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COMPARATIVE STANDING OF KAZAKHSTAN PENSION SYSTEM PERFORMANCE: LEARNING POLICY LESSONS FROM CANADIAN EXPERIENCE

The study examines the current state of Kazakhstan public pension system in terms of its performance and asset structure as compared to that of the OECD countries as well as structural and regulatory issues confronting the national pension market as an impediment to ensuring adequate retirement savings of the population. The underlying issue to be addressed is current low real rate of return by the national pension fund, which translates into its future inability to provide for pension payouts that would meet retirement needs of the nation accounting for recent elevated inflation rates. As a likely solution, the paper investigates the Canadian pension system as a successful case of pension market ecosystem embodying a three-layer pension market structure that fuels diversified sources of pension payouts thus ensuring a sustainable flow of pension income to Canadian retirees. In particular, it advocates for introducing group (employer-based) and private (individual) registered pension programs of investments that have for long been adopted in developed countries demonstrating their effectiveness in generating substantial supplementary sources of pension income. As a prerequisite, favorable legislative and taxation frameworks should be adopted to secure motivation by both the employers and working citizens to contribute to the respective pension plans. By way of learning Canadian experience, suggestions as per prospective ways to reconfigure the Kazakhstan pension system are made that may solidify its overall performance and sustainability to ensure solid real rate of return and consequently adequate pension payouts to its future retirees.

Keywords: pension system, retirement savings, pension asset portfolio, asset structure, pension payout, pension market.

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1. Introduction

This study seeks to raise awareness of the current standing of public retirement savings system of Kazakhstan (KZ) as compared with pension asset management experiences thus far gained by many developed countries within the OECD group.

In particular, the underpinning goal is to highlight the importance of a diversified structure of retirement savings, which implies less dependence on the public pension assets through building upon additional pillars for individual pension portfolios.

It can be posited that in 15 to 20 years, Kazakhstan citizens will likely face a problem of their diminishing pension savings due to an inadequate return on the assets of the public pension system embodied by the Universal Accumulative Pension Fund (UAPF). In fact, based on official data, as of December 1, 2021, UAPF gained 10.33 % of nominal rate of return in local currency terms (KZ Tenge) accounting for the official inflation rate [1]. For the same

time frame, KZ inflation rate reached 8 % [2]. As a likely outcome, if nothing changes in terms of its further performance, the KZ public pension system may carry a huge unfunded liability (insolvency) with most future retirees facing a risk of inadequate financial support through their pension payouts at their retirement age.

Therefore, it can be argued that the KZ government should not passively expect this growing inadequacy issue to unfold in the not-too-distant future, but rather begin to act proactively through the study and further application of the relevant experiences by developed countries in managing their pension assets, diversifying overall pension portfolios while hedging investment risks, making pension markets more competitive and professional, and finally, organizing and supporting group (collective) and private (individual) pension programs to achieve an adequate level of pension income for Kazakhstan residents by the time of retirement.

Presently, there have so far been no known serious scholarly studies published with international academic journals to examine the research topic of the Kazakhstan

national pension system standing. Global Pension Statistics, the OECD-funded multi-year cross-regional research project may be cited as one of few existing longitudinal studies, which have recently started collecting Kazakhstan retirement system related data. However, it does not seek to investigate the subject in sufficient depth to arrive with meaningful country-specific and policy-relevant insights and suggestions. Thus, this paper aspires to help fill the knowledge gap regarding the status of the country's public pension system comparative performance with the respective policy-gear recommendations.

This approach also means learning lessons from those advanced countries that have succeeded in laying ground for alternative pension schemes, which endorse employer-based and individual personal investments based on the portfolio investment approach. In this regard, it offers a case study of Canadian retirement system as an example of responsible and forward-looking government-led national pension architecture that allows its every citizen to take a greater control over their personal savings with support of professional investment intermediaries and favorable taxation regulations.

Research Questions:

1. Where does Kazakhstan Public Pension System presently stand in terms of its performance as compared to that of the OECD group?
2. What relevant experience of Canada can be learned by Kazakhstan to diversify and increase the overall national pension system performance with the respective subsequent rise in pension income payouts to its citizens?

2. Materials and Methods

It can be posited that due to the lack of previous academic studies of the subject, the paper reflects an attempt to explore quite an uncharted research area of the KZ public pension standing. On the other hand, it can at least partially also be classified as an explanatory study deriving its findings and conclusions from an existing pool of secondary data, of both quantitative and qualitative nature reflecting comparative pension statistics for the OECD countries and with more in-depth qualitative look into the case study of Canadian national pension system.

By way of employed research strategy, the study relies on archival research that embarks on examining secondary data previously collected within the framework of Global Pension Statistics as well as from reports by KZ Unified Accumulative Pension Fund, World Bank Global Economic Monitor, Preqin Special Report, and the Actuarial Report by the Canada Pension Plan.

Thus, the study features an attempt to undertake a comparative analysis of existing sets of both quantitative and qualitative data encompassing the latest performance and structure of national pension assets of OECD countries with more detailed examination of sources reflecting the workings of the Canadian pension system.

3. Results and Discussion

3.1. Comparative analysis of KZ pension asset structure and performance v. those of OECD countries. It can be posited that overall personal savings constitute a prerequisite for a decent standard of living for every individual upon retirement by way of contributing to an adequate family savings portfolio to serve as a solid basis for a decent retire-

ment age. Savings are the accumulated portion of a person's income that is intended to be held intact to be used later to meet future retirement age needs. Forced (mandatory) savings are a part of individual incomes restrained for use until retirement age by the government, which are held by the respective public pension or social programs.

It is worth mentioning previous efforts by the KZ government to reform its national pension system that evolved on the aftermath of the country's independence gained in 1991, with the subsequent economic reforms that also encompassed reconfiguring the public pension system. In this regard, in 1998, the country embarked on adopting the then successful Chilean pension system model based on a more competitive and decentralized pension market structure, with heavier accent on the role to be played by private asset management players. In fact, with the Asian Development Bank (ADB) parallel assistance in carrying out the KZ Pension Reform Program, «sixteen pension funds, including the State Accumulative Fund and 15 privately owned and operated funds, have been set up» as well as «seven new asset management companies... established; and six commercial banks... operating as custodians of the assets» [3].

However, this experiment with the financial market-driven public pension asset management by private operators has not been long-lived and was terminated in 2014 for a few reasons, with all private funds disbanded and their public pension assets reaccumulated within the national Unified Accumulative Pension Fund. As noted at an interview with a local expert, one of the main reasons for its failure was «wrong objectives and benchmarks set up by the national regulator, i. e. KZ National Bank whose major policy criteria set for private pension funds was merely outpacing national inflation rates, with very inflexible and rigid asset allocation rules and requirements» [4].

In this regard, it is worth examining the recent total pension assets growth (as a percentage of GDP) and the respective UAPF yield. Based on the UAPF official data released for December 1, 2021, the total of pension assets of the UAPF amounted to 13.369 trillion KZT (Kazakh tenge) that was approximate of 30.665 USD billion (at the then exchange rate of 1 USD=436 tenge), which constituted about 16.6 % of GDP of Kazakhstan (188.5 billion USD) in 2021. Since the beginning of December 2020, the fund's assets have increased by 4.6 % (in KZT) [5].

By way of cross-checking the above data, the preliminary data by the Global Pension Statistics display a similar magnitude of total UAPF assets in the amount of 31.291 USD billion, which constituted 16.6 % of the national GDP by December 2021, with the UAPF assets' annual nominal and real rates of return under management being 10.3 % and 1.7 % respectively [6].

Table 1 illustrates the total pension assets under management in absolute (in USD) and percentage terms (as % of the national GDP) as well as the respective annual changes by the end of 2021 for OECD member countries, with the respective figures for Kazakhstan provided at the bottom for the sake of comparing its standing against largely more advanced nations.

Fig. 1 captures the evolution of Kazakhstan pension system from 1998 to 2019 by featuring the dynamic of the accumulated and investment-grown amounts of its pension assets; total amounts of pension contributions vs. payouts; and how pension funds' rate of return fared against inflation rate over time.

Assets in pension funds and all retirement savings vehicles at end-2021

Table 1

OECD countries	Pension funds			All vehicles % of GDP
	% change	in USD million	% of GDP	
Australia	18.0	2,272,767	146.2	148.8
Austria	8.0	30,553	6.7	-
Belgium	8.0	52,644	9.2	36.6
Canada	-	1,712,806	90.1	167.2
Chile	-4.5	167,556	60.3	-
Colombia	8.3	86,828	29.5	29.5
Costa Rica	20.1	24,874	40.0	40.0
Czech Republic	6.0	26,173	9.4	9.4
Denmark	-8.0	190,403	50.0	210.8
Estonia	-15.5	5,076	14.6	16.8
Finland	15.3	173,962	60.7	-
France	16.6	77,247	2.7	11.1
Germany	0.4	313,807	7.8	-
Greece	11.9	2,083	1.0	-
Hungary	5.6	6,166	3.6	5.2
Iceland	17.9	51,683	208.4	219.1
Ireland	15.1	164,227	34.4	-
Israel	16.1	360,569	72.1	-
Italy	6.4	194,592	9.7	12.6
Japan	2.3	1,483,416	31.3	-
Korea	15.3	249,115	14.4	32.3
Latvia	19.7	827	2.2	20.5
Lithuania	31.5	6,944	11.1	11.1
Luxembourg	5.0	2,193	2.6	-
Mexico	11.2	254,373	20.0	-
Netherlands	7.4	2,042,637	209.5	-
New Zealand	19.0	90,144	37.3	37.3
Norway	7.0	51,109	10.9	-
Poland	26.2	46,485	7.2	-
Portugal	4.7	27,324	11.4	-
Slovak Republic	16.9	17,469	15.9	15.9
Slovenia	20.6	4,211	7.1	7.8
Spain	7.5	142,940	10.5	14.2
Sweden	-	23,777	4.0	101.8
Switzerland	-	1,164,503	143.1	-
Turkey	41.2	18,430	3.3	-
United Kingdom	4.3	3,572,623	117.0	-
United States	11.6	22,599,191	98.3	170.0
OECD Total (2)	8.2	37,711,728	66.9	-
Kazakhstan	4.6	31,291	16.6	16.6

Note: the table is based on data from the sources [5, 7, 8]

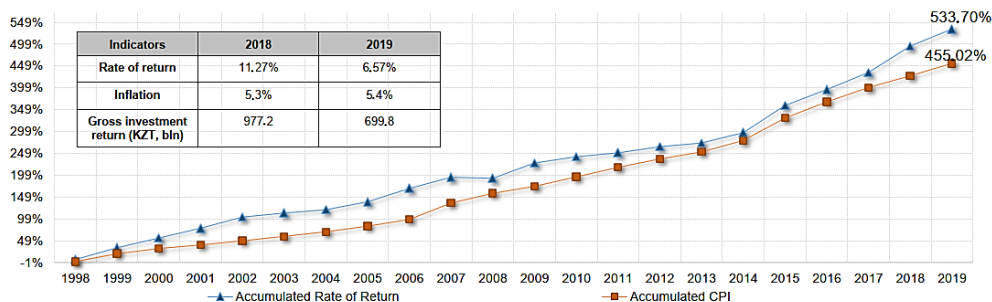
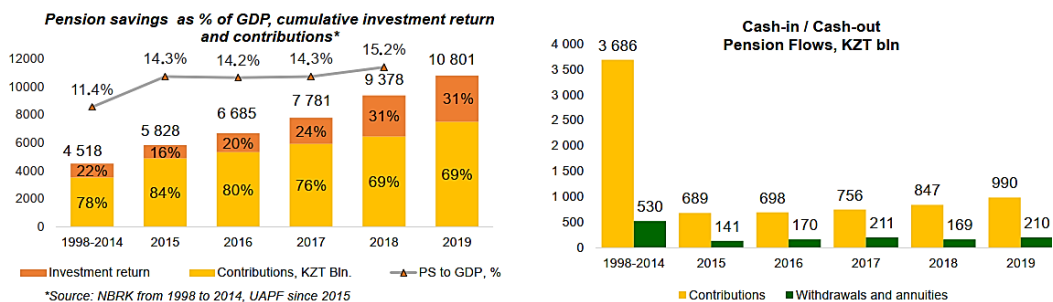


Fig. 1. Fully funded Pension system: Key Indicators [9]

It should be noted that since the country gaining independence in 1991, KZ national pension system has undergone through a few important milestones including experimenting in the years 1999 to 2015 with a more liberal approach to managing public pension funds that sought to copy the then successful Chilean pension model based on private asset management operators who were allowed to manage a major share of national pension assets and compete between themselves and with the Public Pension Fund. This policy however has not brought desirable outcomes, resulting in all private pension operators disbanded and their funds merged back into a single portfolio to be managed by the national pension fund (UAPF).

The current state of Kazakhstan national pension market can since be outlined by a dominant place and role of the national government embodied primarily by its National Bank who sets the overall legislative and regulatory framework that both UAPF and five newly created and licensed Pension Asset Management Companies, or PMCA (with the respective Russian term, KUPA) to comply with. However, now their total share of entrusted pension assets is minimal, with UAPF having again assumed a main role in collecting, administering, and managing a lion's share of accumulated public pension funds.

As envisaged in this newly revived public-private scheme of the KZ pension system, «a pension account holder will have the right to choose the investment strategy and a private management company (KUPA). KUPAs will compete ... based on the three criteria such as their profitability, quality of financial instruments, and the service fees charged ... The National Bank ... remains a manager of pension funds, by default. Those pension account holders who do not select any KUPA will remain with the National Bank to manage their savings» [10].

It remains to be seen whether those changes in the pension market configuration would bring about substantial rise in the future rates of return for both public and private assets-under-management (AUM) options.

In the meantime, it would also be worth studying the existing and successful pension systems that have long been in place in developed countries.

In fact, many OECD member countries have demonstrated an impressive long-term track record of managing overall pension assets for their citizens. Table 1 above features the enviable total amounts and as-GDP-percentages of pension assets accumulated by such frontrunners within the selected group of OECD states as Canada, Australia, US, UK, Netherlands, and Switzerland.

It can be argued that the solid performance demonstrated by those OECD countries in terms of their pension fund rates of return, stem from their overall well-balanced and managed portfolios of national pension funds as reflected through effective asset allocations, which are presented in Table 2.

Finally, it would be worth reviewing both the nominal and real investment annual rates of return of pension funds for a selected group of OECD countries as of December 2021, with the respective Kazakhstan figures provided in Table 3 for the sake of comparison.

Thus, it would be worth examining the major reasons for a solid track record of many OECD national pension systems. One way to seek for an answer would be to learn more about their overall structures, pension system players, and regulatory frameworks governing their pension markets. In this regard, it should be noted that a practice of group (employer-based) and private (individual) registered pension programs (investments) has long been adopted in developed countries, including the United States, Canada, the United Kingdom, and Ireland.

Table 2

Asset allocation of pension funds in selected investment categories at end-2021 (preliminary)

Country	Equity	Bills and bonds	Cash and deposits	CIS (when look-through unavailable)	Other
Poland	82.1	6.2	1.6	0.0	10.1
Lithuania	74.6	18.9	3.4	–	3.1
Estonia	59.7	34.4	4.8	–	1.1
Iceland	51.7	43.9	3.9	–	0.4
Finland	49.6	23.6	5.0	–	21.8
Netherlands	48.3	48.3	2.0	–	1.4
Australia	47.2	13.7	12.7	–	26.4
New Zealand	45.7	28.6	4.8	20.5	0.5
Belgium	44.8	47.6	2.3	–	5.3
Colombia	43.4	41.6	1.9	–	13.0
Chile	43.2	54.3	1.7	–	0.8
Canada	40.9	27.2	4.2	–	27.7
Norway	40.5	51.5	–	–	8.0
Latvia	36.2	56.2	5.2	–	2.4
United States	34.7	23.6	0.4	26.6	14.7
Austria	33.0	27.2	2.0	–	37.8
Hungary	31.2	55.6	6.0	–	7.3
Switzerland	30.9	29.4	4.5	–	35.2
United Kingdom	27.1	42.3	2.0	–	28.7
Sweden	27.0	44.0	2.0	19.0	8.0
Luxembourg	25.7	51.4	7.0	–	15.9
Italy	25.1	42.5	5.9	–	26.4
Ireland	24.5	45.1	2.8	–	27.6
Israel	24.1	56.7	7.0	–	12.1
Denmark	23.6	55.7	0.7	1.9	18.1
Mexico	20.9	74.9	1.2	–	3.1
Portugal	20.7	62.3	4.0	–	13.0
Greece	19.3	39.3	17.7	23.7	0.1
Turkey	17.9	62.1	8.6	–	11.4
Costa Rica	15.2	72.7	6.0	–	6.2
Spain	14.6	39.1	9.0	31.7	5.6
Japan	10.1	26.1	7.6	–	56.2
Germany	7.7	42.3	2.7	–	47.2
Slovenia	4.8	48.4	8.2	36.9	1.6
Slovak Republic	4.0	51.8	2.7	39.1	2.4
Czech Republic	2.4	81.8	12.0	2.5	1.3
Korea	0.0	11.0	41.7	9.5	37.8
Kazakhstan	6.5	85.4	4.8	–	3.4

Notes: the table is based on data from the sources [5, 7]. The GPS database gathers information on investments in Collective Investment Schemes (CIS) and the look-through of these investments in equities, bills and bonds, cash and deposits and other. Data on asset allocation in these figures include both direct investment in equities, bills and bonds, cash and deposits and indirect investment through CIS when the look-through of CIS investments is available. Otherwise, investments by pension funds in CIS are shown in a separate category. Negative values have been excluded from the calculations of the asset allocation of pension funds

Table 3

Nominal and real investment rates of return of pension funds,
 December 2020–December 2021 (preliminary)

Country	Real IRRs	Nominal IRRs
Poland	15.2	25.2
Finland	12.3	16.2
Australia	11.1	15.3
Costa Rica	10.0	13.6
Lithuania	9.2	20.7
Israel	8.4	11.5
Iceland	6.3	11.7
Colombia	3.7	9.6
Austria	3.3	7.6
United States	2.9	10.1
Norway	2.6	8.1
Canada	2.1	6.2
Netherlands	2.1	7.9
Spain	1.9	8.6
Belgium	1.9	7.7
Portugal	1.5	4.3
Italy	1.0	4.9
Greece	0.7	5.8
Estonia	-0.2	11.9
Mexico	-0.3	7.1
Latvia	-1.0	6.8
Denmark	-2.9	0.1
Slovenia	-3.0	1.7
Chile	-3.2	3.7
Hungary	-4.7	2.4
Czech Republic	-5.5	0.8
Turkey	-9.7	22.9
Kazakhstan	1.7	10.3

Note: the table is based on data from the source [5]

As an outcome, statistics provided by Global Pension Studies demonstrate that, for instance, Canadian retirees earn, on average, 75 % of their former salary, of which 34.2 % (also from their former salary) comes from non-public pension funds. And in Ireland, the pension income of 72 % (from the former salary) is comprised of even 38 % by private pension payments, which is more than a half of total payouts.

It can be argued that nowadays this format of diversified and well-managed national pension system, comprised of public, collective, and private players (components for pension income), is adoptable in Kazakhstan as well. In other words, in addition to the UAPF, it is conceivable to build high-yield employer-based (collective) and private (individual) pension programs to further invest a part of earned incomes of working citizens based on their employers' and private professional investment funds with the respective tax support by the government.

In this regard, the next section seeks to examine the overall architecture, components, and regulatory regime including taxation laws governing the pension system of Canada.

3.2. Canadian Pension System: Comparative Standing of Its Pension Asset Structure and Performance.

This subsection seeks to extract some valuable policy lessons from Canada as a country that has managed to attain quite high total pension payout rates. It can be argued that its respective pension assets performance was achieved, based on the Canadian pension market environment providing for a greater structure of opportunity for personal investing through both Government-endorsed and Employer-sponsored Tax-deferred Programs.

By way of demonstrating Canadian pension system size and performance, it is worth indicating selected pension asset benchmarks attained by the leading Canadian pension market players. By Boston Consulting Group report, the 10 largest Canadian public pension funds' current combined assets exceeded 1.1 CAD trillion (822 USD billion), the equivalent of 45 percent of Canada's gross domestic product in 2015.

The following figures illustrate an overall picture of the AUM size, of breakdown for different asset classes, and investment returns for the entire Canadian pension system in 2014. As of 2014, Canada pension plans held over 1 USD trillion of funds collectively managed in assets, of those 600 USD billion invested across various asset classes, with 149 USD billion invested in real estate, infrastructure and private equity in Canada. By way of noting their overall 10-year performance, Canada pension system produced 600 USD billion in net returns from 2003 to 2014 [11].

Among Canada pension system players, the top three plans – the 272.9 CAD billion Canada Pension Plan Investment Board (CPPIB), Toronto; 240.8 CAD billion Caisse de Depot et Placement du Quebec (CDPQ), Montreal; and the 154.4 CAD billion Ontario Teachers' Pension Plan (OTPP), Toronto were among the top 20 plans worldwide in terms of assets. In fact, CPPIB managing assets of the Canada Pension Plan, Ottawa, ranked eighth while the CDPQ overseeing Quebec pension and other assets, was 14th; and OTPP was 20th.

The remaining plans in the top 10 are the 123.6 CAD billion British Columbia Investment Management Corp. (BCIMC), Victoria; 112 CAD billion PSP Investments, Montreal; 75 CAD billion Alberta Investment Management Corp. (AIMC), Edmonton; 69.8 CAD billion Ontario Municipal Employees' Retirement System, Toronto; 60.8 CAD billion Healthcare of Ontario Pension Plan, Toronto; 22 CAD billion Ontario Pension Board, Toronto; and 17.5 CAD billion OPT rust, Toronto.

In terms of asset classes held, seven of the plans – CPPIB, Ontario Teachers, Ontario Municipal, CDPQ, PSP, BCIMC and AIMC – ranked among the top 30 global infrastructure investors, while CDPQ, CPPIB, Ontario Municipal, Ontario Teachers and BCIMC were among the top 30 global real estate investors. Overall, about 32 percent of the top 10's total assets were comprised of alternative asset classes such as infrastructure, private equity, and real estate. In 2015, the above top 10 pension players invested a total of 600 CAD billion across various asset classes and directly employed almost 11,000 people.

In 2017, based on a report by data and intelligence company Preqin, ten Canadian pension funds were among the top 100 global private equity investors [12].

The Canada Pension Plan Investment Board was ranked No. 1 while the Ontario Teachers' Pension Plan, at No. 6 and the Caisse de dépôt et placement du Québec, at No. 7,

also made the top 10. As the report highlighted, in 2017, these three pension funds' current allocation to private equity was 44.4 USD billion, 21 USD billion and 20 USD billion, respectively.

Table 4 displays the respective numbers for total assets under management (AUM) and private equity class for these Canada top ten pension players in 2017.

Table 4

Total assets under management (AUM) and private equity class for Canada top ten pension players in 2017

No.	Pension Fund	AUM (in CAD billion)	Private Equity (in CAD billion)
1	Canada Pension Plan Investment Board	281	44.4
2	Ontario Teachers' Pension Plan	124	21
3	Caisse de dépôt et placement du Québec	188	20
4	Public Sector Pension Investment Board	86	9.2
5	Ontario Municipal Employees Retirement System	73	8.5
6	Retirement Plans Sinking Fund	44	5.5
7	Alberta Investment Management Corp.	47	5.3
8	British Columbia Investment Management Corp.	96	5.3
9	Government and Public Employees Retirement Plan	44	4.4
10	Fonds de Solidarité des Travailleurs du Québec	9	3.9

Note: the table is based on data from the source [12]

Thus, it can be argued that it is this diverse market of different pension players that has provided for the enviable size and spectacular overall performance of Canada pension system in the long run.

3.3. Canadian experience in organizing its overall pension system. The following examines three main components of the pension programmatic framework of Canada comprised of both public, employer-based group, and individual registered retirement programs that feature quite a diversified structure for channeling and investing a pensionable part of income of working Canadians. It can thus be posited that this resultant portfolio of different personal pension assets is conducive to producing their solid and stable overall performance over the long-term horizon.

3.3.1. Public Canada Pension Plan (CPP). The Canada Pension Plan (CPP) is a federal public pension program that provides for monthly, taxable pension incomes when working Canadians retire. If a retiree qualifies, he/she will receive a CPP retirement pension for the rest of the life. To qualify they must be at least 60 years old and have made at least one valid contribution to the CPP. Valid contributions can be either from work that they have performed in Canada, or as a result of receiving credits from a former spouse/former common-law partner at the end of the relationship.

CPP constitutes one of the two major components of Canada's public retirement income system, the other component being Old Age Security (OAS). The amount that retirees receive each month is based on their average earnings throughout working life, their contributions to the CPP, and the age when they decide to start receiving CPP retirement pension. The standard age to start the pension is 65; however, a worker can start receiving it as early as age of 60 or as late as age of 70. If he/she starts receiving pension earlier, the monthly payout amount will be smaller. If they decide to start later, they will receive a larger monthly amount. There's no benefit to wait after age of 70 to start receiving the pension. The maximum monthly amount they can receive is reached at 70.

As of 2017, the CPP Investment Board (CPIB) held over 328 CAD billion in investment assets for the Canada Pension Plan on behalf of 20 million Canadians. As of 2019, the prescribed employee contribution rate was 4.95 % of a salaried worker's gross employment income between 3,500 CAD and 57,400 CAD, up to a maximum contribution of 2,668 USD. The employer matches the employee contribution, effectively doubling the contributions of the employee. Self-employed workers must pay both halves of the contribution, or 9.9 % of pensionable income, when filing their income tax return. These rates have been in effect since 2003.

CPP payment rates vary person to person, based on their work history and when they decide to start taking pension benefit. For 2016, the maximum monthly payout benefit was 1,092 USD, with the average monthly amount of 629 USD.

As the 27th Actuarial Report on the Canada Pension Plan states, the CPP has an enormous unfunded liability. In fact, as of December 31, 2015, the unfunded liability was 884 CAD billion, which is the difference between CPP's liabilities of 1.169 USD trillion and the CPP's assets of 285 billion USD [13].

Public Canada Pension Plan: Old Age Security (OAS).

The OAS pension is a monthly payment available to seniors aged 65 and older who meet the Canadian legal status and residence requirements. As a result of quarterly indexation, on July 1, 2019, the maximum OAS pension amount increased to 607 USD.

In addition to the OAS pension, there are three types of OAS benefits:

– *Guaranteed Income Supplement.*

If a person lives in Canada and has a low income, this monthly non-taxable benefit can be added to his/her OAS pension. The maximum Guaranteed Income Supplement (GIS) amount is augmented to 907 USD for single seniors and to 546 USD for each member of a couple.

– *Allowance.*

If a person is 60 to 64 years of age and his/her spouse or common-law partner is receiving the OAS pension and is eligible for the Guaranteed Income Supplement (GIS), this person might be eligible to receive this benefit.

– *Allowance for the Survivor.*

If a senior is 60 to 64 years of age and is widowed, he/she might be eligible to receive this benefit.

3.3.2. Employer-sponsored pension plans. An employer pension plan is a registered plan that provides a worker with a source of income during his/her retirement. Under

these plans, they and their employer (or just an employer) regularly contribute money to the plan. When workers retire, they will receive an income from the plan. There are two main types of employer pension plans:

- defined contribution plans;
- defined benefit plans.

If a worker switches jobs during his/her career, they may have two or more pensions from different employers. They may also be able to transfer their old pension plan to a new plan.

3.3.2.1. Defined contribution pension plans. In a defined contribution pension plan, an employee knows how much he/she will pay into the plan but not how much they will receive when they retire. Usually employees and their employers pay a defined amount into employee's pension plan each year. The money in their defined contribution pension is invested in one or more products on a worker's behalf. He/she may be able to choose how their money is invested. The amount they receive when they retire will depend on how their plan is managed and how these investments perform.

3.3.2.2. Defined benefit pension plans. In a defined benefit pension plan, an employer promises to pay a worker a regular income upon retirement. Usually both a worker and an employer contribute to the plan. Their contributions are pooled into a fund. An employer or a pension plan administrator invests and manages the fund. Workers don't have an option of making any investment choices.

The income employees receive when they retire is usually calculated based on their salary and the number of years they contributed to the plan. It's a set amount that does not depend on how well the investments perform.

The amount that retirees receive may be increased on a regular basis to help them cover their living expenses while the overall cost of living increases, the notion called an indexed pension.

3.3.2.3. Locked-In Retirement Account (LIRA). In Canada, a locked-in retirement account (LIRA) is registered retirement savings account. A worker may elect to open a LIRA at any age to hold funds transferred from a pension plan when he/she terminate their membership in a pension plan by leaving the employer that initiated that plan. LIRA account is designed expressly to hold pension funds for a former pension plan member or their beneficiaries. Death benefits are not locked-in and can be paid out as cash, or the balance may be transferred to another of the owner's retirement funds.

Pension funds that are transferred to a LIRA are used to purchase a life annuity, transferred to a life income fund (LIF) or to a locked-in retirement income fund (LRIF). Upon reaching the retirement age, the life annuity, LIF and/or LRIF provide a pension for life.

The locked-in retirement account is designed to hold pension funds for a former plan member, former spouse or common-law partner or a surviving spouse or partner. The LIRA may be elected at any age to hold funds transferred from a pension plan upon the termination of membership in a pension plan; the disintegration of a marriage or common-law partnership; or death before retirement.

3.3.3. Private Tax-Sheltered Pension Programs

3.3.3.1. Registered Retirement Savings Plan (RRSP).

An RRSP is a retirement savings plan that a working person can establish and to which he/she or their spouse or common-law partner contribute. Deductible RRSP contributions can be used to reduce his/her tax. Any income they earn in the RRSP is usually exempt from tax as long as the funds remain in the plan; beneficiaries usually have to pay tax when they receive payments from the plan. RRSP is a type of Canadian account for holding savings and investment assets. RRSPs have various tax advantages compared to investing outside of tax-preferred accounts. They were introduced in 1957 to promote savings for retirement by employees and self-employed people.

3.3.3.2. Registered Retirement Income Fund (RRIF).

A retirement fund similar to an annuity contract that pays out income to a beneficiary or a number of beneficiaries. To fund their retirement, RRSP holders often roll over their RRSPs into an RRIF. RRIF payouts are considered a part of the beneficiary's normal income and are taxed as such by the Canadian Revenue Agency in the year that the beneficiary receives payouts. The organization or company that holds the RRIF is known as the carrier of the plan. Carriers can be insurance companies, banks or any kind of licensed financial intermediary. The Government of Canada is not the carrier for RRIFs; it merely registers them for tax purposes.

The RRIF plan is designed to provide people with a constant income flow through retirement from the savings in their RRSPs. RRSPs must be rolled over by the time the contributor reaches age 71, but by converting an RRSP into an RRIF, people can keep their investments under a form of tax shelter, while still having the chance to allocate assets according to contributor specifications.

3.3.3.3. Tax-Free Savings Account (TFSA). The Tax-Free Savings Account (TFSA) is an account that does not apply taxes on any contributions, interest earned, dividends, or capital gains, and can be withdrawn tax free. This savings account is available to individuals aged 18 and older in Canada and can be used for any purpose.

As of January 1, 2020, the total cumulative contribution room for a TFSA is 69,500 USD for those who have been 18 years or older and residents of Canada for all eligible years.

Investment income, including capital gains and dividends, earned in a TFSA is not taxed in most cases, even when withdrawn. Contributions to a TFSA are not deductible for income tax purposes, unlike contributions to a registered retirement savings plan (RRSP).

Despite the name, a TFSA does not have to be a cash savings account. Like an RRSP, a TFSA may contain cash and/or other investments such as mutual funds, segregated funds, certain stocks, bonds, or guaranteed investment certificates (GICs).

3.4. Limitations and directions for research developments. By way of noting initial inherent impediments to following the experience of the Canadian pension system, first, the Kazakh government would be advised to reflect upon their own prior policy lessons that stem from the earlier nation-wide initiative of the years 1998 to 2015 when an attempt was made to simply copy the Chilean

model of the pension market architecture. As indicated previously, their apparent lack of success in reinventing the national pension system that has been quietly reverted to the old and almost monopolistic pension market structure may serve as a warning to Kazakh policymakers who have to draw meaningful policy lessons from their earlier bold and drastic yet arguably not adequately managed experiment.

Second, again with the earlier less than perfect policy-transfer experience in mind, it would probably be naive to expect the Canadian soil-grown pension system architecture to start bringing its fruits unless it is critically examined from regulatory, fiscal, economic, legal compliance, average income level, and financial literacy perspectives to assess its suitability to the present economic, social, technological, mental, and educational fabric of Kazakhstan. In fact, for instance, as reflected in view by a former pension market practitioner, employer-sponsored pension funds may just not obtain funding congruent with the employees' real incomes if businesses don't comply with the respective formula and prefer to minimize employer's contributions by paying their workers largely in «black cash» [4].

Next, it can be posited that in order to warrant an anticipated outcome as per higher long-term performance of the to-be-reconfigured Kazakhstan public pension market by following the Canadian model, the policy-makers need to undertake a «feasibility study» to examine, based on the project-management approach, what financial, technical and competence-specific human resources would be required within a projected timeframe bound to the project scope, to put consequentially into effect an envisioned reengineering of the national pension ecosystem. In this regard, it might also be prudent to run a preliminary «pilot test» to be limited to a particular city or a region to test-drive the respective policy initiative thus hedging risks and costly mistakes.

Finally, it would certainly be worth organizing joint expert and research teams of Kazakh, Canadian, and possibly other OECD pension system scholars and professionals prior to devising any new major pension policy initiatives in Kazakhstan. Indeed, as the above-mentioned expert argues and the paper reveals, no in-depth academic or professional disseminated policy studies have been thus far undertaken and published, which would lay solid ground for the national policy discourse on the matter in question [4]. In this regard, launching a policy research project on the evolution and current standing of as well as issues confronting Kazakhstan public pension system, might serve as a prerequisite for a well-grounded approach to deliberating, developing, and executing serious policy innovations with desirable long-term national pension system performance outcomes.

4. Conclusions

Based on the undertaken analysis of the current situation within the public pension system of Kazakhstan as compared to the OECD group of countries and the subsequent overview of the structure and performance by the pension system of one of its members, namely Canada, the following policy steps can be considered as a way of learning the respective lesson from it.

1. The national pension system should be viewed as a part of financial markets of Kazakhstan to be based

on rules of freedom of choice for citizens as customers as well as a fair and transparent competition between pension market players.

2. The role of the government would be devising and sustaining supportive legislative and regulatory frameworks governing the whole pension ecosystem, i. e. different types of pension market players and requirements regarding their capital, licensing, professional certification, taxation, reporting, and disclosure.

3. In view of the above experience of Canada pension system, it would be worth perfecting further a three-layer pension system structure comprised of the public, employer-based (collective), and individual registered retirement plans that would be supported by the respective taxation rules.

4. This programmatic approach should be developed in parallel with policies that would target most employers, both public and private, in Kazakhstan to motivate and fiscally endorse their efforts in building collective (employer-based) pension plans.

5. It seems to be worth adopting the Canadian blueprint in developing employer-based and individual retirement plans that would account for such products (accounts) as LIRA, LIF, LRIF, RRSP, RRIF, and TFSA.

6. It would be critical to organize and launch a long-term investment literacy campaign to be undertaken by pension market players for all groups of employees and endorsed by the respective government agencies.

7. By way of trial, the government can deploy a few employer-based and individual retirement plans on a pilot-project basis to evaluate their effectiveness so then the appropriate corrections could be made for further expansion on the national scale.

8. Last, but not the least, continuous learning from professionals and the respective institutions of OECD countries as well as inviting their policy experts and pension market practitioners would be a safer way to complete the learning curve with fewer costly mistakes in reforming the Kazakhstan pension system.

Conflict of interest

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