CHAPTER XVIII

IMPLICATIONS OF COVID-19 CRISIS ON PUBLIC AND PRIVATE PENSION SECTORS

Stevan LUKOVIĆ[1]
Darko MARJANOVIĆ[2]
Miloš PJANIĆ[3]

ABSTRACT
After almost two years of coping with the Covid-19 pandemic, the global economy is still unable to regain pre-Covid growth rates. Governments worldwide have implemented various policy measures to counter the Covid-19 economic crisis, which triggered the public finance deterioration. Since public pension systems of many countries are financed partially through tax revenues, the rise of public expenditures could pose a danger to the safety of old-age pensions in the future. As for private pension plans and funds, the prolonged period of low investment return rates prior to the Covid-19 outbreak followed by amplification in the Covid-19 era has affected their financial position. However, global investment returns are recovering from the Covid-19 adverse impact, which benefits the private pension sector in maintaining the pre-Covid funded status. Also, the economic growth rate prospects are promising, combined with the unemployment rate decrease. These trends should mitigate the negative effects of exemptions from contribution obligations, deferrals in the payment of contributions, and reduction of contributions. In this way, current and future retirees would not experience significant drops in retirement benefits.

Keywords: *Public pension system, Private pension sector, Covid-19 pandemic, Economic crisis.*

JEL Classification: *H75, H55, G01.*

[1] Stevan Lukovic, Assistant Professor, Faculty of Economics, University of Kragujevac, slukovic@kg.ac.rs
[2] Darko Marijanovic, Senior Research Associate, Institute of Economic Sciences, Belgrade, darko.marjanovic@ien.bg.ac.rs
[3] Miloš Pjanć, Associate Professor, Faculty of Economics in Subotica, University of Novi Sad, milospjanic@ef.uns.ac.rs

1. INTRODUCTION

The Covid-19 pandemic proved lengthier than initially expected with serious health consequences. To illustrate, on September 20, 2021, the number of Covid-19 related deaths in the United States surpassed the 675 thousand lethal cases related to the 1918 influenza pandemic as the previous worst US pandemic recorded. The pandemic has disrupted societies globally and negatively affected global economic growth in 2020. Data suggest that due to Covid-19, the reported annualized rate of global economic growth in 2020 was -3.2%, but with a significant projected rise of 5.9% in 2021. The fall of international trade activity in 2020 stood at around 5.3% but is projected to increase by 8.0% in 2021 (Congressional Research Service, 2021).

Consequently, public finances across countries have significantly deteriorated, but this burden has hampered global economic progress for almost a decade (Marjanović & Zubović, 2020). Amid the aftermath of the 2008 economic crisis, the ratio of public debt and GDP stood at around 73% in the euro area, 71% in the United States, and the most alarming situation occurred in Japan, where public debt accounted for more than 170% of GDP (Pjanić et al., 2020). A short time after, in 2010, a sovereign debt crisis emerged in Europe that adversely affected many euro area countries and spread to the rest of the world. At the present time, following the outbreak of the Covid-19 pandemic, there is a high probability that the euro area is headed towards another sovereign debt crisis. To illustrate, Italy, the third-largest economy in the euro area, serves as an example of the magnitude of the deterioration of public finance in the euro area. In 2010, Italy's public debt amounted to 120% of GDP, while today, it stands at around 150%, at its highest level ever recorded. Similarly, in 2010, Italy recorded a budget deficit that stood at around 5% of GDP, but currently, it amounts to 10% of GDP (European Commission, 2021a).

The tax systems of European countries evolved in the past decades as each country developed its own tax policy, focusing on the requirements of domestic economies (Marjanović et al., 2020). Multilateral tax treaties and agreements were negotiated within the framework of national sovereignty in tax policy. However, globalization changed this, particularly concerning the tax levels, taxation mix, design of particular taxes, tax administration, and compliance (Luković, 2015). Amid the Covid-19 pandemic, the taxation again proves to be strictly a national issue, with little emphasis placed on the coordination of national tax policies. Nevertheless, public revenues and especially public expenditures policy should remain flexible, and an abrupt withdrawal of policy support should be avoided as long as the near-term prospect is uncertain. In this sense, the public spending reduction in 2022 will most certainly come mainly from automatic reductions in crisis-related spending as the economy strengthens rather than discretionary fiscal policy measures.

The Covid-19 pandemic caused a significant initial shock in retirement systems across the world. After the onset of disease, business turmoils, economic slowdowns, and rising unemployment occurred, which triggered declining investment returns (Marjanović & Domazet, 2021). The relaxation of monetary and fiscal policies has induced the latest fall of interest rates and a rise of public debt in most countries. These circumstances have worsened the financial sustainability of both Pay-As-You-Go public pensions and private retirement schemes. Governments have reacted promptly to counter the Covid-19 impact on all parties that have an interest in public and private pension systems (OECD, 2020a). Public policies have to provide short/term assistance without generating detrimental long-term repercussions. In that way, the sustainability of retirement saving schemes is secured. Although the Covid-19 crisis significantly impacts labor markets, safety nets, such as job retention schemes and unemployment insurance, have reduced the impact of the labor market plunge on retirement entitlements. It is to be expected that these measures would offset adverse repercussions on future retirement benefits. However, if unemployment remains high in the forthcoming years, the population of long-term unemployed will continue to rise. This poses a serious issue since long-term unemployed persons are rarely capable of building up pension benefits.

2. BACKGROUND

The impact of the Covid-19 pandemic on pension schemes, sponsors, members, and providers has been extensively researched. This section provides some insight into the existing literature.

Feher and de Bidegain (2020) examined how the Covid-19 crisis-affected pension systems and the corresponding policy design repercussions. Their analysis is mainly focused on PAYG public pension systems. The authors concluded that the governments need to refrain from using the pension system to confront the Covid-19 crisis. The temporary policy measures should be taken without creating significant distortions. If governments opt to allow early withdrawals, this could diminish retirement benefits in the future. Also, if assets are sold at low prices as a response to Covid-19 shock, individual account balance losses are possible. Hence, the decision to allow early withdrawals must recognize the impact of these actions on future retirement benefits in a manner that assures that enough assets remain to fulfill public pension objectives.

Bosch et al. (2021) discussed the international experience with early access to pension funds, analyzing its advantages and disadvantages. The authors conclude that access to pension funds should be a tool of last resort in the current recession, and losses associated with financial market volatility should be avoided. In typical

situations, allowing a degree of liquidity for pension funds presents a policy dilemma between building a pension and providing individuals with liquidity in facing income shocks. It is up to each country to evaluate this dilemma.

Baily et al. (2020) discussed how the Covid-19 economic crisis might alter retirement systems. Since this pandemic is without precedent in the last hundred years, the future seems uncertain, and the authors' general conclusion is that the pandemic will put the standard of living at retirement in jeopardy for current retirees and persons near retirement by diminishing resources for retirement and imposing social distancing rules and other measures. As for the future retirees, the impact is less obvious but could include less generous future benefits and higher saving rates required.

Natali and Terlizzi (2021) analyzed the public measures to combat Covid-19 effects on pension systems in European countries, focusing chiefly on their classification. The authors classified the measures by combining five criteria: deferral or temporary reductions of pension contributions; public budget financial injections to stabilize the pension system; an increase of pension benefits; regulatory measures to support the financial position of pension schemes; the reconsideration of the pension reform process.

Biggs (2020) dealt with employees nearing retirement amid the Covid-19 pandemic in the United States. The author points out that, due to the Covid-19-induced recession, the average wage fell sharply in 2020. Since the benefit formula used by Social Security is indexed for the growth of the average wage, the significant drop in the average wage in 2020 will result in permanently lower benefits for individuals that will reach the normal retirement age in the following years. The solution for this problem would be to put inflation-indexed earnings rather than wage-indexed earnings in the pension formula since a pension formula using inflation-indexed earnings is less responsive to sudden declines in earnings.

3. RESEARCH METHODOLOGY AND OBJECTIVES

The methodology in this chapter is based on a quantitative approach, with the primary goal to point out the essential facts concerning the impact of Covid-19 on public and private pension schemes. Secondary data extracted from the official OECD and EU economic and pension reports were used in the analysis. The period considered in the analysis spans between the end-2019, as the Covid-19 starting point, and the end-2020 due to data availability. Countries with well-developed pension systems (only OECD and EU member countries included) are covered by the analysis to assess the impact of the Covid-19 pandemic.

The main research goals are the following:

1. determine the impact of Covid-19 on public finance and the indirect effect via central government budget support on public pension schemes;
2. shed light on the ways Covid-19 affects public pension systems;
3. Provide information regarding the impact of Covid-19 on the financial position of private pension schemes, focusing on the measures taken by the pension regulators to improve the overall pension sector state.

Given the objectives set in this way, with the appropriate methodological setting, it becomes clear that the chapter is primarily focused on understanding the directions in which the Covid-19 pandemic affects the pension systems around the world.

4. IMPACT OF COVID-19 ON GLOBAL ECONOMIC ACTIVITY AND PUBLIC FINANCE

After negative GDP growth rates recorded in 2020, in 2021, the global recovery of economic activity has become evident. OECD projected that the global GDP growth rate in the OECD area by the end of 2021 would amount to 5.6% in 2021. It should be said that the global economic recovery has been more accelerated than expected, so the output in most OECD countries is close to pre-pandemic levels. This could be attributed to massive policy measures aimed at households and companies and successful health measures that prevented the further spread of disease. However, the achieved increase is insufficient to compensate for the rapid decline recorded in 2020; mid-2021 global GDP is still 3.2% lower than the pre-pandemic projected level (OECD, 2021a).

The lasting effects of the pandemic are particularly evident in economic activities where physical proximity is required, such as travel, hospitality, human transport, etc. The labor market is still contracted since the number of employed persons at the end of 2021Q3 is lower than in 2019. Currently, advanced economies are approaching the goal of complete vaccination of the adult population. Hence, the danger of new waves of infectious disease is becoming weaker, but countries with lower vaccination rates remain exposed to risks of future outbreaks.

In 2020 and the first half of 2021, almost all countries worldwide used expansionary fiscal policy to some extent. However, governments now face complex policy challenges. The easing of the Covid-19 measures should be balanced with providing the necessary support to the economic recovery. In the long term, measures to accomplish public finance sustainability have to be carefully elaborated. These challenges have important implications for public expenditures and revenues

composition (OECD, 2021a). Fiscal policy has remained supportive throughout 2021 due to the prolonged implementation of measures launched in 2020 and early 2021. Automatic stabilizers and Covid-19-related fiscal measures have a more significant impact on 2021 government budgets than the levels disclosed in projections previously published in March 2021. On average, public deficits in 25 EU member countries are expected to reach 7% in 2021 and exceed the 3% reference value (EU Independent Fiscal Institutions, 2021). The substantial size of fiscal expansions in 2021 in response to Covid-19 is expected to impact public debt significantly, as shown in Table 1. The debt levels of 15 EU countries are projected to be above the 60% debt reference value in 2021.

Table 1. Projected general government balance and public debt in 2021 (% of GDP)

Country	IT	LV	FR	CZ	DE	RO	HU	NL	BG	SE	PT	DK	LU
Deficit	-12	-9	-9	-9	-8	-8	-8	-6	-6	-5	-4	-3	-2
Country	IT	PT	ES	FR	BE	IE	AT	HU	DE	SK	NL	CZ	DK
Public debt	160	132	119	118	116	112	89	80	73	61	59	45	40

Source: EU Independent Fiscal Institutions (2021)

Governments are faced with rising expenditures in the case of high unemployment, which leads to a higher debt to GDP ratio. In this scenario, a positive correlation between unemployment and public debt exists (Pjanić et al., 2020). In April 2020, the unemployment rate of 14.8% was recorded in the United States, the highest rate after World War II. As of mid-2021, the unemployment rate remained higher (5.4%) than the pre-Covid level (before the outbreak of Covid-19, in February 2020, the unemployment rate was 3.5%). Although economic outlooks have improved compared to data early in the recession, the projections show that unemployment rates over 5.0% will remain in the first half of 2022 (Congressional Research Service, 2021).

As for the relationship between public finance and public pension systems, the Pay As You Go system is by nature short-sighted. Funds are gathered only when needed. Since only financing of present liabilities is brought into focus in this pension model, the general conclusion is that future pensions are left unfunded until the moment of retirement of a specific generation arrives. Hence, the uncovered liabilities when a sudden economic crisis occurs are not unexpected (Symeonidis et al., 2021). The pension systems in OECD countries are very diverse. This diversity is also reflected in the significant disparities between expenditure as a percentage of GDP, which varies from 4.6% of GDP in Ireland to 13.7% in Italy (European Commission, 2021b). Despite the large variety of pension systems, almost all systems face the growing challenge of ensuring sufficient funding to provide adequate benefits and

coverage. Due to population aging, the ratio of active and retired populations decreases. Also, during the Covid-19 crisis, a potentially rising number of people in nonstandard careers might be excluded from social protection systems or pay lower or no contributions. These trends severely affect the pension system's resilience to financial shocks.

5. IMPACT OF COVID-19 ON PUBLIC PENSION SYSTEMS

After 2008, many European countries experienced high budget deficits and rising public debts, and pension system adjustments worsened the living standard of current and future retired persons. The post-2008 reforms in the EU shaken by the crisis were executed without consensus-seeking and compromise building (Hinrichs, 2021). Although completely different events triggered the global financial crisis and the Covid-19 crisis, it should be stated that the previously mentioned direction of actions must be avoided.

The current crisis influences public pension systems through many channels. The main ones are (Feher & de Bidegain, 2020):

1. Older employees are increasingly opting to retire during the pandemic;
2. Labor market impact, as losses in working hours and decline of real wages, lead to a shrinkage of the wage tax base;
3. Asset price shocks adversely affect pension plans financial position on both assets and liabilities side;
4. As the ultimate public pension plan sponsors, governments' ability to maintain funded status under adverse conditions weakens.

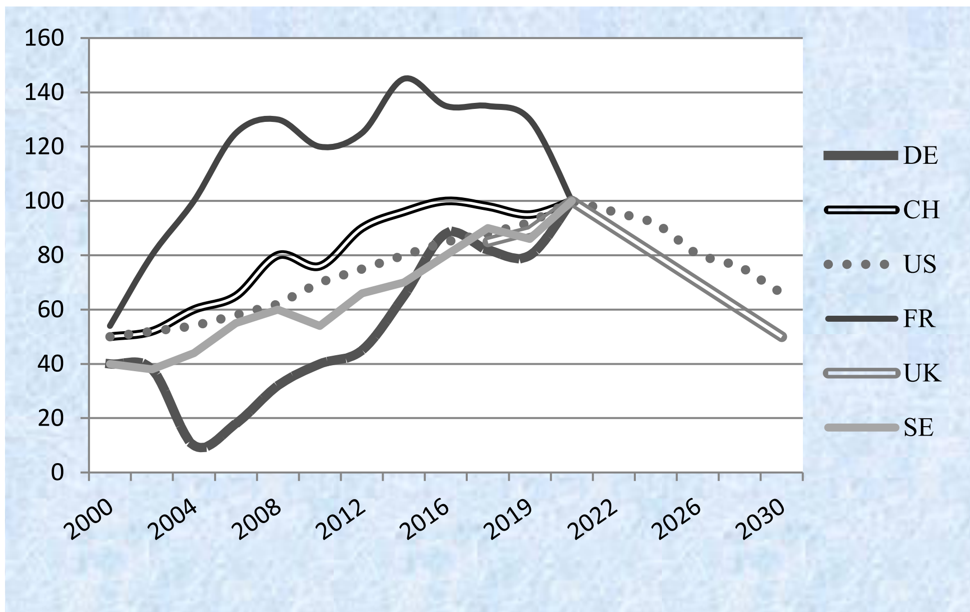
Interestingly, despite the older people being most vulnerable to Covid-19, the measures implemented within the contributory and non-contributory old-age pensions that directly look after older people's income security are negligible. As of November 2020, of almost 1,600 social protection measures introduced globally, less than 6 percent relate to pensions (IPC-IG, 2021). By December 2020, only 36 countries had temporarily or permanently increased pension benefits, and only ten countries expanded pension coverage (HelpAge International, 2021). Since retirement benefits are widely accepted through societies and can be implemented quickly, they seem convenient to promote social protection coverage in crisis. A key benefit of old-age social protection programs, such as universal social pensions, is their simplicity, enabling quick implementation even when the institutional framework is limited. For example, universal social pension requires only two pieces of information, age and residency/citizenship, which can be quickly and, in most cases, easily verified.

The initial government interventions amid Covid-19 have included short-term actions to improve pension adequacy and support economic activity, mostly through the reduction of employers' social contribution payments, to ease their financial position (Natali, 2020). For example, in Slovenia, temporarily laid-off workers are granted wage compensation in the amount of 80% of their average wage. The compensation is financed from the government budget and is no less than the national minimum wage.

Also, pension contributions on the wage compensation are also financed by the government budget (Eurofound, 2020). In Spain, the government began to subsidize pension contributions for furloughed workers in March 2020, with higher subsidies granted for workers returning to the original workplace. In France, subsidized wages were not initially subject to paying pension contributions, essentially hampering pension building for the future. However, starting from June 2020, the subsidized wage compensations paid between March and December 2020 were accounted for in future retirement benefits calculations (OECD, 2020a).

Rates of return that pension plans obtain in the financial markets are crucial because they determine the ability of plan sponsors to provide underfunded pension schemes with short-term financial injections. In the past two decades, financial crises adversely affected public schemes, underlining the importance of funded status in the future. The path to ensure the long-term financial sustainability of public pension schemes followed in several developed countries was the formation of public pension reserve funds (Natali & Terlizi, 2021). These funds serve to accumulate surpluses during economic expansions and to cover deficits during recessions. However, the shape of these funds varies from country to country (Figure 1). While in some countries, like Switzerland, Germany, and Sweden, assets in public reserve funds will continue to grow in the future, in some countries, such as the United States, the United Kingdom, and France, assets will continue to decline until they are completely depleted in the mid-term future.

Figure 1. Evolution of assets in selected public reserve funds 2000-2030



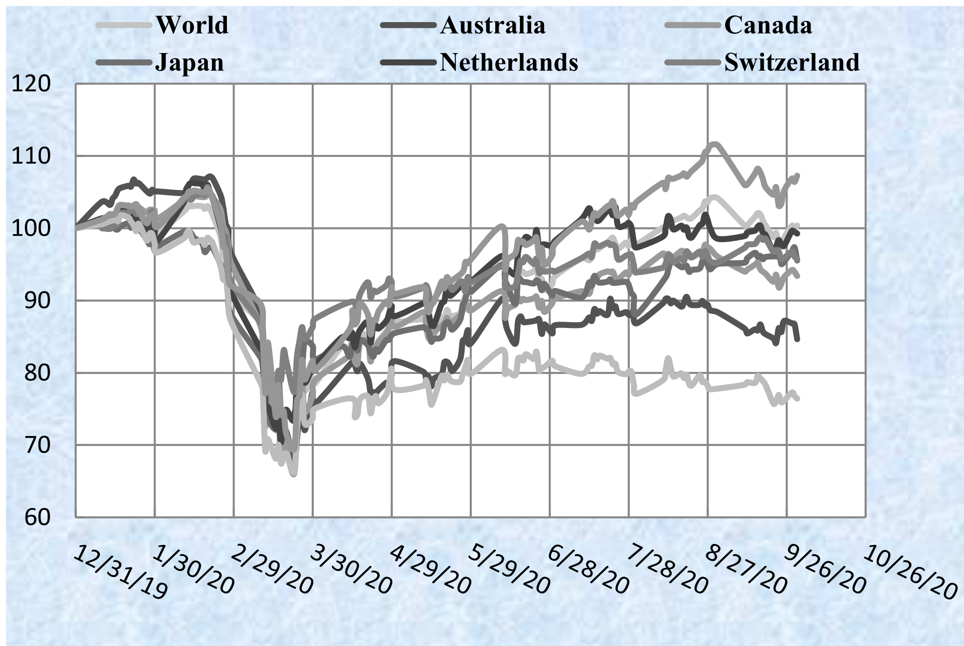
Source: OECD (2021b)

Unfortunately, for many public schemes, the central government budget remains the primary buffer, and pension deficits increase public debt during recessions. The capability of public pension plans to cope with financial shocks depends on their funded status. In general, healthy pension plans rely mostly on investment returns, while poorly funded plans rely mostly on contributions to improve their financial position (American Academy of Actuaries, 2020). It seems that the impact of the Covid-19 crisis on contribution levels will be a more significant threat to the funded status of public pension plans than investment returns which already experienced a fast and strong rebound. As shown in Figure 2, global investment return rates have already recorded a pre-Covid 19 level at the end of 2020.

Although public pension plan funding levels and costs are influenced by multiple factors, the market price drops typically have a greater impact on unfunded actuarial liabilities and employer contributions. Each of the market declines since 2000 resulted in an increase in public pension plans' unfunded actuarial liabilities and a decrease in the number of employers making their full actuarially determined contribution (NASRA, 2020). The cost of a pension plan also rises when an employer fails to make their actuarially determined contribution because additional contributions are needed to make up for the foregone contributions and projected investment earnings. The impact of skipping contribution payments may remain

persistently long after normal contributions are restored, and the lost investment returns on those contributions enlarge the overall financial impact (Holzrichter & Seliga, 2020).

Figure 2. The global financial market recovery, end 2019-October 2020 (base 100 at end-2019)



Source: OECD (2020b)

As opposed to persons who have already retired, those that will retire during or shortly after the Covid-19 crisis are facing lower retirement benefits than expected. In earnings-related pension schemes, the retirement benefits usually depend on the shape of the labor market at retirement through the valorization of past wages, point values, or national accounts. Short-term shocks can permanently lower the benefits of those who exit the labor market during the downswings (Biggs, 2020). Also, shortages in labor demand make it difficult to work at older ages. Older workers laid off amid Covid-19 are less likely to find another employment and are forced to retire early, leading to a permanent benefit reduction (OECD, 2020a).

6. THE IMPACT OF COVID-19 PANDEMIC ON PRIVATE PENSION SECTOR

The Covid-19 pandemic outbreak, the associated lockdowns, and economic downturns are affecting all the parties that have an interest in pension systems, potentially leading to lower old-age incomes in the future. The primary potential impacts on private pension schemes are reported in Table 2.

Table 2. The main effects of Covid-19 on private pension schemes

The main effects of Covid-19 on private pension schemes
The retirement account balances are experiencing a decrease due to declining asset prices
The rise of pension liabilities in defined benefit pension plans caused by declining interest rates
Employers are experiencing troubles in contributing to occupational retirement plans
Contribution holidays and early retiring result in erosion in savings

Source: OECD (2020a)

Global pension assets fell sharply due to the financial market collapse recorded in the first quarter of 2020. Private pension schemes experienced a significant drop in investment returns in 2020 compared to 2019 (Table 3). This drop is particularly worrisome because pension schemes had previously recorded negative return rates in 2018.

Table 3. The overview of nominal return rates of pension funds in 12 selected EU countries, 2018-2020

	Austria	Belgium	Bulgaria	Croatia	Estonia	Italy
2018	-5.14	-2.41	-3.3	1.86	-2.47	-2.27
2019	11.66	16.06	7.0	9.32	9.67	7.44
2020	2.55	5.26	2.5	-0.59	3.76	3.38
	Latvia	Lithuania	Romania	Slovakia	Spain	Netherlands
2018	-4.09	-3.24	0.95	-1.65	-2.99	-1.26
2019	10.79	11.65	9.10	8.53	9.01	16.70
2020	1.44	5.09	4.39	2.29	1.76	7.66

Source: Better Finance (2021)

However, asset prices rose in the second half of 2020, which prompted the retirement savings recovery. By the end-2020, the asset growth rate has been higher than the average rate in the past ten years in most of the developed countries. Table 4 reports that almost all jurisdictions (except Australia and Poland) reported more pension assets at the end-2020 than at the end-2019.

Table 4. The rise of private pension assets in the end-2019 - end-2020 period

Country	AU	BE	CA	CZ	DK	EE	DE	HU
% change	-1.2	3.9	5.3	6.8	20.0	11.5	4.2	5.8
% of GDP (end-2020)	131.8	37.5	174.1	9.6	238.9	21.5	8.1	5.6
Country	ISL	IT	NL	PL	PT	SK	UK	US
% change	15.4	7.4	8.0	-3.7	5.6	11.3	8.1	8.9
% of GDP (end-2020)	205.6	12.7	210	6.5	11.4	14.4	118.5	95.8

Source: OECD (2021b)

This rapid and somewhat unexpected recovery differs from the 2008 financial crisis, in which the market did not retrieve its pre-crisis level until almost five years later. Retirement savings plans also benefited from this steep rise, as is reported in Table 5. In only a tri quarters time span, all reported private pension markets completely recovered from shock in Q1-2020. In contrast, this is not the case for the state pension plans that had already entered the pandemic in bad shape; only 69 percent of state pension liabilities were funded in 2017 (Baily et al., 2020).

Table 5. Assets in retirement savings plans in the OECD, up to end Q3-2020, in US trillion

	End 2019	Q1 2020	Q2 2020	Q3 2020
United States	32.2	28.6	31.7	33.6
United Kingdom	3.6	3.3	3.6	3.5
Canada	2.8	2.5	2.7	2.8
Australia	1.9	1.6	1.8	1.8
Netherlands	1.8	1.7	1.8	1.8
Japan	1.5	1.4	1.5	1.5
Switzerland	1.1	1.1	1.1	1.2
Other OECD countries	4.4	4.2	4.5	4.6
OECD Total	49.2	44.3	48.8	50.7

Source: OECD (2021c)

Saving for retirement is by its nature a long-term oriented process, and people with a long-term investment horizon would probably recover any short-term losses. Still, countries have launched several policies to combat these threats directed to employees, employers, retirees, and retirement plan providers. The measures countries have taken to cope with the crisis differ from country to country. In March 2020, Spain allowed the option of the withdrawal of funds for pension plans' members under certain circumstances up to a ceiling for a limited period of time (World Pension Alliance, 2021). Australia has also authorized pension plan members

to withdraw funds in case of unemployment or a reduction in working hours (Warren, 2021).

Some countries have protected retirees from investment losses by relaxing requirements in drawdown arrangements. Australia has temporarily reduced minimum drawdown amounts from March 2020 until June 2022 (AustralianSuper, 2021). The benefit from this reduction is that the retirees will not be obliged to draw funds from their superannuation accounts when asset prices are low due to the Covid-19 pandemic. A similar arrangement is applied in the United States. Persons affected by Covid-19 have the option to withdraw funds from DC pension plans (401(k) plans or IRA accounts) without penalty. Under normal circumstances, early withdrawal of funds is subjected to a 10% penalty tax, but that penalty is waived during the Covid-19 crisis (Atlas et al., 2020). Half of the American employees have already used these options or plan to use them in the near future.

Partial access to pension assets may increase well-being, but it also presents some dilemmas. The fundamental policy dilemma is the conflict between a long-term objective (to build up a pension) and a short-term one (to smooth an income shock). Early asset withdrawal directly undermines the goal of obtaining a decent standard of living in old age. However, access to funds supports the households' resilience to income shocks (Bosch et al., 2020).

To help individuals keep saving for retirement during the crisis, some countries subsidized contributions to retirement plans. In Iceland, the Netherlands, New Zealand, Slovak Republic, Sweden, and the United Kingdom, where mandatory participation or automatic enrollment into a private pension plan is in place, labor market measures are also aimed at subsidizing contributions to private pension plans.

In some countries (Belgium, for example) the employers are given a right to defer their pension contributions for temporarily laid-off workers (Deloitte, 2021). Also, in some countries, a temporary reduction of contributions has been approved. Finland passed the temporary reduction of employer contributions by 2.6% in the second half of 2020 (OECD, 2020c). Pension providers are allowed to use reserve funds to overcome a shortage of funds.

Pension asset accumulation becomes hampered when employers/ employees stop contributing to pension plans. For example, Estonia has suspended employer contributions to the second pension pillar between July 2020 and August 2021. More precisely, employers continue to pay the 4% contributions, but they are temporarily kept in the public pension pillar. On the other hand, employees have the option to

stop contributing between December 2020 and August 2021. The government commits itself to reinstate employer contributions and a return on these contributions in pension plans in the 2023-2024 period for every month employees continue contributing between July 2020 and August 2021. However, the government commitment does not apply to those who decide to stop contributing (Government of the Republic of Estonia, 2020).

Overall, the employees can make up for welfare losses from the Covid-19 by working longer and postponing a retirement date. However, that may not be possible in the future due to the prolonged period of high unemployment, and those who choose to retire early are likely to receive lower benefits (Luković & Grbić, 2020). The elderly are more likely to face rising health needs that require medical assistance, but, these provisions are also restrained by actions to prevent the spread of disease.

7. CONCLUSION

The unparalleled economic shock stemming from the Covid-19 pandemic has shown that pension schemes may fulfill an important social function on a global scale in ensuring benefits for the old-age population. Since pension plans are institutional investors that promote long-term investments and sustainable economic growth, they act counter-cyclically by sustaining their long-term strategic asset allocation, particularly in extremely adverse market conditions. The current economic setting determined by persistently low-interest rates and negative Covid-19 pandemic effects may serve as a trigger to provide pension schemes with greater responsibilities in mitigating the global economic impact of the Covid-19 and achieving a more balanced and diversified investing approach in the future.

The Covid-19 crisis-affected pension schemes in many ways that limited the capability of employers and employees to contribute to pension plans and reduced the savings owing to government actions aimed at providing short-term relief. Regardless, pension plans seem to adapt well to Covid-19 circumstances, and their managers are coping well with the current liquidity risk.

Pension plans should not be treated as solely financial institutions. Policymakers must understand the role that such schemes assume in easing the old-age poverty issue. It should be said that pension plans manage retirement savings in diverse surroundings in terms of political, economic, regulatory, and social country-specific factors. This diversity poses a significant challenge for pension schemes investing at the global level, but at the same time, provides them with the opportunity to act as an integrative factor, especially in times of economic turmoil.

It is important that policymakers recognize the value of pension plans funding adequacy given their countercyclical role and long-term investment horizon. Pension savings should not be treated as an alternative to short-term savings since retirement schemes foster a long-term investment horizon. Asset withdrawals in times of crisis should be treated only as a temporary measure of last resort. A clear recovery path must accompany any withdrawals. With regard to the Covid-19 pandemic, pension schemes' ability to serve their liabilities should be a key priority. At the same time, since pension plan sponsors may be under financial pressure, the relaxation of their financial position could be done, but only in a temporary fashion, through the deferral of contributions, their decrease, or temporary waiver.

ACKNOWLEDGEMENT

This chapter is financed by the Ministry of Education, Science, and Technological Development of the Republic of Serbia.

REFERENCES

1) American Academy of Actuaries (2020). The Impact of Covid-19 Pandemic on Public Pension Plans. Issue Brief. Retrieved December 6, 2021,
2) available at https://www.actuary.org/sites/default/files/2020-12/Covid19PP
3) lans.IB12.20.pdf
4) Atlas, H., Reno, J., & Tavares, L. (2020). Employee Benefits in the Time of the Coronavirus: IRS Retirement Plan CARES Act Update. Venable LLP.
5) AustralianSuper (2020). Minimum Drawdown Amounts for 2021/2022. Retrieved December 3, 2021, available at https://www.australiansuper.com/retirement/coronavirus-reduced-drawdowns
6) Baily, M., Harris, B., & Doshi, S. (2020). COVID-19 and retirement: Impact and policy responses. Brookings Economic Studies.
7) Better Finance (2021). Long-Term and Pension Savings - 2021 Edition. The European Federation of Investors and Financial Services Users.
8) Biggs, A. (2020). How the Coronavirus Could Permanently Cut Near-Retirees' Social Security Benefits. Working, No. 675. Wharton Pension Research Council.
9) Bosch, M., Felix, C.C., Garcia-Huitron, M., & Silvia-Porto, M. (2020). Access to mandatory retirement savings in times of COVID-19: public policy considerations. Inter-American Development Bank, 1-15.
10) Congressional Research Service (2021). Unemployment Rates During the Covid-19 Pandemic. *CRS Report*, R46554.

11) Deloitte (2021). *Special measures for occupational pensions in response to Covid-19 extended*, Deloitte tax @ hand, retrieved December 13, 2021, available at https://www.taxathand.com/article/16343/Belgium/2021/Special-measures-for-occupational-pensions-in-response-to-COVID-19-extended
12) EU Independent Fiscal Institutions (2021). *European Fiscal Monitor 2021*. Network of EU Independent Fiscal Institutions.
13) Eurofound (2020). *Subsidies for Short-Time Work - Factsheet for case SI-2020-23/904*. European Foundation for the Improvement of Living and Working Conditions.
14) European Commission (2021a). Economic policy coordination in 2021: overcoming COVID-19, supporting the recovery, and modernizing our economy. *Commission Staff Working Document*, Brussels.
15) European Commission (2021b). Pension Adequacy Report: Current and future income adequacy in old age in the EU. *Social Protection Committee*, 1-152.
16) Feher, C., & de Bidegain, I. (2020). Pension Schemes in the COVID-19 Crisis: Impacts and Policy Considerations. *IMF Fiscal Affairs*. International Monetary Fund, 1-8.
17) Government of the Republic of Estonia (2020). *Report for the period of July 1, 2019 to June 30, 2020 on measures implementing the provisions of the European Code of Social Security*. Retrieved November 28, available at https://rm.coe.int/estonia-reportcodeart74n-15-2020-website/1680a18519
18) HelpAge International (2020). *Responding to COVID-19 with improved social protection for older people*. London.
19) Hinrichs, K. (2021). Recent pension reforms in Europe: More challenges, new directions. An overview. *Social Policy Administration* (Special Issue 55), 409-422.
20) Holzrichter, M., & Seliga, J. (2020). Pension Systems under Pressure: How Public Pension Systems Will Handle the Impact of COVID-19. *The Bureau of National Affairs*, *Inc*.
21) IPC-IG (2021). What's next for social protection in light of Covid-19: Challenges ahead, *Policy in Focus*, 19(2), 8-44.
22) Luković, S. (2015). The Impact of Globalization on the Characteristics of European Countries' Tax Systems. *Economic Annals*, 60 (206), 117-139.
23) Luković, S. & Grbić, M. (2020). *The Impact of 2019-20 Coronavirus Pandemic on Pension Insurance Sector*. EBM 2020 Conference. Faculty of Economics, University of Kragujevac.
24) Marjanović, D. & Domazet, I. (2021). Tax competitiveness as a significant factor in attracting foreign investment – the case of Serbia. *Argumenta oeconomica*, 2 (47), 63-80.
25) Marjanović, D., Domazet, I., & Simović, V. (2020*)*. Influence of Tax Incentives on the Business of Foreign Investors in Serbia. TEME, XLIV (3), 69-984.

26) Marjanović, D. & Zubović, J. (2020). The Analysis of Main Macroeconomic Indicators - A Comparative Study of Serbia and Selected SEE Countries. In Jović-Lazić, A. & Troude, A. (Eds.) *Security Challenges and the Place of the Balkans and Serbia in a Changing World*, 331-345. Belgrade: Institute of International Politics and Economics: Faculty of Security Studies
27) NASRA (2020). Recession and Market Decline Impacts on Public Pension Plans. National Association of State Retirement Administrators.
28) Natali, D. (2020). Pensions in the age of Covid-19: Recent changes and future challenges. *ETUI Policy Brief*, No. 13, 1-5.
29) Natali, D., & Terlizzi, A. (2021). The Impact of Covid-19 on the Future of Pensions in the EU. *ETUC SociAll Project 2018/08*, Thematic Report 3.
30) OECD (2020a). *OECD Pensions Outlook 2020*. OECD Publishing.
31) OECD (2020b). *Pension Markets in Focus 2020*. OECD Publishing
32) OECD (2020c). *OECD Economic Surveys – Finland.* OECD Publishing.
33) OECD (2021a). *OECD Economic Outlook*. Vol. 2021, Iss. 2. OECD Publishing.
34) OECD (2021b). *Pension Markets in Focus 2021*. OECD Publishing
35) OECD (2021c). *Global Pension Statistics*, available at https://www.oecd.org/daf/fin/private-pensions/pensionmarketsinfocus.htm
36) Pjanić, M., Milenković, N., Andrašić, J., Kalaš, B., & Mirović, V. (2020). Public debt's predictors in EU: evidence from members and non-members of European Monetary Union. *Economic Research*, 33 (1), 3562-3579.
37) Symeonidis, G., Tinios, P. & Chouzouris, M. (2021). Public Pensions and Implicit Debt: An Investigation for EU Member States Using Ageing Working Group 2021 Projections. *Risks*, 9 (190).
38) Warren, D. (2021). *Families in Australia Survey: Towards Covid Normal Report No. 6: The Covid-19 Early Release of Superannuation*. Australian Institute of Family Studies.
39) World Pension Alliance (2020). *Global Regulatory Responses and Pension Fund Challenges Related to the Covid-19 Pandemic.* Retrieved November 28, available at https://www.ncpers.org/files/ncpers-world-pension-alliance-global-regulatory-responses-and-pension-fund-challenges-related-to-the-covid-19-pandemic-.pdf