bonds, of which 37% comes from treasury bonds and the rest from corporate bonds. 32% of pension assets are placed in deposits, and 25% in collective investment funds (see Appendix 2, Table 1).

New Zealand

Since 2007, a defined contribution pension system has been implemented in New Zealand. Everyone who starts work is automatically included in this program, although the employee can withdraw at their discretion. The employee can choose to save 4% or 8% of his salary. For those who do not make such a choice, their contribution is automatically determined in the amount of 4% of the salary[97]. Since 2008, the employer's contribution has gradually increased from 1% to 4%. The government gives a one-time payment of 804 USD (1,000 New Zealand dollars) to a new member, and 32 USD (40 New Zealand dollars) annually to each person who has savings.

According to the data of the second quarter of 2022, 60% of the assets are placed in shares (equities and units in trusts), of which 20% are in New Zealand shares and the remaining 40% in foreign shares. 45% is invested in listen shares (10% in listed shares of local companies and 35% in listed shares of foreign companies). 29% of pension savings are invested in debt securities, of which 3% are in local short-term, 12% in local long-term, and 14% in foreign long-term debt securities. Only 8% of assets (6% in local, 2% in foreign currency) are placed on deposits[98].

As of March 31, 2022, returns from investments amounted to approx. 1.3 billion dollars. This is a sharp decrease compared to the 13.2 billion dollar increase in 2021, although it should be taken into account that the loss caused by the COVID-19 pandemic in 2020 amounted to 820 million US dollars. And if compared to the period before the pandemic, in 2019 pension savings increased by 3.8 billion dollars[99].

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[95] https://cda.am/en/37/information-centre/72/pension-system
[96]https://hetq.am/hy/article/135780
[97] https://www.ssa.gov/policy/docs/ssb/v67n4/67n4p113.html
[98] https://www.rbnz.govt.nz/statistics/series/non-banks-and-other-financial-institutions/retail-unit-trusts-assets-by-sector
[99] https://www.fma.govt.nz/assets/Reports/KiwiSaver-Annual-Report-2022.pdf