INDICES USED IN THE INTERNATIONAL COMPARABILITY OF THE PENSION SYSTEMS

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Abstract

The COVID-19 pandemic has caused negative effects on the entire world economy, including affecting pension systems. Since 2020, they have faced additional pressures caused by the impact of the global health crisis, pressures that have added to those already in place, namely increasing life expectancy, aging the population and reducing the active population. Under these conditions, each country is concerned with ensuring the health of its citizens, and the way public resources are managed, which are currently concentrated for this purpose, could affect the security of medium- and long-term retirement, and the way employees across the country. the world will withdraw from activity. Given that in many countries around the world, the level of public debt has increased as a result of the impact of coronavirus, it will certainly have a direct influence on the level of future pensions. At the same time, worldwide, there was a reduction in the contributions of participants to private pension funds, while reducing the return on investment. According to experts in the field, in this situation, in order to maintain the desired standard of living, some people will have to stay active in the workplace longer, and others, who do not want this, will be able to accept a standard of living. lower living age at retirement age.

Keywords: *retirement income systems, Global Pension Index, adequacy, sustainability, integrity.*

JEL Classification: C10, C20, E01.

Introduction

Globally, the Global Pension Index is calculated by collaborating with prestigious institutions in the fields of investment, labor markets and pensions. This index analyzes pension systems around the world, highlighting their weaknesses and recommending areas where a number of reforms could be made to provide pensioners with more appropriate and sustainable benefits.

The Mercer CFA Institute Global Pension Index allows the complex study, both individually and the comparative analysis of the various existing

pension systems worldwide, using over 50 statistical indicators. The analysis of the functioning of the pension system of each country takes into account three reference criteria (subindices), namely: adequacy, sustainability and integrity, with the aim of assessing the benefits they offer, the ability to maintain and development in the conditions the aging of the population, as well as the level of transparency in the activity carried out. Each of these criteria (subindices) has a certain weight in the calculation of the general index and is based on a series of indicators. The overall value of the index for each country's system is the weighted average of the three derived indices.

Literature review

Brown and Weisbenner (2014) find that the probability of choosing the DC plan decreases with the relative financial generosity of the DB plan compared to the DC plan and increases with education and income. Estrin and Prevezer (2011) argue that the role of informal as well as formal institutions is essential for understanding the functioning of corporate governance. Fransen (2013) proposes an alternative approach that focuses on exploring the links between disaggregated variables, which can then be the basis for imagining new national-institutional configurations affecting aspects of CSR (corporate social responsibility), illustrating this approach with an exploration of the importance of policy. support for the development of CSR practices in global supply chains. Lusardi and Mitchell (2007) show that many households are not familiar with even the most basic economic concepts needed to make saving and investing decisions. Molenaar and Ponds (2012) study whether it is possible to combine ideas and recommendations on optimal individual investments in the life-cycle system with the already proven earnings of defined benefit pension funds. Kieser et al. (2017) use the historical features of pension funding law to investigate whether managers of U.S. corporations contributing employees to defined benefit pension plans strategically use the regulatory framework to reduce the reported level of pension debt and, therefore, the cash contributions they have to make. Bravo et al. (2021) study the relationship between time and life expectancy of cohorts, as well as how this relationship evolves. Boermans and Galema (2019) study whether pension funds actively decarbonize their portfolios, through active divestment, thus deviating from the reference allocation of market indices. Collins and Hughes (2017) examine the effectiveness of the tax system as a means of supporting pension contributions using data for Ireland. Nullmeier (2021) details the reasons for the failure of the Riester pension system by integrating political and economic perspectives. Van Vliet et al. (2012) test empirically whether the relative shift from public to private pension systems involves higher levels

of income inequality among older people, using OECD and EU databases. Chybalski and Marcinkiewicz (2016) discuss the issue of measuring pension adequacy, focusing mainly on the replacement rate, which, although defined in different ways, is the most common measure of pension adequacy. Bijlsma et al. (2018) study the effect of saving for pension on economic growth, differentiated, on firms with lower or higher external financing. Jun et al. (2019) investigate the effects of different socio-economic factors on tax benefits for private pensions at the country level.

Research methodology, data, results and discussions

The calculation methodology of the Mercer CFA Institute Global Pension Index is systematized in the following table:

Calculation methodology in the Mercer CFA Institute Global Pension Index

Table no. 1

Benchmark	Weight in the indicator (%)	Evaluated indicators
Adequacy	40	The advantages offered and the way of designing the retirement income systems; savings; financial support from the authorities; growth assets.
Sustainability	35	Ways to cover the pension; total assets; contributions; demography; public expenditures; government debt; economical growth.
Integrity	25	Regulatory framework; governance; protection; ways of communication; operating costs

Source: Mercer CFA Institute Global Pension Index 2020, own systematization

Analyzing the previous table, it can be seen that, in general, through the indicators used, the degree of adequacy refers to the benefits of the system currently offered, as well as a number of elements related to predicting the organization and operation of the system. The sustainability calculation aims to identify the capacity of the current pension system to provide future benefits in the future, while the integrity criterion reflects aspects related to management activity, with a direct influence on the trust that the citizens of each country have. in their own pension system.

Detailing the scope of each sub-index and starting from the consideration that the purpose of any pension system is to have the ability to ensure adequate income for retirement, we can say that the adequacy of benefits is the most effective way to study the comparability of pension systems. From this perspective, the following six features are evaluated for the forecasting of the private pension system:

- providing tax incentives to encourage middle-income people to save for retirement. Specifically, the value of taxes on investment income diminishes the adequacy of future benefits;
- the imposition by the regulations in force of a minimum age in order to be able to benefit from the private pension, except in cases of disability and death; this feature aims to identify how the respective private pension system works, ie whether it focuses on providing benefits for retirement or allows them to be offered even before reaching retirement age;
- following the trajectory of the personal asset of the participant in case he resigns from work, respectively it is wanted to know if he is entitled to the full acquisition of the accumulated asset until that moment or if there are penalties, thus affecting the level benefits that will be available for retirement;
- analysis of the rules that influence the benefits provided during retirement years and any arrangements that may provide incentives for income flows;
- determining whether the accumulated asset is subject to sharing between spouses / partners, in case of divorce / separation, taking into account the impact on their future financial security;
- the obligation to participate in private pension funds for persons receiving financial support, in the form of a disability pension or child raising allowance.

The second sub-index, sustainability, takes into account contribution rates, asset levels and coverage of the private pension system. The level of pre-financing is important in the conditions of decreasing the ratio between employees and retirees. Real long-term economic growth also has a strong effect on the sustainability of pensions because it influences employment, savings rates and return on investment. At the same time, the long-term sustainability of a system, as well as the future level of pensions are influenced by the level of public debt.

The third sub-index, integrity, analyzes the role of regulation and governance, as well as the provisions of the legislation in force. Also included in the analysis is the way of communication in relation to the participants, as well as the protection offered to them against risks.

Depending on the value of the Global Pension Index, countries are grouped into seven categories: A, B+, B, C+, C, D and E.

The pension systems included in category A are characterized by robustness, stability, good benefits and a high degree of integrity, and those included in categories B+ and B, although they have a solid structure, have several areas that can be improved.

Category C+ and C pension schemes have good features, but at the same time they face major risks which, unresolved, could affect the long-term effectiveness of the system.

The systems found in category D are characterized by a series of features that are desirable to be found in any pension system, but also have major weaknesses that call into question both effectiveness and stability.

A system included in category E is a poor one that may be in an early stage of development or is a non-existent system.

In table no. 2, the classification categories of the countries are systematized according to the value of the index.

The country classification categories according to the index value

Table no. 2

Category	A	B+	B	C+	C	D	E
Index value	> 80	75-80	65-75	60-65	50-60	35-50	< 35

Source: Mercer CFA Institute Global Pension Index 2020, own systematization

In table no. 3 are centralized the average values registered by the Global Pension Index, as well as by the three derived indices, in the period 2018-2020. For the calculation of these indicators, for 2018, 34 pension systems were analyzed, for 2019, 37 pension systems were taken into account, representing over 63% of the world's population, and in 2020, the number of pension systems studied has been increased to 39 pension systems, incorporating over 64% of the world's population.

**Mercer CFA Institute Global Pension Index, during 2018-2020**

Table no. 3

No. crt.	Indicator	2018	2019	2020
1	Overall Index Value	60.5	59.3	59.7
2	Adequacy	61.1	60.6	60.8
3	Sustainability	52.0	50.4	50.0
4	Integrity	71.6	69.7	71.3

Source: Melbourne Mercer Global Pension Index 2018 and 2019, Mercer CFA Institute Global Pension Index 2020, own systematization

As it can be seen, all the analyzed indicators decreased in 2019, compared to the previous year, amid the health crisis generated by the coronavirus pandemic and recorded a recovery in 2020, but without reaching the values recorded in 2018, highlighted in figure no. 1.

The evolution of Mercer Global Pension Index during 2018-2020

Figure no. 1
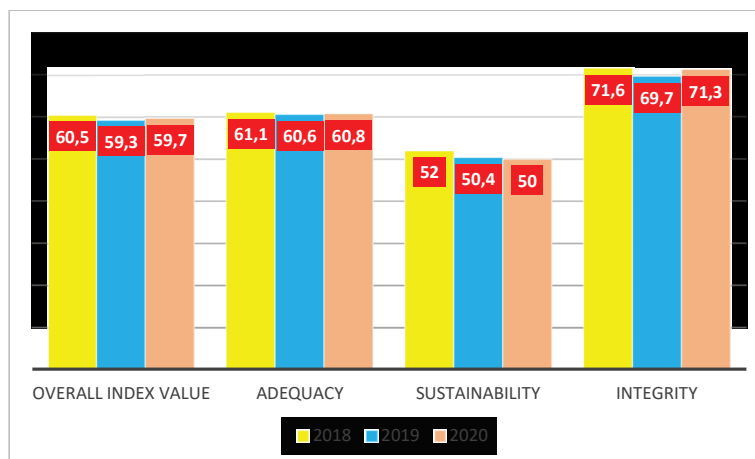
Source: own systematization

Category A includes the pension systems of the Netherlands (82.6) and Denmark, a situation that has been maintained since 2018, given that in 2017, no pension system met the conditions to be included in this category. .

Category B includes pension schemes belonging to the following countries: Israel, Australia, Finland, Sweden, Singapore, Norway, Canada, New Zealand, Germany, Switzerland, Chile and Ireland.

The pension systems of the United Kingdom, Belgium, Hong Kong, the United States, Malaysia and France are included in the C + category. In category C, we find: Colombia, Spain, Saudi Arabia, Peru, Poland, Brazil, South Africa, Austria, Italy, Indonesia, South Korea.

Category D includes pension systems in Japan, China, India, Mexico, the Philippines, Turkey, Argentina, Thailand.

We mention that in the B + and E categories there is no system.

Analyzing the results obtained in the reference year, it is concluded that the first position is occupied by the Netherlands with an index value of 82.6, and on the last place is Thailand with an index of 40.8.

In table no. 4 shows the values of the Mercer Global Pension Index recorded by several countries, such as Chile (which introduced, in 1980, the first private pension system in the world), also adopted by Mexico or Colombia. The study is extended to some European countries, such as Poland, which is in the first place in the transposition of European Union directives, countries where there are communities with a large number of Romanians,

such as Spain, Italy or England. Denmark, the Netherlands and Australia, which have the strongest private pension systems in the world, were also taken into account in carrying out the analysis.

**Mercer Global Pension Index, in selected countries, in the period 2018-2020**

Table no. 4

No. crt.	Country	2018	2019	2020
1	Netherlands	80.3	81.0	82.6
2	Denmark	80.2	80.3	81.4
3	Australia	72.6	75.3	74.2
4	Chile	69.3	68.7	67.0
5	United Kingdom	62.5	64.4	64.9
6	Colombia	62.6	58.4	58.5
7	Spain	54.4	54.7	57.7
8	Poland	54.3	57.4	54.7
9	Italy	52.8	52.2	51.9
10	Mexico	45.3	45.3	44.7

Source: Melbourne Mercer Global Pension Index 2018 and 2019, Mercer CFA Institute Global Pension Index 2020, own systematization

In figure no. 2 is graphically represented the evolution of Mercer CFA Institute Global Pension Index in the period under analysis, respectively 2018-2020.

The evolution of Mercer CFA Institute Global Pension Index during 2018-2020

Figure no. 2
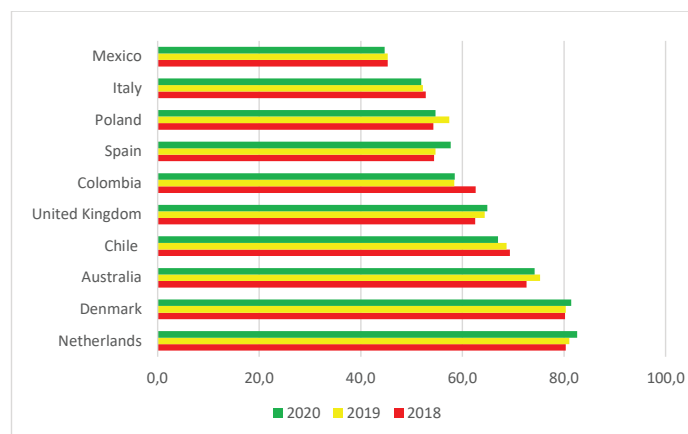
Source: own systematization

Increasing the overall value of the index for the Chilean system, which is currently in category B, can be achieved by increasing the minimum level of support for the poorest people, as well as by raising the retirement age for both men and women.

Mercer CFA Institute Global Pension Index derivative indices for the period 2018-2020

Table no. 5

No. crt.	Country	Adecvare			Sustenabilitate			Integritate		
		2018	2019	2020	2018	2019	2020	2018	2019	2020
1	Netherlands	75.9	78.5	81.5	79.2	78.3	79.3	88.8	88.9	88.9
2	Denmark	77.5	77.5	79.8	81.8	82.0	82.6	82.2	82.2	82.4
3	Australia	63.4	70.3	66.8	73.8	73.5	74.6	82.2	85.7	85.5
4	Chile	59.2	59.4	56.5	73.3	71.7	70	79.7	79.2	79.6
5	United Kingdom	57.8	60.0	59.2	53.4	55.3	58	82.9	84.0	83.7
6	Colombia	68.4	61.4	62.5	50.1	46.0	45.5	70.9	70.8	70.5
7	Spain	68.7	70.0	71	27.8	26.9	27.5	68.6	69.1	78.5
8	Poland	53.8	62.5	59.9	46.2	45.3	40.7	66.4	66.0	65.9
9	Italy	67.7	67.4	66.7	20.1	19.0	18.8	74.5	74.5	74.4
10	Mexico	37.3	37.5	36.5	57.1	57.1	55.8	41.6	41.3	42.2

Source: Melbourne Mercer Global Pension Index 2018 and 2019, Mercer CFA Institute Global Pension Index 2020, own systematization.

In table no. 5 are highlighted the values of the sub-indices registered in the period 2018-2020 by the analyzed countries.

Conclusions

Based on the global pension index, each pension system is analyzed, using in this sense the weighted average of the derived indices of adequacy, sustainability and integrity. The times we live in now show that the impact of Covid-19 goes beyond health, affecting economic and social activity as a whole and having direct implications on the financial field, interest rates and return on investment, changing mindsets and confidence in the future. Each country needs to analyze its ability to support its population, and with regard to the older population, this is done through pensions provided and by the provision of social services for the elderly. During this period, governments have seen a wide range of fiscal measures and incentives to protect their citizens and pension systems, some of which (Australia, Chile) allow temporary access to individual pension assets or reducing the level of mandatory contribution rates to pension funds. Each government should conduct a SWOT analysis of its pension system to take the necessary steps to ensure better long-term benefits for retirees.

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