MERCER CFA INSTITUTE GLOBAL PENSION INDEX 2020

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CONTENTS

MERCER PREFACE

The year 2020 has been like no other year we have lived through in recent times. The COVID-19 pandemic has dominated headlines and government decisions as virtually every country has responded to the emerging health crisis. However, the impact is much broader than the health implications; there are clearly long term economic effects impacting many industries, interest rates, investment returns and community confidence in the future. We are now living in a very different, and more uncertain, world.

As a result, the provision of adequate and sustainable retirement incomes over the longer term has also changed. Whilst we have highlighted the need for pension reform in our previous reports, this has now become even more difficult with an even broader range of pressure points, including:

- The future growth in ageing populations in most countries continues, arising from decreasing fertility and increasing life expectancies
- Changes in capital markets with near-zero or negative interest rates raise significant questions about the most appropriate investment strategies for pension funds
- The impact of these interest rates on the funding status of defined benefit pension arrangements, both in the public and private sectors
- The different impacts of the pandemic on various different subgroups within many countries, including women, who are often over-represented in the industries that have been most affected
- The significant growth in government debt during 2020 which will, at some future date, affect the ability to pay benefits from pay-as-you-go systems and provide "social protection" programs
- The lack of private pension coverage and any saving for retirement by many workers in both developed and developing economies, whether it be due to informal labour markets or the growing importance of "gig employment"
- The continuing growth of defined contribution schemes and the related increased risks now borne by individuals

These issues affect billions of people around the world. Significant pension reform is now more urgent than ever. As such reform is considered in our new environment, it is critical that we learn from each other and understand what best practice may look like, both now and into the future. This 12th edition of the Global Pension Index presents such research and compares 39 retirement income systems which encompass a diversity of pension policies and practices.

The primary objective of this research is to benchmark each retirement income system using more than 50 indicators. An important secondary purpose is to highlight some shortcomings in each system and to suggest possible areas of reform that would provide more adequate retirement benefits, increased sustainability over the longer term and a greater community trust in the pension system.

Many of the challenges are similar around the world, irrespective of social, political, historical or economic influences. Further, the policy reforms needed to alleviate these challenges are also similar and relate to benefit levels, pension ages, encouraging people to work a little longer, increasing the level of funding set aside for retirement, and some benefit design issues that reduce leakage of benefits before retirement and develop appropriate retirement income products. However, these desirable reforms are not easy and may require long transition periods.

As you have probably noticed, the name of the Global Pension Index has changed this year. I am delighted to welcome CFA Institute as our major sponsor and sincerely thank them for their enthusiasm and participation. The Global Pension Index is now a real partnership between two respected global organisations.

I would also like to thank the Monash Centre for Financial Studies within Monash University for their continued involvement, particularly in establishing an Advisory Board of senior and experienced individuals who have provided insightful comments throughout the project.

Finally, the Mercer consultants around the world have been invaluable in providing information in respect of their retirement income systems, checking our interpretation of the data and providing very useful comments. In this respect, we also appreciate the support of the Finnish Centre for Pensions.

I hope you enjoy reading this report and that it continues to encourage pension reform to improve the provision of financial security for all retirees.

DR DAVID KNOX
Senior Partner
Mercer

CFA INSTITUTE PREFACE

CFA Institute is pleased to sponsor the Mercer CFA Institute Global Pension Index and collaborate with Mercer and the Monash Centre for Financial Studies in its development and distribution. As an internationally regarded index, it has provided valuable information to both policymakers and market participants around the world for more than a decade, and we look forward to expanding its impact even further through this new collaborative effort.

As the world's largest association of investment professionals, CFA Institute recognizes the role that the investment industry plays in building wealth and well-being. Pension funds are a primary source of retirement income and are enormously influential in financial markets. We believe it is important to join forces with those in business and in government who are working to improve pension systems globally and to enhance investors' knowledge of pension issues.

Even prior to the pandemic, many public and private pension systems around the world have been under increasing pressure to maintain benefits; aging demographics and the low-growth/low-interest rate economic environment have reduced the ability for some retirement schemes to fund future liabilities.

Our research on trust in the industry has shown that nearly half of defined benefit pension plans anticipate they will need to reduce benefits in the next 10 years, but nearly 70% of beneficiaries expect benefits will be paid out as promised. We see this as a deferred trust deficit for the industry that must be addressed.

Much has been learned, however, about system effectiveness over the years, and the experiences of the systems included in the index provide insights for others to follow. Though challenges exist, the Global Pension Index focuses on actions that each system can take to have greater adequacy, sustainability, and integrity.

Because each system has its own unique history and culture, an index is a helpful way to differentiate what is possible and practical in each market. Having accurate and comparative information between the pension systems contained in the Global Pension Index enables proactive discussions and can facilitate better outcomes.

Many of the proposed reforms will take time to implement and may be politically challenging, but without the data we cannot engage in meaningful conversations. We owe it to financial market participants to do so.

We thank lead author Dr. David Knox of Mercer and the Mercer team for their continued dedication to this research, and the Monash Centre for Financial Studies for their leadership of the Advisory Board that oversees the methodology and approach. We look forward to the discussions that the 2020 Mercer CFA Institute Global Pension Index will prompt, and for the continued success of the index in providing the basis for best practice in pension fund reform.

MARGARET FRANKLIN, CFA
President and CEO
CFA Institute

MONASH CENTRE FOR FINANCIAL STUDIES PREFACE

The Monash Centre for Financial Studies (MCFS) is delighted to be associated with the Mercer CFA Institute Global Pension Index, in its new phase under the sponsorship of CFA Institute. During the last decade, the Index has reflected how pension systems have developed to respond to the increase in human longevity.

This year, in 2020, the world has to face new challenges due to COVID-19. The pandemic has adversely impacted many aspects of life, including health and job security. Governments around the world have responded to the recession with substantial fiscal stimulus, and central banks have adopted unconventional monetary policy. Additionally, some governments have allowed temporary access to saved pensions or reduced contribution rates to improve liquidity positions of households. These developments will likely have a material impact on the adequacy, sustainability and integrity of pension systems, thereby influencing the evolution of the pension index in the coming years.

In this new partnership with Mercer and CFA Institute, MCFS is responsible for an expert Advisory Board that oversees the development of the Global Pension Index and ensures that it represents an independent and unbiased view. The contribution of the members of the Advisory Board, listed below, are much appreciated:

- Professor Keith Ambachtsheer, Director, Rotman International Centre for Pension Management, Rotman School of Management, University of Toronto
- Professor Hazel Bateman, Head, School of Risk and Actuarial, University of NSW Business School and Deputy Director, Centre of Excellence in Population Ageing Research (CEPAR)
- Syd Bone, Chair of the Advisory Board, Executive Director of CP2, Chairman of MCFS Research Engagement Network
- Richard Boyfield, Partner, Mercer
- Professor Joseph Cherian, Practice Professor of Finance, National University of Singapore
- Professor Kevin Davis AM, Professor of Finance, University of Melbourne
- Rebecca Fender, CFA, Senior Director, Future of Finance, CFA Institute
- Dr Vince FitzGerald AO, Chairman, ACIL Allen Consulting
- Dr David Knox, Senior Partner, Mercer
- Dr Nga Pham, Research Fellow, MCFS, Monash Business School
- Professor Deborah Ralston, Retirement Review Panel member, member of Fintech Hub Advisory Board (YBF Ventures), member of Payments System Board (Reserve Bank of Australia)
- Professor Susan Thorp, Professor of Finance, University of Sydney Business School, University of Sydney
- Maria Wilton, CFA, Board Vice Chair, CFA Institute

Dr David Knox is the lead author of this report. Over many years, David has made numerous outstanding contributions to improving our understanding of the global pension systems. As such, it should be no surprise that David and his team have once again presented an insightful set of findings in this year's study.

PROFESSOR DEEP KAPUR
Director
Monash Centre for Financial Studies

CHAPTER 1
EXECUTIVE SUMMARY

The provision of financial security in retirement is critical for both individuals and societies as most countries are now grappling with the social, economic and financial effects of ageing populations. During 2020 these issues have been accentuated by the COVID-19 pandemic, which is further discussed in Chapter 4. But it is not only COVID-19 and ageing populations that represent challenges for pension systems around the world. The current economic environment with historically low interest rates, an economic recession in many countries and reduced investment returns are placing additional financial pressures on existing retirement income systems.

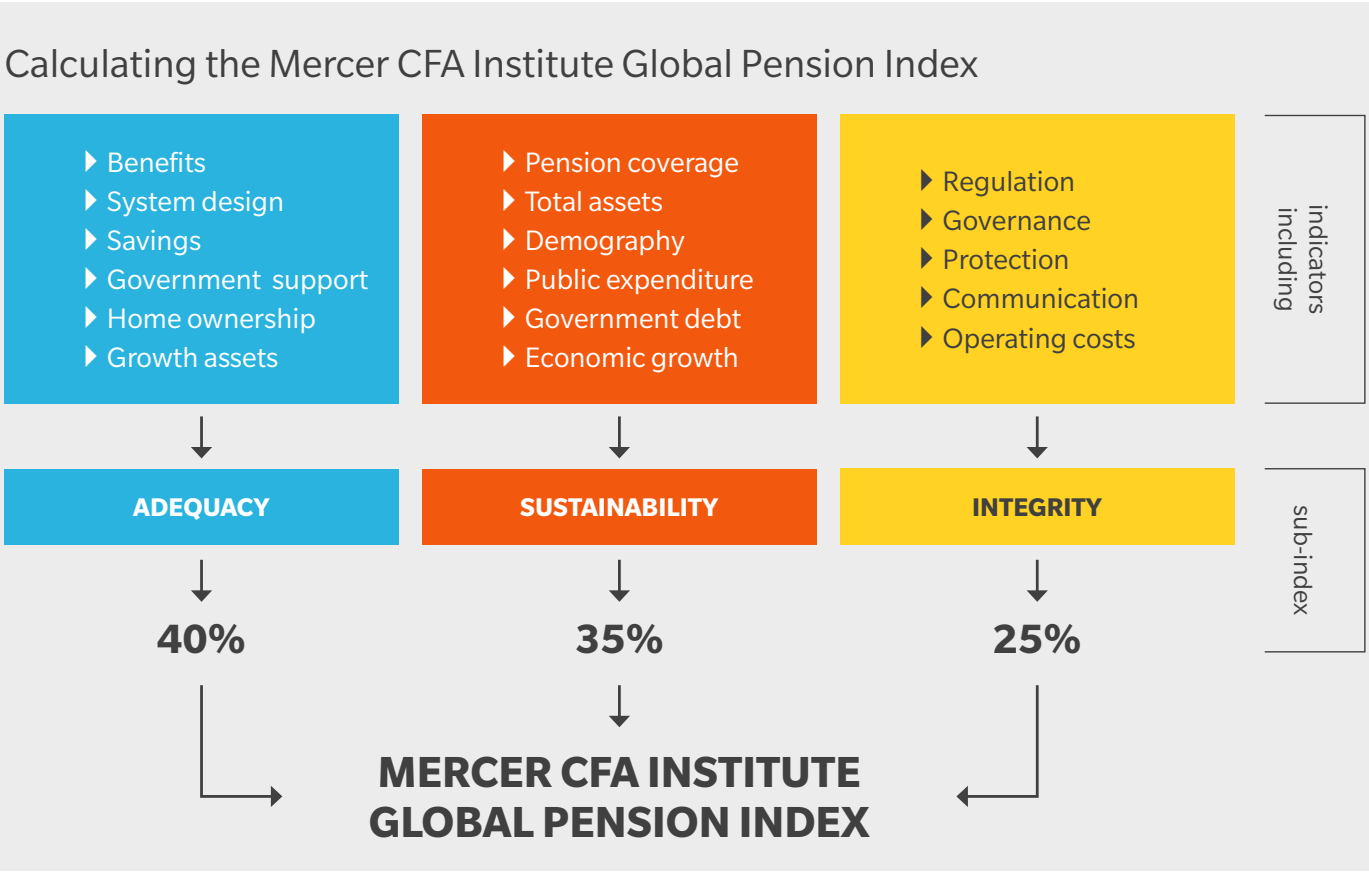
Now, more than ever before, it is important to understand the features of the better pension systems. Yet, a comparison of the different pension systems around the world is not straightforward. As the Organisation for Economic Co-operation and Development (OECD) (2019a) comments: "Retirement-income regimes are diverse and often involve a number of different programmes."[1]

1 OECD (2019a), p132.

Any comparison of systems is likely to be controversial as each system has evolved from that country's particular economic, social, cultural, political and historical circumstances. This means there is no single system that can be transplanted from one country and applied, without change, to another country. However, there are certain features and characteristics across the range of systems that are likely to lead to improved financial benefits for the older members of society, an increased likelihood of future sustainability of the system, and a greater level of community trust and confidence.

With these desirable outcomes in mind, the Mercer CFA Institute Global Pension Index uses three sub-indices – adequacy, sustainability and integrity – to measure each retirement income system against more than 50 indicators. The following diagram highlights some of the topics covered in each sub-index.

Figure 1: Calculating the Mercer CFA Institute Global Pension Index



The overall index value for each system represents the weighted average of the three sub-indices. The weightings used are 40 percent for the adequacy sub-index, 35 percent for the sustainability sub-index and 25 percent for the integrity sub-index which have remained unchanged since the first Index in 2009.

The different weightings are used to reflect the primary importance of the adequacy sub-index which represents the benefits that are being provided together with some important system design features. The sustainability sub-index has a focus on the future and measures various indicators which will influence the likelihood that the current system will be able to provide benefits in the future. The integrity sub-index includes many legislative requirements that influence the overall governance and operations of the system which affect the level of confidence that citizens have in their system.

This study of 39 retirement income systems, representing more than 64% of the world's population, shows there is great diversity between the systems around the world with scores ranging from 40.8 for Thailand to 82.6 for the Netherlands. In 2020 Belgium and Israel have been added to the index with Israel coming in third place with a score of 74.7.

This year's results

This study confirms that the Netherlands and Denmark have the best systems with both receiving an A-grade in 2020. Although the Netherlands has retained the top ranking this year, it is noted that their system is currently undergoing significant reform. However, it needs to be recognised that this system will continue to provide very good benefits, has excellent pension coverage in the private sector, a significant level of assets set aside for the future and receives high scores in every sub-index. These changes indicate there is always room for improvement and several dynamics exist in determining the 'best' system for each country given the varied economic, social, cultural, political and historical contexts.

Table 1: Summary of the 2020 results

Grade	Index Value	System	Description
A	>80	Netherlands Denmark	A first class and robust retirement income system that delivers good benefits, is sustainable and has a high level of integrity.
B+	75–80		A system that has a sound structure, with many good features, but has some areas for improvement that differentiates it from an A-grade system.
B	65–75	Israel Australia Finland Sweden Singapore Norway Canada New Zealand Germany Switzerland Chile Ireland	
C+	60–65	UK Belgium Hong Kong SAR* USA Malaysia France	A system that has some good features, but also has major risks and/or shortcomings that should be addressed. Without these improvements, its efficacy and/or long-term sustainability can be questioned.
C	50–60	Colombia Spain Saudi Arabia Peru Poland Brazil South Africa Austria Italy Indonesia Korea (South)	
D	35–50	Japan China* India Mexico Philippines Turkey Argentina Thailand	A system that has some desirable features, but also has major weaknesses and/or omissions that need to be addressed. Without these improvements, its efficacy and sustainability are in doubt.
E	<35	Nil	A poor system that may be in the early stages of development or non-existent.

None of these systems has an E-grade system, which would be represented by an index value below 35. A score between 35 and 50, representing a D-grade system, indicates a system that has some sound features but there also exist major omissions or weaknesses. A D-grade classification may also occur in the relatively early stages of the development of a particular retirement income system.

* In this report China refers to the retirement income system in mainland China whereas Hong Kong SAR refers to the retirement income system in Hong Kong, a Special Administrative Region (SAR) of China.

Table 2 shows the overall index value for each system, together with the index value for each of the three sub-indices: adequacy, sustainability and integrity. Each index value represents a score between zero and 100. It should be recognised that these 2020 index values do not yet fully recognise the longer term effects of the COVID-19 pandemic on future pension payments, although reduced economic growth has already led to lower scores in the sustainability sub-index.

Table 2: Overall index value for each system, including the three sub-indices

System	Overall Index Value	Sub-Index Values		
		Adequacy	Sustainability	Integrity
Argentina	42.5	54.5	27.6	44.4
Australia	74.2	66.8	74.6	85.5
Austria	52.1	64.4	22.1	74.6
Belgium	63.4	74.6	32.4	88.9
Brazil	54.5	72.6	22.3	70.7
Canada	69.3	68.2	64.4	77.8
Chile	67.0	56.5	70.0	79.6
China	47.3	57.4	36.2	46.7
Colombia	58.5	62.5	45.5	70.5
Denmark	81.4	79.8	82.6	82.4
Finland	72.9	71.0	60.5	93.5
France	60.0	78.7	40.9	57.0
Germany	67.3	78.8	44.1	81.4
Hong Kong SAR	61.1	54.5	50.0	87.1
India	45.7	38.8	43.1	60.3
Indonesia	51.4	45.7	45.6	68.7
Ireland	65.0	74.7	45.6	76.5
Israel	74.7	70.7	72.4	84.2
Italy	51.9	66.7	18.8	74.4
Japan	48.5	52.9	35.9	59.2
Korea (South)	50.5	48.0	53.4	50.3
Malaysia	60.1	50.1	58.6	78.0
Mexico	44.7	36.5	55.8	42.2
Netherlands	82.6	81.5	79.3	88.9
New Zealand	68.3	63.8	62.9	82.9
Norway	71.2	73.4	55.1	90.3
Peru	57.2	59.5	49.2	64.6
Philippines	43.0	38.9	53.4	34.8
Poland	54.7	59.9	40.7	65.9
Saudi Arabia	57.5	59.6	51.6	62.4
Singapore	71.2	74.1	59.9	82.5
South Africa	53.2	43.0	46.7	78.3
Spain	57.7	71.0	27.5	78.5
Sweden	71.2	65.2	72.0	79.8
Switzerland	67.0	59.5	64.2	83.1
Thailand	40.8	36.8	40.8	47.3
Turkey	42.7	44.2	24.9	65.3
UK	64.9	59.2	58.0	83.7
USA	60.3	58.9	62.1	59.9
Average	**59.7**	**60.8**	**50.0**	**71.3**

As noted earlier, each index value takes into account more than 50 indicators, some of which are based on data measurements which can be difficult to compare between countries. For this reason, one should not be too definite that one system is better than another when the difference in the overall index value is less than two or three points. On the other hand, when the difference is five or more it can be fairly concluded that the higher Index value indicates a better retirement income system.

Table 3 shows the grade for each system's sub-index values as well as the overall grade. This analysis highlights the fact that some systems may have a weakness in one area (e.g. sustainability) whilst being much stronger in the other two areas. Such a weakness highlights areas for future reforms.

Table 3: Overall index grades for each system, including the three sub-indices

System	OverallIndexGrade	Sub-IndexGrades		
		Adequacy	Sustainability	Integrity
Argentina	D	C	E	D
Australia	B	B	B	A
Austria	C	C+	E	B
Belgium	C+	B	E	A
Brazil	C	B	E	B
Canada	B	B	C+	B+
Chile	B	C	B	B+
China	D	C	D	D
Colombia	C	C+	D	B
Denmark	A	B+	A	A
Finland	B	B	C+	A
France	C+	B+	D	C
Germany	B	B+	D	A
Hong Kong SAR	C+	C	C	A
India	D	D	D	C+
Indonesia	C	D	D	B
Ireland	B	B	D	B+
Israel	B	B	B	A
Italy	C	B	E	B
Japan	D	C	D	C
Korea (South)	C	D	C	C
Malaysia	C+	C	C	B+
Mexico	D	D	C	D
Netherlands	A	A	B+	A
New Zealand	B	C+	C+	A
Norway	B	B	C	A
Peru	C	C	D	C+
Philippines	D	D	C	E
Poland	C	C	D	B
Saudi Arabia	C	C	C	C+
Singapore	B	B	C	A
South Africa	C	D	D	B+
Spain	C	B	E	B+
Sweden	B	B	B	B+
Switzerland	B	C	C+	A
Thailand	D	D	D	D
Turkey	D	D	E	B
UK	C+	C	C	A
USA	C+	C	C+	C

Overall recommendations

Chapter 5 makes several suggestions to improve each retirement income system. Although each system reflects a unique history, there are some common themes for improvement as many systems face similar problems in the decades ahead. As the OECD noted in 2017: "OECD countries should not wait until the next crisis to implement the needed reforms to deal with increasing longevity, increasing risk of old-age inequality and changing work patterns."[2] In light of COVID-19, these suggestions are now even more relevant. As Winston Churchill is quoted as saying: "Never let a good crisis go to waste."

There continues to be a range of reforms that can be implemented to improve the long term outcomes from our retirement income systems. These include:

- Increase the coverage of employees (including non-standard workers) and the self-employed in the private pension system, recognising that many individuals will not save for the future without an element of compulsion or automatic enrolment
- Increase the state pension age and/or retirement age to reflect increasing life expectancy, both now and into the future, thereby reducing the costs of publicly financed pension benefits[3]
- Promote higher labour force participation at older ages, which will increase the savings available for retirement and limit the continuing increase in the length of retirement
- Encourage or require higher levels of private saving, both within and beyond the pension system, to reduce the future dependence on the public pension while also adjusting the expectations of many workers
- Introduce measures to reduce the gender gap and those that exist for minority groups in many retirement income systems
- Reduce the leakage from the retirement savings system prior to retirement thereby ensuring that the funds saved, often with associated taxation support, are used for the provision of retirement income
- Review the level of public pension indexation as the method and frequency of increases are critical to ensure that the real value of the pension is maintained, balanced by its long-term sustainability
- Improve the governance of private pension plans and introduce greater transparency to improve the confidence of plan members

The World Economic Forum (2017) highlighted three key areas that will have the biggest impact on the overall level of financial security in retirement. These were to:

- Provide a "safety net" pension for all
- Improve ease of access to well-managed cost-effective retirement plans
- Support initiatives to increase contribution rates

Each of these actions are critical and all have been highlighted within the adequacy or sustainability sub-indexes.

As the World Economic Forum report highlighted: "Healthy pension systems contribute positively towards creating a stable and prosperous economy."[4]

2 OECD (2017), p29

3 It should be noted that several countries have moved in this direction in recent years. Nevertheless, very few are linking the future pension age to the likely ongoing increases in life expectancy.

4 World Economic Forum (2017), *p9*.

CHAPTER 2
BACKGROUND TO THE APPROACH USED

The structure and characteristics of pension systems around the world exhibit great diversity with a wide range of features and norms. Comparisons are not straightforward. In addition, the lack of readily available and comparable data in respect of many systems provides additional challenges for such a comparison. Therefore, this report uses a wide variety of data sources drawing on publicly available data, wherever possible.

These challenges of data and benchmarking should not, however, prevent the comparison of retirement income systems. Within the context of our ageing populations and our current economic conditions, it is too important to ignore. Furthermore, there is no doubt that programs, policies and practices adopted in some countries provide valuable lessons, experience or ideas for the development or reform of pension systems in other countries.

This edition of the Global Pension Index compares 39 retirement income systems, highlighting both the considerable diversity and the positive features present in many systems. The study also confirms that no pension system is perfect and that every system has some shortcomings. In Chapter 5, suggestions are made for improving the efficacy of each retirement income system. In that respect it is hoped this study will act as a stimulus to review each retirement income system and to consider making improvements so that future retirement incomes can be improved.

In its influential report *Averting the Old Age Crisis*, the World Bank (1994) recommended a multi-pillar system for the provision of old-age income security, comprising:

- Pillar 1: A mandatory publicly managed tax-financed public pension
- Pillar 2: Mandatory privately managed, fully funded benefits
- Pillar 3: Voluntary privately managed, fully funded personal savings

Subsequently, the World Bank (2008), as part of its Pension Conceptual Framework, extended this three-pillar system to the following five-pillar approach:

Zero Pillar:
A non-contributory basic pension from public finances that may be universal or means-tested

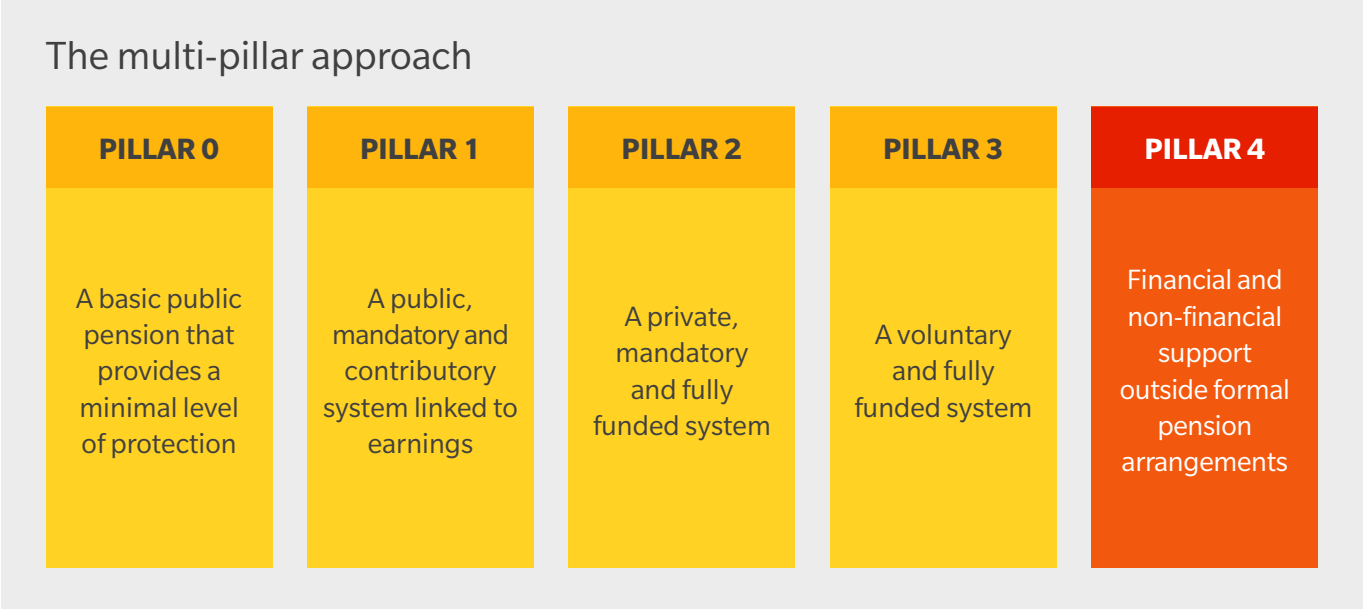
First Pillar:
A mandated public pension plan that is publicly managed with contributions linked to earnings

Second Pillar:
Mandated defined contribution, fully funded occupational or personal pension plans with financial assets

Third Pillar:
Voluntary and fully funded occupational or personal pension plans with financial assets

Fourth Pillar:
A voluntary system outside the pension system with access to a range of financial and non-financial assets and informal support such as family, health care and housing.

Figure 2: Pension Conceptual Framework



In effect, the original first pillar was split into a Zero Pillar and a mandatory First Pillar. A new Fourth Pillar was also added that includes access to non-pension assets and informal support.

This five-pillar approach provides a good basis for comparing retirement income systems around the world. Hence the range of indicators used in this report considers features or results associated with each pillar.

In contrast to the World Bank, the OECD (2017) adopts a three tier system, namely:

- Tier 1 - A universal or targeted pension
- Tier 2 - A mandatory savings system, provided by either the public or private sector
- Tier 3 – A voluntary savings system in the private sector

The Centre of Excellence in Population Ageing Research (2018) suggests that the first tier is primarily a safety net designed for those unable to provide for themselves. On the other hand, the second tier represents some consumption smoothing from one's working years to the retirement years. The third tier is voluntary and enables some households to save more than required under the mandatory system.

Whilst this three tier approach is helpful in understanding the different roles for each type of pension, the Global Pension Index continues to include non-pension factors such as home ownership, non-pension savings and household debt which can have a significant effect on financial security during retirement. That is, an individual's financial wellness in retirement does not depend solely on their pension.

The 'best' system for a particular society at a particular time must also take into account that country's economic, social, cultural, political and historical context. In addition, regulatory philosophies vary over time and between countries. There is no pension system that is perfect for every country at the same time. It is not that simple! There are, however, some characteristics of all pension systems that can be tested or compared to give us a better understanding of how each system is tackling the provision of retirement income.

Since its inception, the Global Pension Index has grouped these desirable characteristics into adequacy, sustainability and integrity although every year the questions in each sub-index are reviewed and some changes may be made.

Adequacy

The adequacy of benefits is perhaps the most obvious way to compare different systems. After all, the primary objective of any pension system is to provide adequate retirement income. This sub-index considers the base (or safety-net) level of income provided by each system as well as the net replacement rate at income levels ranging from 50% to 150% of the average wage.

Critical to the delivery of adequate benefits is the design features of the private pension system (i.e. the Second and Third Pillars). Whilst there are many features that could be assessed, we have considered the following six, each of which represents a feature that will improve the likelihood that adequate retirement benefits are provided:

- Are ***voluntary member contributions*** by an average-income earner to a funded pension plan treated more favourably by the tax system than similar savings in a bank account? Is the investment income earned by pension plans exempt from tax in the pre-retirement and/or post retirement periods? The first question assesses whether the government provides any incentives to encourage average-income earners to save for retirement. It is recognised that the taxation treatment of pensions varies greatly around the world so this question assesses whether an incentive exists or not, not the value of the concession. The second question recognises that the level of investment earnings is critical, especially for defined contribution plans. A tax on investment income reduces the compounding effect and will therefore reduce the adequacy of future benefits.
- Is there a ***minimum access age*** to receive benefits from the private pension plans (except for death, invalidity and/or cases of significant financial hardship)? This question determines whether the private pension system permits leakage of the accumulated benefits before retirement or whether the regulations are focused on the provision of benefits for retirement.

- On ***resignation from a particular employer***, are plan members normally entitled to the full vesting of their accrued benefit? After resignation, is the value of the member's accrued benefit normally maintained in real terms (either by inflation-linked indexation or through market investment returns)? Can a member's benefit entitlements normally be transferred to another private pension plan on the member's resignation from any employer? These questions focus on what happens to the individual's accrued benefit when they change employment. Traditionally, many private pension designs penalised resigning members which, in turn, affected the level of benefits available at retirement.
- What proportion, if any, of the retirement benefit from the private pension arrangement is required to be taken as an ***income stream***? Are there any tax or other incentives, such as favourable conversion rates, that exist to encourage the taking up of income streams? Many systems around the world provide lump sum retirement benefits which are not necessarily converted into an income stream. These questions review the rules affecting the form of retirement benefits and any arrangements that can provide incentives for income streams.
- Upon a couple's ***divorce or separation***, are the individuals' accrued pension assets normally taken into account in the overall division of assets? This question recognises that the financial treatment of accrued pension assets can have a major effect on the future financial security of one or both partners, following a divorce or separation.
- Is it a requirement that an individual continues to accrue their retirement benefit in a private pension plan when they receive ***income support*** (or income maintenance) such as a disability pension or paid maternity leave? Does the system provide any additional contributions or benefits for parents who are caring for young children whilst the parent is not in the paid workforce? These questions recognise that the adequacy of an individual's retirement income can be affected if there is no requirement for benefits to continue to accrue when a worker is temporarily out of the workforce, for example due to parental leave, ill health, disability or to care for young children.

In addition to these design issues, we consider savings from outside formal pension programs, highlighting the fact that, as the World Bank notes, the Fourth Pillar can play an important role in providing financial security in retirement. These indicators cover the rate of household savings, the level of household debt and the level of home ownership. It is also recognised that this pillar includes access to informal support (such as family) but the importance of this support is very difficult to measure in an objective manner.

Finally, we recognise that the net investment return over the long-term represents a critical factor in determining whether an adequate retirement benefit will be provided. This is particularly true given the increasing importance of defined contribution plans. While investment and administrative costs are considered as part of the integrity sub-index, the long-term return is likely to be affected by the diversity of assets held by the pension fund. Hence the adequacy sub-index includes an indicator representing an assessment of the percentage of investments held in growth assets (including equities and property).

Sustainability

The long-term sustainability of the existing retirement income system is a concern in many societies, particularly in light of the ageing population, the increasing old age dependency ratio, the public expenditure on pensions and substantial government debt. This sub-index therefore brings together several measures that affect the sustainability of current programs. Whilst some demographic measures, such as the old age dependency ratio (both now and in the future) are difficult to change, others such as the state pension age, the opportunity for phased retirement and the labour force participation rate amongst older workers can be influenced, either directly or indirectly, by government policy.

An important feature of sustainability is the level of funding in advance, which is particularly important where the ratio of workers to retirees is declining. Hence, this sub-index considers contribution rates, the level of pension assets and the coverage of the private sector pension system. In addition, real economic growth over the long-term has a significant impact on the sustainability of pensions as it affects employment, saving rates and investment returns.

Finally, given the key role that the provision of a public pension plays in most systems, the level of government debt and public pension expenditure represent important factors affecting a system's long-term sustainability and the future level of these pensions.

Integrity

The third sub-index considers the integrity of the overall pension system, but with a focus on funded schemes which are normally found in the private sector system. As most societies are relying on the private system to play an increasingly important role in the provision of retirement income, it is critical that the community has confidence in the ability of private sector pension providers to deliver retirement benefits over many years into the future.

This sub-index therefore considers the role of regulation and governance, the protection provided to plan members from a range of risks and the type of communication provided to individuals. In each case, we consider the requirements set out in the relevant legislation and not the best practice delivered by some pension plans.

In addition, the Worldwide Governance Indicators published by the World Bank are used to provide a broader perspective of governance within each society.

An important contributor to the long-term confidence of members is that they receive good value from their pension plan and that costs are kept to a reasonable level. Although an international comparison of the total costs of operating each system is difficult, this sub-index includes some proxy measures relating to industry structure and scale which should provide a good indication.

The construction of the Global Pension Index

In the construction of the Global Pension Index, we have endeavoured to be as objective as possible in calculating each system's index value. Of course, it is recognised that the Index is generalised, at least to some extent, as it does not recognise the pension that any retired individual will receive. Furthermore, it cannot recognise every aspect of a pension system, particularly the more subjective matters such as community confidence in the system. We also recognise that comparable international data is not available for every desirable feature.

Nevertheless, where international data are available, we have used that data. In other cases, we have used objective questions about each system to obtain a better understanding of each system's operations and outcomes. In some countries there is more than one system or different regulations exist in different parts of the country. Where this occurs, we have concentrated on the most common system or taken an average position.

Each system's overall index value is calculated by taking 40 percent of the adequacy sub-index, 35 percent of the sustainability sub-index and 25 percent of the integrity sub-index. These weightings have remained constant since the first edition of the Index in 2009.

Although each sub-index is not weighted equally, the robustness of the overall results is worth noting. For example, re-weighting each sub-index equally does not provide any significant changes to the results. Of course, the weighting of each indicator within each sub-index is subjective as there is no "correct" answer. Our approach has been to give higher weightings to the more important indicators.[5]

It is acknowledged that living standards in retirement are also affected by a number of other factors including the provision and costs of health services (through both the public and private sectors) and the provision of aged care. However, some of these factors can be difficult to measure within different systems and, in particular, difficult to compare between countries. It was therefore decided to concentrate on indicators that directly affect the provision of financial security in retirement, both now and in the future. The Global Pension Index does not claim to be a comprehensive measure of living standards in retirement; rather it is focused on the provision of financial security in retirement.

5 The attachments provide the scores for all indicators in each sub-index so that readers may calculate the effects of changing the weights used for each sub-index or the sensitivity of changing the weights within each sub-index.

CHAPTER 3

CHANGES FROM 2019 to 2020

The Global Pension Index has been expanded in 2020 to include two new retirement income systems – Belgium and Israel. Belgium's score of 63.4 is similar to the UK's score whereas Israel's score of 74.7 means it is ranked third. These additions continue our longstanding practice of considering a variety of systems from different economic, historical and political backgrounds. This approach highlights an important purpose of the Global Pension Index; to enable comparisons of different systems around the world with a range of design features operating within different contexts and cultures. The Global Pension Index now includes 39 retirement income systems covering more than 64% of the world's population.

Revised questions

Pension costs to Government

A question that has been asked in every previous Index, as part of the sustainability sub-index, has been in respect of the level of Government debt. The precise wording is:

- What is the level of adjusted government debt (being the gross public debt reduced by the size of any sovereign wealth funds that are not set aside for future pension liabilities), expressed as a percentage of GDP?

The rationale for this question was that higher government debt is likely to limit the ability of future governments to support their older populations with pension payments and other services. Hence, governments with lower levels of debt are in a stronger financial position to be able to sustain their current level of pension and other payments.

However, with near zero interest rates applying to most government debt, it has been suggested that the government cost of pensions, measured as a percentage of GDP, may be a better measure of future sustainability. Hence this question has been broadened to have the following two components:

- The level of adjusted government debt, as previously measured
- The level of public expenditure on pensions expressed as a percentage of GDP, averaged over the latest available figure and the projected figure for 2050

Each of these indicators is now worth 5% of the sustainability sub-index. The greatest impacts on the overall Index scores of this change are an increase of 0.8 for India and a decrease of 1.2 for Norway.

Life expectancy

Since the first Global Pension Index in 2009, we have asked the following two questions:

- What is the current gap (or difference) between life expectancy at birth and the State pension age?
- What is this gap projected to be in 20 years' time?

This approach followed a 2009 Working Paper by D Park from the Asian Development Bank.

These two questions reflected both increasing life expectancies as well as any changes to State pension ages and comprise 10% of the sustainability sub-index (5% each).

During 2020, it was suggested we should use life expectancy at the State pension age and not at birth as this would more accurately reflect the likely period of retirement.

Hence these two questions have now become:

- What is the life expectancy at the current State pension age?
- What is the projected life expectancy at the legislated State pension age in 2050?

The extension of the second question from 2040 to 2050 makes it more consistent with other forward-looking indicators within the Index as well as allowing for different cohorts and their changing life expectancies.

The greatest impacts on the overall Index scores of the above changes relating to life expectancy and the longer projected period are an increase of 0.7 for Singapore and a decrease of 0.8 for the Philippines. In general terms, countries with higher mortality rates at pre-retirement ages have been adversely affected by this change as their life expectancy at the State pension age has increased more than for other countries.

The long-term importance of ESG investing

In recent years there has been an increasing interest amongst many stakeholders in the pension and investment industries in the importance of environmental, social and governance (ESG) related issues.

For the development of robust and sustainable long-term pension systems, it has been suggested that it is appropriate for pension fund trustees and fiduciaries to take ESG factors into account when framing their investment strategy.

Hence, an additional question has been added to the sustainability sub-index:

- Is it a requirement for the trustees/fiduciaries to consider Environmental, Social and Governance (ESG) issues in developing their investment policies or strategies?

This requirement applies fully in respect of six systems whilst it applies to some extent within an additional four systems. This indicator represents an important signal for the future rather than an assessment of current retirement income systems. Hence its initial weighting in the sustainability sub-index is only 1% with a corresponding reduction in the importance of the economic growth indicator.

Pension benefits for carers

There is growing awareness around the world of the gender gap in respect of retirement benefits. For example, the OECD (2019a) noted that:

"Women's pensions are lower than men's. Older women often had short careers and lower wages than men's, resulting in low benefit entitlements."[6]

There are many reasons contributing to this gap and there is no single solution. Nevertheless, many women take time out of the workforce to provide care for young children, which provide broader benefits to the community. As a signal to the value of this service, a new question has been added to the adequacy sub-index:

- Does your retirement income system provide any additional contributions or benefits for parents who are caring for young children whilst the parent is not in the paid workforce?

For example, this may mean the continuation of pension contributions or additional pension benefits whilst on unpaid maternity leave. However, this indicator is not requiring a particular outcome. Rather it signals the importance of providing some future pension benefits whilst taking time out of the workforce for caring purposes. This type of benefit is provided in respect of 14 systems with an additional three systems providing some form of benefits.

The initial weighting of this question in the adequacy sub-index is 1% with a corresponding reduction in the importance of the indicator relating to sharing of pension assets following a divorce.

Updated OECD data

Since publication of the 2019 Global Pension Index, the OECD has published *Pensions at a Glance 2019 OECD and G20 Indicators* together with revised country profiles with updated pension benefits, replacement rates and coverage of funded and private pension plans for many pension systems. In particular, this new data has

- Updated the level of benefits paid as the basic pension which has significantly improved the Index value for Argentina and the Netherlands (to a lesser extent) whilst having a negative impact on the Index values for Austria and Ireland
- Recalculated the net replacements rates for every system which has had a negative impact on the Index values for several systems including Australia, Canada, Chile, China, Ireland, Japan, New Zealand and Poland
- Revised the proportion of the working age population that are members of private pension plans which improved the Index values for New Zealand and Spain
- Updated the level of private pension assets, improving the Index values for Finland and Norway but reducing the value for the USA

6 OECD (2019a), p21.

A comparison from 2019 to 2020

Table 4 compares the results for the 37 systems from 2019 to 2020. Comments in respect of each system are made in Chapter 5.

Table 4: Comparison index values for each system, including the three sub-indices

Country	Overall Index Value		Adequacy		Sustainability		Integrity	
	2019	2020	2019	2020	2019	2020	2019	2020
Argentina	39.5	42.5	43.1	54.5	31.9	27.6	44.4	44.4
Australia	75.3	74.2	70.3	66.8	73.5	74.6	85.7	85.5
Austria	53.9	52.1	68.2	64.4	22.9	22.1	74.4	74.6
Brazil	55.9	54.5	71.8	72.6	27.7	22.3	69.8	70.7
Canada	69.2	69.3	70.0	68.2	61.8	64.4	78.2	77.8
Chile	68.7	67.0	59.4	56.5	71.7	70.0	79.2	79.6
China	48.7	47.3	60.5	57.4	36.7	36.2	46.5	46.7
Colombia	58.4	58.5	61.4	62.5	46.0	45.5	70.8	70.5
Denmark	80.3	81.4	77.5	79.8	82.0	82.6	82.2	82.4
Finland	73.6	72.9	73.2	71.0	60.7	60.5	92.3	93.5
France	60.2	60.0	79.1	78.7	41.0	40.9	56.8	57.0
Germany	66.1	67.3	78.3	78.8	44.9	44.1	76.4	81.4
Hong Kong SAR	61.9	61.1	54.5	54.5	52.5	50.0	86.9	87.1
India	45.8	45.7	39.9	38.8	44.9	43.1	56.3	60.3
Indonesia	52.2	51.4	46.7	45.7	47.6	45.6	67.5	68.7
Ireland	67.3	65.0	81.5	74.7	44.6	45.6	76.3	76.5
Italy	52.2	51.9	67.4	66.7	19.0	18.8	74.5	74.4
Japan	48.3	48.5	54.5	52.9	32.2	35.9	60.8	59.2
Korea (South)	49.8	50.5	47.5	48.0	52.6	53.4	49.6	50.3
Malaysia	60.6	60.1	50.5	50.1	60.5	58.6	76.9	78.0
Mexico	45.3	44.7	37.5	36.5	57.1	55.8	41.3	42.2
Netherlands	81.0	82.6	78.5	81.5	78.3	79.3	88.9	88.9
New Zealand	70.1	68.3	70.9	63.8	61.5	62.9	80.7	82.9
Norway	71.2	71.2	71.6	73.4	56.8	55.1	90.6	90.3
Peru	58.5	57.2	60.0	59.5	52.4	49.2	64.7	64.6
Philippines	43.7	43.0	39.0	38.9	55.5	53.4	34.7	34.8
Poland	57.4	54.7	62.5	59.9	45.3	40.7	66.0	65.9
Saudi Arabia	57.1	57.5	59.6	59.6	50.5	51.6	62.2	62.4
Singapore	70.8	71.2	73.8	74.1	59.7	59.9	81.4	82.5
South Africa	52.6	53.2	42.3	43.0	46.0	46.7	78.4	78.3
Spain	54.7	57.7	70.0	71.0	26.9	27.5	69.1	78.5
Sweden	72.3	71.2	67.5	65.2	72.0	72.0	80.2	79.8
Switzerland	66.7	67.0	57.6	59.5	65.4	64.2	83.0	83.1
Thailand	39.4	40.8	35.8	36.8	38.8	40.8	46.1	47.3
Turkey	42.2	42.7	42.6	44.2	27.1	24.9	62.8	65.3
UK	64.4	64.9	60.0	59.2	55.3	58.0	84.0	83.7
USA	60.6	60.3	58.8	58.9	62.9	62.1	60.4	59.9
Average	**59.3**	**59.2**	**60.6**	**60.2**	**50.4**	**49.9**	**69.7**	**70.5**

The results show that the average score for the overall index has decreased by 0.1 with a decrease in the average adequacy sub-index of 0.4 and the average sustainability sub-index of 0.5. The adequacy sub-index decrease was mainly due to the updated OECD data mentioned above.

The reduction in the sustainability sub-index was primarily caused by a decline in the level of real economic growth in 2020 around the world caused by the COVID-19 pandemic. This pandemic is having an impact on all pension systems as discussed in the next Chapter.

In contrast to these two reductions, the average integrity sub-index increased by 0.8 primarily due to improved regulations in Germany, India and Spain.

CHAPTER 4

COVID-19 AND ITS IMPACT ON PENSION SYSTEMS AROUND THE WORLD

The COVID-19 pandemic has affected every country and we have seen a wide range of government responses to support their communities in terms of both their health and their finances. This diversity of approaches is also apparent when it comes to the different retirement income systems around the world, with a range of responses from governments, regulators, fiduciaries and individual members.

However, before we consider these diverse responses, let's step back and review the purpose of retirement income systems. In brief, these systems exist to enable workers to retire and, through the receipt of income from their pension plan and government, live their final years with dignity and confidence. Some systems are predominantly pay-as-you-go government pensions whereas other systems provide most of the income from pre-funded private pension programs, subject to regulatory oversight. Of course, many systems are a mix with both types of arrangements operating.

Whatever the system, COVID-19 has changed the landscape and will affect the provision of pensions for decades to come.

The immediate impact

The onset of the global pandemic has had several immediate effects which are already visible and will have some long term impacts on pension provision. These include:

- A significant devaluation of asset values in the first quarter of 2020. Although there has been a recovery in most markets since then, the value of pension fund assets in many markets may be lower at the end of 2020 than at the beginning of the year
- A reduction in the level of regular income provided by many assets due to record low interest rates, reduced company dividends and lower rentals from property investments
- Higher unemployment in many industries (often impacting those industries with greater numbers of lower/middle income earners) which will lead to a reduction in the level of contributions into pension arrangements, whether they be Social Security or private pension plans
- Some employers struggling to continue paying their pension contributions
- Reduced mobility of labour due to various restrictions and an increased ability to work remotely in many industries
- Higher government debt due to the income and other support measures provided during the pandemic which could lead to a reduction in the level of Government pensions in the future
- Investment switching behaviour by some individuals in defined contribution plans. The most common behaviour was a switch from growth assets to cash and other defensive assets, following the market fall. This behaviour often crystallises a loss that might otherwise have been recovered over time and thereby reduces the value of assets available for future benefits
- The early withdrawal of accrued pension benefits in some jurisdictions to provide financial support to those who have suffered reductions in their employment income during the pandemic
- Increased insurance costs which will reduce the funds available for retirement in some systems
- Increases in the cost of Government pensions, particularly where they are means-tested, as the retirement benefits available from private pension plans will be reduced due to the factors mentioned above

Each of these effects is likely to have a negative effect on the provision of future retirement income which may lead to some of the following outcomes:

- A lower standard of living in retirement, particularly for existing pensioners and those approaching retirement
- A deterioration in the funding position of most defined benefit schemes which, in some cases, may lead to their closure and development of defined contribution arrangements
- A deterioration in the liquidity position of some defined contribution schemes due to member switching causing the sale of some assets at reduced prices
- A decision by some individuals to defer retirement and thereby make up their pension shortfall through additional years in the labour force
- The need to increase pension contributions in the future with a corresponding reduction in current consumption which will have economic effects
- An attempt by some plan members to increase the rate of their investment return by increasing the level of risk within their investment portfolio

There is no doubt that the short and medium term outlook has changed. Yet, the OECD recently commented that:

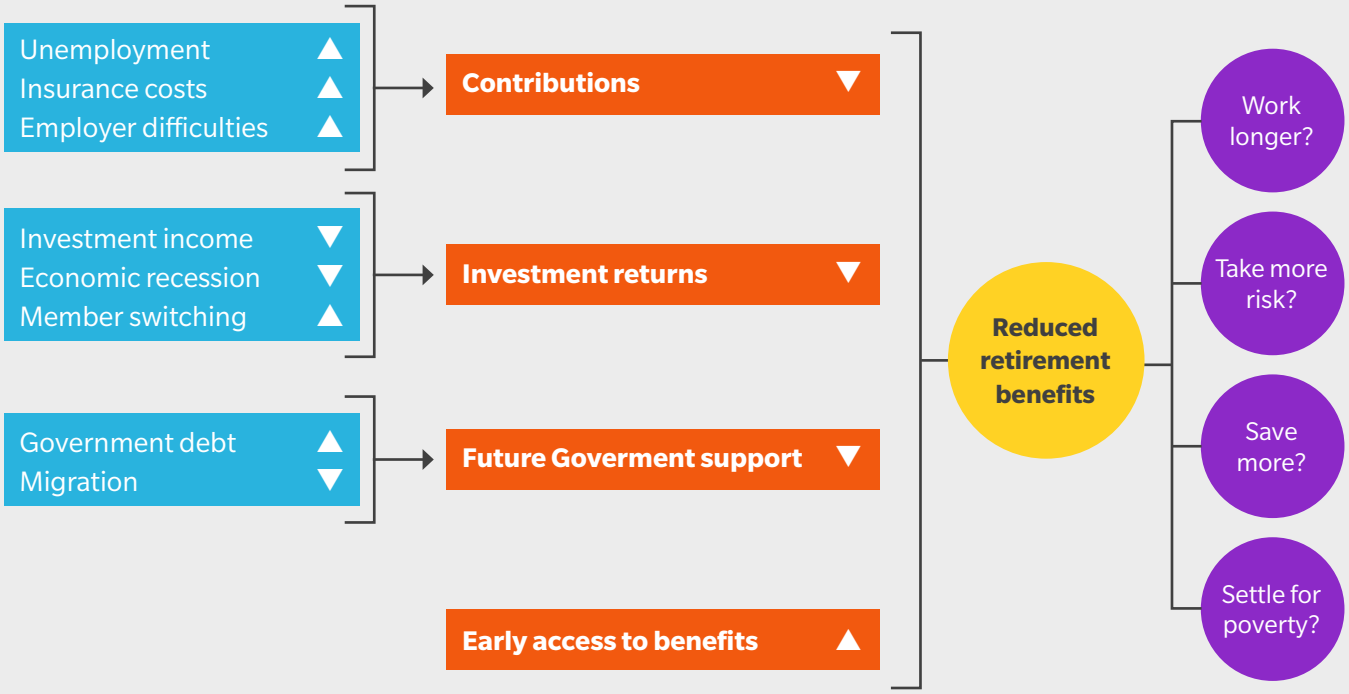
"Saving for retirement is for the long haul and financial losses can be recouped over the long term, unless assets are withdrawn prematurely."[7]

"Policy makers should communicate to members the importance of staying the course, keeping long term investment plans."[8]

Of course, this is not necessarily true for everyone. The financial position of many retirees and those approaching retirement has deteriorated. In addition, the financial hardships of many employees during 2020 have had both significant short term consequences as well as longer term implications for their retirement plans and future pension. Given the widespread impact of the pandemic, it is not surprising that Governments, pension regulators, individual members and plan fiduciaries have responded to the unusual events of 2020.

7 OECD (2020a), *Pension Fund in Figures*, June.
8 OECD (2020b), *Retirement savings in the time of COVID-19*, 22 June

Figure 3: A diagram of potential effects from COVID-19



Decisions by Governments

In light of COVID-19, there have been a range of decisions made by some Governments in respect of their retirement income systems whereas other Governments have left their system unchanged, notwithstanding some of the effects mentioned earlier.

The simplest response was to increase the level of Government support received by the older population which could act as an economic stimulus to encourage further spending within a depressed economy. This approach occurred in Australia with a means-tested bonus payment; in India with an ex gratia payment; in New Zealand with a doubling of the winter energy payment; and in Turkey with an increase in the State pension.

The provision of these additional benefits to retirees was designed to increase their spending and so stimulate the economy. On the other hand, given that these payments were often paid during a lockdown, their short term effectiveness may be questioned.

Another way of providing additional spending money to support the economy was to enable pension plan members to access their accrued benefit to a greater extent than is normally permitted. For example, Australia enabled individuals whose income had dropped by more than 20% to access up to AUD 20,000 (approximately USD 14,000) from their pension assets while India allowed partial withdrawals for COVID-19 treatment and a payment from the Pension Fund account not exceeding three months' wages and allowances. In Peru workers were permitted to withdraw up to 25% of their savings from their individual accounts, with a limit of 12,900 soles (USD 3,685) while Chile allowed active contributors to voluntarily withdraw 10% of their individual pension funds, with a maximum of USD 5,600.

Another approach was adopted in Spain where eligible participants could receive a benefit equal to the lesser of an amount related to their lost wages and a Government formula. In contrast to these limits, the United States permitted distributions of up to USD 100,000 to qualified individuals from eligible retirement plans, together with favourable tax treatment.

These examples raise the question of the purpose of a funded retirement income system and whether, in extreme circumstances, a limited portion of the assets accrued by an individual should be available before retirement. There is no single answer to this question but the prefunding of pensions provides the opportunity to ease the financial pressures on pension plan members in such circumstances. On the other hand, easy access to an accrued benefit is a very attractive option for many individuals, who may have limited understanding of its impact on their future retirement benefit. Therefore, as the International Organisation of Pension Supervisors (IOPS) notes the:

"early access to pension savings should be limited, temporary and proportionate to actual needs".[9]

The OECD goes even further by commenting that:

"Access to retirement savings should remain an exceptional measure based on individual specific circumstances and based on regulations already in place for that purpose."[10]

It is interesting to note that the top two retirement income systems in this report, namely the Netherlands and Denmark, have not permitted early payments, even though the assets of each pension system are more than 150% of the country's GDP.

A third way of providing additional funds was to reduce the level of contributions that would normally be payable to the pension arrangements. For example, in Indonesia the Social Security contribution rate was cut from 2.0% to 0.2% from May to July 2020 and in Thailand the 5% contribution required from both employers and employees was reduced to 4% and 1% respectively for three months. In Colombia, affiliates to a private pension scheme were able to opt for a reduction of their contributions for two months from 16% to 3% while in Peru the employer did not deduct a pension contribution of 13% of salary during April and May 2020.

In Singapore the scheduled increase in contribution rates for older workers was deferred one year to January 2022.

These reductions in the level of contributions for the short term are likely to have less significant long-term consequences for individuals compared to the withdrawal of accrued benefits.

Many Governments also provided additional benefits to those who became unemployed or suffered reduced income. In many cases, these income benefits were income only and had no associated pension provision component. However, in the Netherlands, the Government supported affected employers with compensation of up to 90% of wages plus a supplement of 30% for employer expenses including pension premiums payable by both the employer and employees. The supplement was increased to 40% in June 2020. This provision of pension premiums as part of the Government support means that the funding of future retirement benefits is maintained during the crisis. The United Kingdom also provided support for pension contributions although it was limited to the mandatory employer contribution of 3% of salary above the lower limit of qualifying earnings.

Decisions and actions by regulators

Pension regulators have made many pragmatic decisions to ease the burden of the above COVID-19 impacts on funded pension schemes. Indeed, the IOPS recognises the relevance of easing some regulatory constraints and providing temporary relief from certain requirements.[11] However it is also noted that in many jurisdictions the scope of the regulator to ease some regulations or requirements is limited by legislation.

A common action was to defer deadlines for various reporting and other requirements. For example, Canada extended the deadlines for certain actions and annual filing requirements; Denmark relaxed the deadlines for the publication of reports and shareholder meetings; New Zealand extended the deadline for financial and member statements by two months; Spain extended the deadline for the fund's annual reports; and Thailand delayed the requirement for audited financial statements by 240 days.

9 IOPS (2020), IOPS Statement on pension supervisory actions to mitigate the consequences of the Covid-19 crisis, 26 May, p2.
10 OECD (2020b), *Retirement savings in the time of COVID-19*, 22 June.
11 IOPS (2020), op. cit. .

This easing of previous requirements was also evident in the easing of responses relating to certain compliance breaches in many jurisdictions, including the UK.

The funding requirements for defined benefit schemes were also eased in some countries. For example, many Canadian provinces announced moratoriums for the remainder of 2020 on the funding of pension deficits; Germany deferred payments required of employers to limit underfunding to 10% of the technical provisions until 2021; whilst the United States deferred any minimum contributions required in 2020 until 2021. The UK regulator also eased some of its requirements for DB funding although it noted that they do not expect trustees to unquestioningly extend the original suspension arrangements. Rather, they now expect that most trustees will be able to undertake due diligence on the employer's financial position before agreeing to a new suspension or reduction in employer contributions.

In South Africa the boards of pension funds were required to consider any requests for the suspension or reduction of employer contributions. However, funds must attempt to ensure that full risk premiums continue to be paid in order to ensure that the risk benefits continue to be provided.

The European Insurance and Occupational Pensions Authority noted that regulators should monitor the liquidity position of pension funds in the current environment due to reduced contributions; the potential need to cover cash margin calls on derivative hedging positions; reduced dividend payments from equity investments; a possible moratorium on payments on loans and mortgages; and difficulties in selling assets under current market circumstances.[12]

This concern was also seen in Australia where the regulator increased its surveillance relating to fund liquidity, particularly given the member switching of assets and the early release of benefits, which was accessed by more than one fifth of the workforce. Liquidity was also a concern in Canada where the regulator temporarily prohibited all portability transfers and annuity purchases relating to defined benefit provisions of pension plans. Most provinces also announced restrictions on transfers of lump sums from pension plans upon termination of employment. Another approach occurred in Brazil where the regulator required trustees to review their investment policy.

Decisions by plan members

Common behaviour by many pension plan members during a financial crisis is a flight to safety, often occurring after the share market has crashed. These actions are often available to individuals with personal accounts in defined contribution (DC) plans or mutual funds. On the other hand, members in defined benefit funds with the backing of an employer sponsor, are not able to respond in this manner.

Members switching to cash and other conservative investments options was seen in DC plans in Australia, Indonesia, Ireland, New Zealand and the United States; there was also a switch to gold-based investments in Turkey. Interestingly, as the share market recovered (at least to some extent), the evidence is that some of these members have switched back into equities, probably prompted by the very low interest rates available on cash investments.

As greater responsibility is given to individuals in many retirement income systems, this often comes with the ability to make investment decisions and switch between asset classes. It is therefore to be expected that in times of financial crisis, there will be a movement towards safer investments, even though over the longer term this may not be a wise decision. Hence, the need for sound member education and good communication from pension funds is highlighted at such times.

12 EIOPA (2020), Statement on principles to mitigate the impact of Coronavirus/COVID-19 on the occupational pensions sector in Europe, 17 April.

Plan trustees and fiduciaries

Naturally, the significant responses from the financial markets to the pandemic have caused pension plan trustees and fiduciaries to review their asset allocation and investment strategy. In most cases, the reaction has not been dramatic. Rather they have adopted the longer term view, whilst keeping a close watch on economic developments. Nevertheless there have been two developments that have been seen in some countries.

The first is some adjustments to their asset selection with a greater emphasis on equities that have less volatility as well as increased diversification, including more liquid infrastructure investments. This is consistent with a more cautious and risk-averse approach which has been the general approach around the world.

The second is a greater focus on liquidity, particularly in markets where there has been a significant reduction in investment income, a greater level of member switching to conservative assets or a higher level of benefit payments.

The COVID-19 experience has highlighted the important role that risk management should play in the responsibilities of trustees and fiduciaries. In particular, they should "expect the unexpected" and explore the implications and develop possible responses to a range of scenarios that may not have occurred previously. After all, being underprepared is no excuse, when these events occur.

The future

COVID-19 has changed many aspects of the world as we knew it. Some of these changes will be for the short term whereas others are likely to be longer lasting. COVID-19's impact on economic activity, financial markets, employment practices and possibly life expectancies will affect the provision of retirement incomes for many years, if not decades.

In addition to the immediate impact on real economic growth, which is already reflected in this report, it is likely there will be other negative impacts on future index scores for many retirement income systems. These may include:

- Reduced Social Security pensions as governments respond to increasing debt thereby reducing net replacement rates
- Reduced pension coverage in the private sector (where it is voluntary) as some employers seek to reduce costs as part of their recovery plan
- Reduced growth in pension plan assets and the subsequent benefits due to lower real investment returns, increased insurance premiums, reduced contributions and earlier retirement due to fewer employment opportunities or longer term personal consequences from the pandemic
- Greater leakage from pension plans prior to retirement if the rules allowing earlier access are maintained or weakened from the previous requirements
- An increase in the rate of population aging in some countries due to decreased immigration

Yet, the fundamental purpose of pension programs has not changed. Most individuals will continue to spend many years earning an income and, at some point, leave the workforce and move into their retirement years. Whilst the actual point and form of retirement is likely to become more flexible, the need for a sustainable system that provides an adequate level of retirement income has not disappeared. Hence the principles for a sound and robust retirement system as outlined in CFA Institute (2015) remain. They are:

- Clear objectives for the overall system
- A minimum level of a Government pension
- A minimum level of funding before retirement for those with employment
- Flexibility in the system as employment conditions change
- Limited leakage from the funded system before retirement
- An income focus in the benefit design
- Good pension plan governance together with appropriate prudential and market regulation

These have not changed. In fact, they are now more important than ever, given the uncertainties in the post-COVID-19 world.

CHAPTER 5
A BRIEF REVIEW OF EACH SYSTEM

This chapter provides a brief summary of each retirement income system in this study, together with some suggestions that would — if adopted — raise the overall index value for that system. Of course, whether such developments are appropriate in the short term depend on the current social, political and economic situation. Where relevant, a brief comment is also made about the change in the system's index value from 2019 to 2020.

As detailed in Chapter 3, many of these changes were due to revisions to some data used in the adequacy sub-index as well as improvements to the sustainability sub-index.

Global Grades

Figure 4

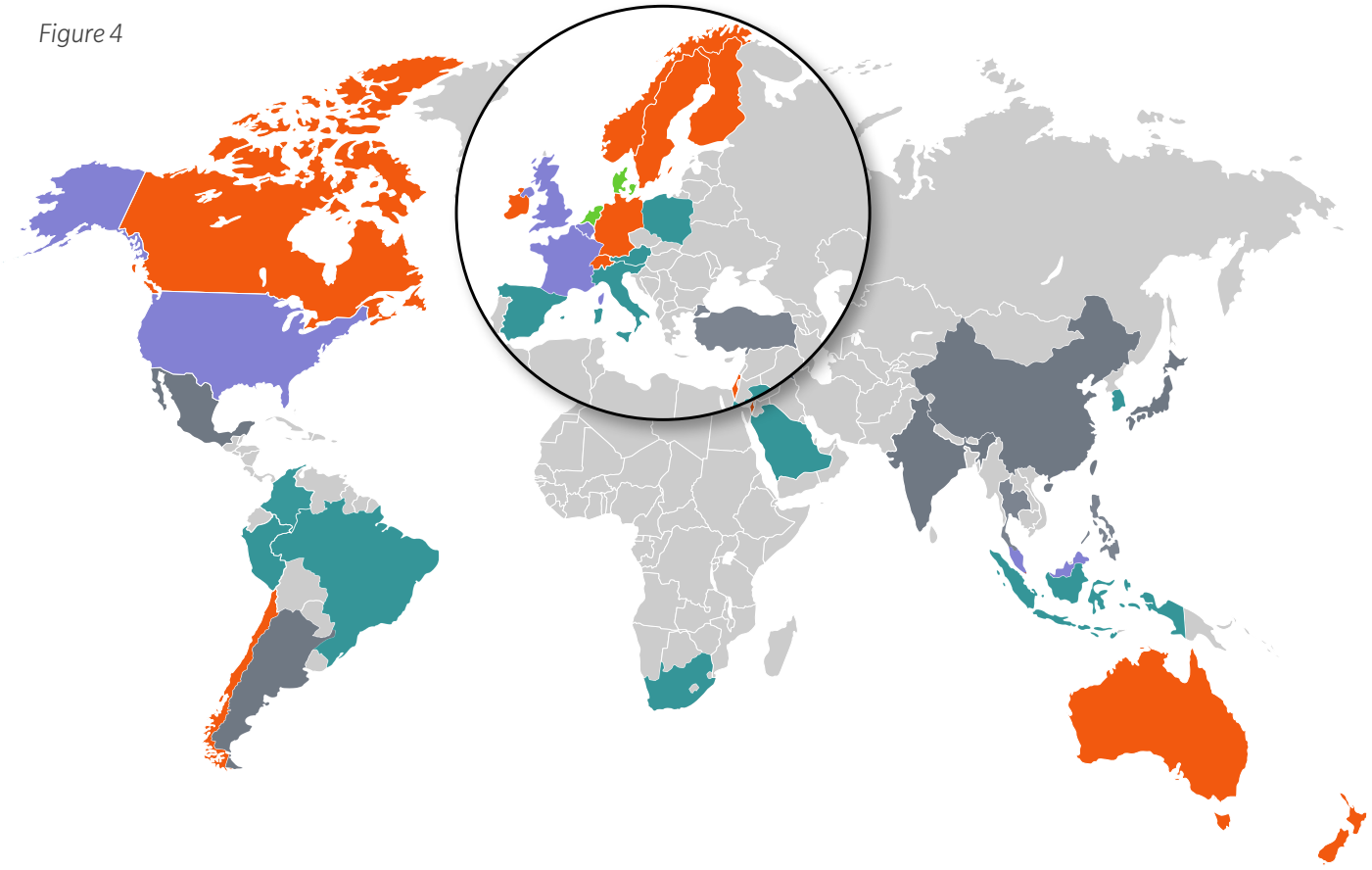


Table 5: Summary of the 2020 results

Grade	Index Value	Countries		Description
A	>80	Denmark Netherlands		A first class and robust retirement income system that delivers good benefits, is sustainable and has a high level of integrity.
B+	75–80			A system that has a sound structure, with many good features, but has some areas for improvement that differentiates it from an A-grade system.
B	65–75	Australia Canada Chile Finland Germany Ireland Israel	New Zealand Norway Singapore Sweden Switzerland	
C+	60–65	Belgium France Hong Kong SAR Malaysia	UK USA	A system that has some good features, but also has major risks and/or shortcomings that should be addressed. Without these improvements, its efficacy and/or long-term sustainability can be questioned.
C	50–60	Austria Brazil Colombia Indonesia Italy Korea (South)	Peru Poland Saudi Arabia South Africa Spain	
D	35–50	Argentina China India Japan	Mexico Philippines Thailand Turkey	A system that has some desirable features, but also has major weaknesses and/or omissions that need to be addressed. Without these improvements, its efficacy and sustainability are in doubt.
E	<35	Nil		A poor system that may be in the early stages of development or non-existent.

Argentina

Argentina's retirement income system comprises a pay-as-you-go social security system together with voluntary occupational corporate and individual pension plans which may be offered through employer book reserves, insurance companies or pension trusts.

The overall index value for the Argentinian system could be increased by:

- Continuing to increase the pension available to the poorest aged individuals
- Increasing coverage of employees in occupational pension schemes through automatic membership or enrolment, thereby increasing the level of contributions and assets
- Introducing a minimum level of mandatory contributions into a retirement savings fund
- Improving the regulatory requirements for the private pension system

The Argentinian index value increased from 39.5 in 2019 to 42.5 in 2020 due to an increase in the minimum pension and an updated figure for growth assets in the adequacy sub-index.

Australia

Australia's retirement income system comprises a means-tested age pension (paid from general government revenue); a mandatory employer contribution paid into private sector arrangements (mainly DC plans); and additional voluntary contributions from employers, employees or the self-employed paid into private sector plans.

The overall index value for the Australian system could be increased by:

- Moderating the assets test on the means-tested age pension to increase the net replacement rate for average income earners
- Raising the level of household saving and reducing the level of household debt
- Introducing a requirement that part of the retirement benefit must be taken as an income stream
- Increasing the labour force participation rate at older ages as life expectancies rise
- Introducing a mechanism to increase the pension age as life expectancy continues to increase

The Australian index value decreased from 75.3 in 2019 to 74.2 in 2020 primarily due to a reduction in the net replacement rates published by the OECD.

Austria

Austria's retirement income system consists of a hybrid defined benefit public scheme with an income-tested top-up for low-income pensioners and voluntary private pension plans.

The overall index value for the Austrian system could be increased by:

- Introducing a minimum access age so that the benefits from private pension plans are preserved for retirement purposes
- Increasing coverage of employees in occupational pension schemes thereby increasing the level of contributions and assets (which could be done by collective bargaining agreements or tax effective regulation)
- Increasing the labour force participation rate at older ages.

The Austrian index value decreased from 53.9 in 2019 to 52.1 in 2020 primarily due a reduction in the minimum pension as reported by the OECD.

Belgium

Belgium's retirement income system comprises of public, occupational and private pension schemes. The public pension scheme is earnings-related, and has a means-tested safety net. Voluntary private pension arrangements are typically operated by insurance companies.

The overall index value for the Belgian system could be increased by:

- Increasing the level of household savings and reducing the level of household debt
- Introducing a requirement that part of the retirement benefit must be taken as an income stream
- Increasing coverage of the private pension arrangements
- Introducing a minimum level of mandatory contributions into a retirement savings fund
- Increasing the labour force participation rate at older ages as life expectancies rise

The Belgian index value for 2020 is 63.4.

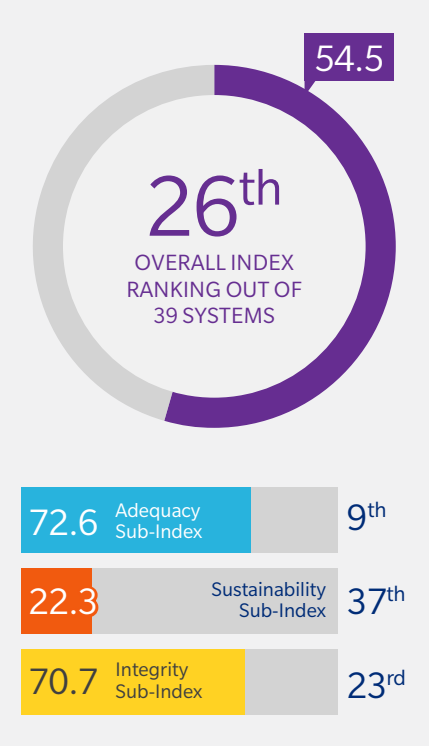
Brazil

Brazil's retirement income system comprises a pay-as-you-go social security system with higher replacement rates for lower income earners; and voluntary occupational corporate and individual pension plans which may be offered through insurance companies or pension trusts.

The overall index value for the Brazilian system could be increased by:

- Introduce automatic adjustments to the normal social security retirement age by linking it to the changes in life expectancy
- Introducing a minimum level of mandatory contributions into a retirement savings fund
- Increasing coverage of employees in occupational pension schemes through automatic membership or enrolment, thereby increasing the level of contributions and assets
- Introducing a minimum level of mandatory contributions into a private retirement savings fund
- Enabling individuals to retire gradually whilst receiving a part pension
- Introducing arrangements to protect the pension interests of both parties in a divorce

The Brazilian index value decreased from 55.9 in 2019 to 54.5 in 2020 due to a reduction in the sustainability sub-index primarily caused by the life expectancy changes described in Chapter 3 and the lower real economic growth rate in 2020. The new social security legislation implemented this year is expected to improve Brazil's score in the future.



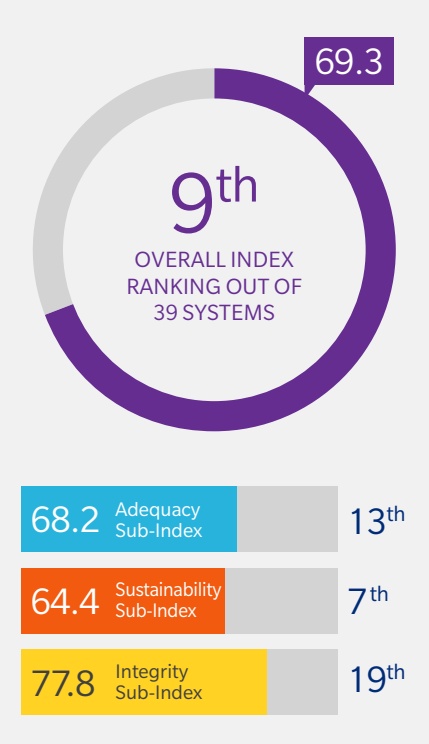
Canada

Canada's retirement income system comprises a universal flat-rate pension, supported by a means-tested income supplement; an earnings-related pension based on revalued lifetime earnings; voluntary occupational pension schemes (many of which are defined benefit schemes); and voluntary individual retirement savings plans.

The overall index value for the Canadian system could be increased by:

- Increasing the coverage of employees in occupational pension schemes through the development of an attractive product for those without an employer-sponsored scheme
- Increasing the level of household savings and reducing the level of household debt
- Reducing government debt as a percentage of GDP
- Increasing the labour force participation rate at older ages as life expectancies rise

The Canadian index value increased slightly from 69.2 in 2019 to 69.3 in 2020 due to several improvements in the sustainability sub-index which were largely offset by the decrease in the adequacy sub-index with reductions in the net replacement rates published by the OECD.



Chile

Chile's retirement income system comprises means-tested social assistance; a mandatory privately-managed defined contribution system based on employee contributions with individual accounts managed by a small number of Administradoras de Fondos de Pensiones (AFPs); and a framework for supplementary plans sponsored by employers (the APVC schemes).

The overall index value for the Chilean system could be increased by:

- Increasing the minimum level of support for the poorest aged individuals
- Increasing the retirement age for women
- Introduce a minimum age for access to retirement benefits from private pensions
- Requiring annual reports of pension plans to be made available to all members

The Chilean index value decreased from 68.7 in 2019 to 67.0 in 2020 primarily due to reductions in the net replacement rates published by the OECD and a decline in the real economic growth for 2020.

China

China's retirement income system comprises an urban system and a rural social system as well as systems for rural migrants and public sector workers. The urban and rural systems have a pay-as-you-go basic pension consisting of a pooled account (from employer contributions or fiscal expenditure) and funded individual accounts (from employee contributions). Supplementary plans are also provided by some employers, more so in urban areas.

The overall index value for the Chinese system could be increased by:

- Increasing the minimum level of support for the poorest aged individuals
- Continuing to increase the coverage of workers in pension systems
- Introducing a requirement that part of the supplementary retirement benefit must be taken as an income stream
- Increasing the state pension age over time
- Offering more investment options to members and thereby permitting a greater exposure to growth assets
- Improving the level of communication required from pension plans to members

The Chinese index value decreased from 48.7 in 2019 to 47.3 in 2020 primarily due to reductions in the net replacement rates published by the OECD.

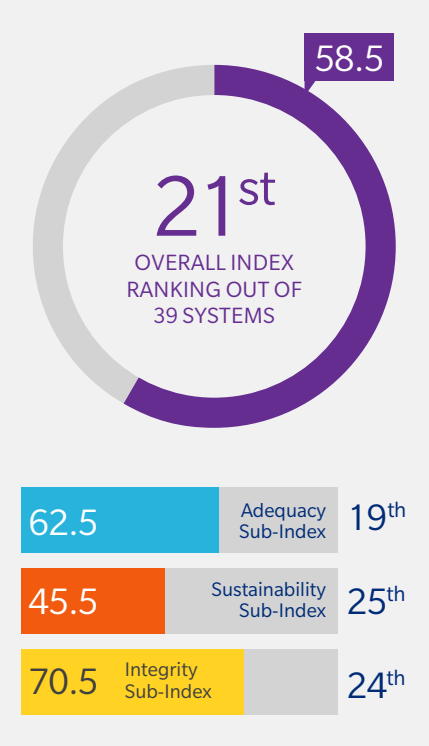
Colombia

Colombia's retirement income system comprises a means-tested pension paid to the needy (BEPS & Colombia Mayor); and two parallel and mutually exclusive pension systems. The first of these is a pay-as-you-go defined benefit plan and the second is a system of funded individual accounts offered through qualified financial institutions; individuals can make additional voluntary contributions in order to increase retirement benefits and/or reduce taxes. An employee elects to join one system although there is the option to change later, within certain restrictions. The employer and employee contribution rates are the same for both systems.

The overall index for the Colombian system could be increased by:

- Increasing the minimum level of support for the poorest aged individuals
- Raising the level of household saving
- Increasing coverage of employees in the pension schemes
- Raising the state pension age over time

The Colombian index value increased slightly from 58.4 in 2019 to 58.5 in 2020 due to a small rise in the adequacy offset by small falls in the other two sub-indices.



Denmark

Denmark's retirement income system comprises a public basic pension scheme, a means-tested supplementary pension benefit, a fully funded defined contribution scheme and mandatory occupational schemes.

The overall index value for the Danish system could be increased by:

- Raising the level of household saving and reducing household debt
- Introducing arrangements to protect the interests of both parties in a divorce
- Providing greater transparency of pension plans through annual public reports

The Danish index value increased from 80.3 in 2019 to 81.4 in 2020 with small increases in each sub-index.

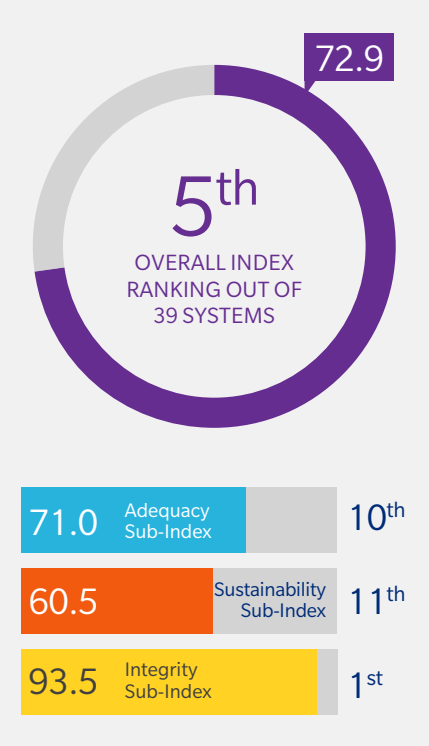
Finland

Finland's retirement income system consists of a basic state pension, which is pension income-tested, and a range of statutory earnings-related schemes.

The overall index value for the Finnish system could be increased by:

- Raising the level of household saving and reducing household debt
- Continuing to raise the level of mandatory contributions that are set aside for the future
- Introducing arrangements to protect the pension interests of both parties in a divorce
- Increasing the labour force participation rate at older ages as life expectancies rise

The Finnish index value decreased from 73.6 in 2019 in 72.9 in 2020 primarily due to a reduction in the minimum pension as reported by the OECD.



France

France's retirement income system comprises an earnings-related public pension with a minimum pension level; two mandatory occupational pension plans for blue and white collar workers which merged on the 1 January 2019 (AGIRC-ARRCO); and voluntary occupational plans.

The overall index value for the French system could be increased by:

- Increasing the level of funded contributions thereby increasing the level of assets over time
- Increasing the state pension age
- Increasing the labour force participation rate at older ages as life expectancies rise.
- Improving the regulatory requirements for the private pension system

The French index value decreased slightly from 60.2 in 2019 to 60.0 in 2020 with small movements in each sub-index.

Germany

Germany's retirement income system comprises an earnings-related pay-as-you-go system based on the number of pension points earned during an individual's career; a means-tested safety net for low-income pensioners; and supplementary pension plans which are common amongst major employers. These plans typically adopt either a book reserving approach, with or without segregated assets, or an insured pensions approach.

The overall index value for the German system could be increased by:

- Increasing the level of funded contributions thereby increasing the level of assets over time
- Increasing the minimum pension for low-income pensioners
- Increasing coverage of employees in occupational pension plans

The German index value increased from 66.1 in 2019 to 67.3 in 2020 primarily due to the new requirement for plan members to receive an annual statement showing their current personal benefit and a projection of their retirement benefit.

Hong Kong SAR

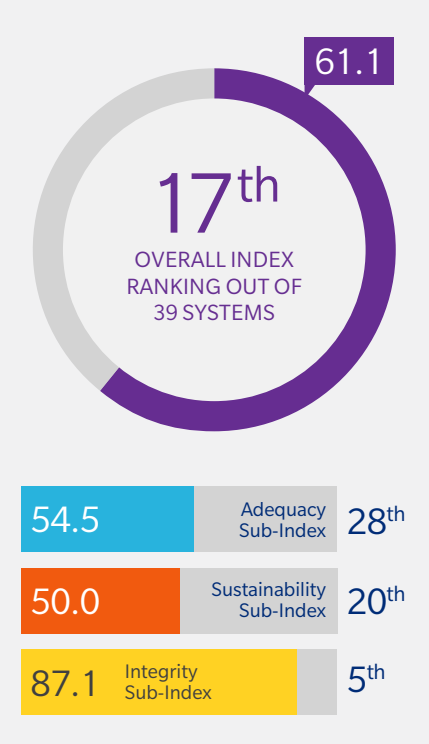
Hong Kong's retirement income system consists of mandatory provident funds where employers, most employees and the self-employed are each required to make mandatory contributions of 5% of relevant income to the MPF scheme, subject to minimum and maximum relevant income levels. Over the years, voluntary contributions have been increasing and a tax-deductible voluntary contribution was also launched in April 2019 to promote retirement savings. Scheme members who have reached the age of 65, or who have reached the age of 60 and have decided to retire early can choose to either withdraw their MPF benefits in lump sum or by instalments or retain all their MPF benefits in their accounts for continuous investment.

Post retirement fund or products are developing recently and an official retirement income fund has just launched at the same time.

The overall index value for the Hong Kong SAR system could be increased by:

- Introducing a requirement that part of the retirement benefit must be taken as an income stream
- Increasing the level of household savings and reducing the level of household debt
- Increasing the labour force participation rate at older ages as life expectancies rise
- Introducing requirements to protect all the pension interests of both parties in a divorce

The index value for Hong Kong SAR decreased from 61.9 in 2019 to 61.1 in 2020 primarily due to a fall in the real economic growth rate for 2019 and 2020.



India

India's retirement income system comprises an earnings-related employee pension scheme, a defined contribution employee provident fund, and supplementary employer managed pension schemes that are largely defined contribution in nature.

Government schemes have been launched as part of universal social security program aimed at benefiting the unorganised sector. The EPFO's schemes continue to be the primary one for the organized sector. The National Pension System is gradually gaining popularity.

The overall index value for the Indian system could be increased by:

- Introducing a minimum level of support for the poorest aged individuals
- Increasing coverage of pension arrangements for the unorganised working class
- Introducing a minimum access age so that it is clear that benefits are preserved for retirement purposes
- Improving the regulatory requirements for the private pension system
- Increasing the level of contributions in statutory pension schemes

The Indian index value decreased slightly from 45.8 in 2019 to 45.7 in 2020. The increase in the integrity sub-index due to some new regulations was offset by the small falls in both the adequacy and sustainability sub-indices.

Indonesia

Indonesia's retirement income system comprises earnings-related civil service pensions, mandatory defined contribution plans for private sector workers and voluntary defined contribution plans for other workers. The national pension scheme provides a defined benefit scheme funded through employer and employee contributions of a fixed percentage of the monthly salary.

The overall index value for the Indonesian system could be increased by:

- Introducing a minimum level of support for the poorest aged individuals
- Increasing coverage of employees in occupational pension schemes thereby increasing the level of contributions and assets
- Improving the regulatory requirements for the private pension system
- Improving the required level of communication to members from pension arrangements
- Increasing the pension age as life expectancy continues to increase

The Indonesian index value fell slightly from 52.2 in 2019 to 51.4 in 2020 primarily due to a reduction in the net replacement rates published by the OECD and the life expectancy changes described in Chapter 3.

Ireland

Ireland's retirement income system comprises a flat-rate basic social security scheme and a means-tested benefit for those without sufficient social insurance contributions. Voluntary occupational pension schemes and personal pension schemes provide supplementary income in retirement but currently only cover about 60% of the working population.

The overall index value for the Irish system could be increased by:

- Continuing to increase coverage of employees in occupational pension schemes thereby increasing the level of contributions and assets
- Introducing a minimum level of mandatory contributions into a retirement savings fund thereby increasing the level of assets
- Improving the regulatory requirements for private pension plans
- Providing greater protection of members' accrued benefits in the case of fraud or mismanagement within the fund
- Reducing government debt as a percentage of GDP

The Irish index value decreased from 67.3 in 2019 to 65.0 in 2020 primarily due to reductions in the minimum pension and the net replacement rates published by the OECD.

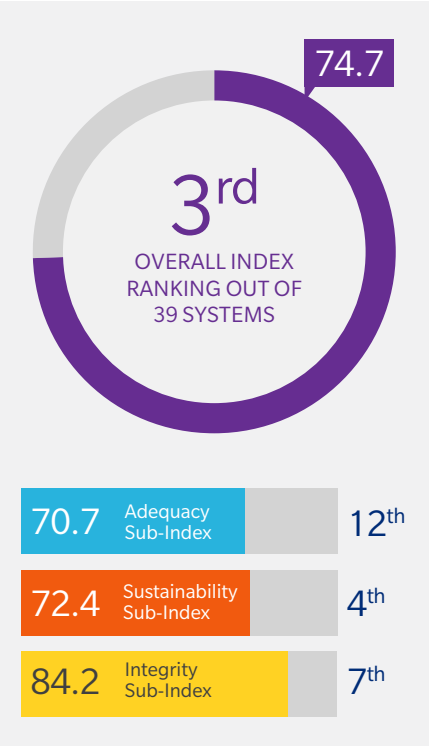
Israel

Israel's retirement income system comprises of a universal state pension and private pensions with compulsory employer and employee contributions. In most cases annuities are paid from the private pension system.

The overall index value for the Israeli system could be increased by:

- Increasing the level of assets held in private pension arrangements, lowering the reliance on the public system
- Reducing government debt as a percentage of GDP
- Introducing protection for members of private pension plans in the event of mismanagement or fraud

The Israeli index value for 2020 is 74.7.



Italy

Italy's retirement income system comprises a notional defined contribution scheme for workers and a minimum means-tested social assistance benefit. Voluntary supplementary occupational schemes also exist; however coverage is low but gradually increasing.

The overall index value for the Italian system could be increased by:

- Increasing coverage of employees in occupational pension schemes thereby increasing the level of contributions and assets
- Continuing to raise the labour force participation rate at older ages as life expectancies rise
- Restricting the availability of benefits before retirement (other than bridge pensions)
- Reducing government debt and government spending on pensions as a percentage of GDP

The Italian index value decreased slightly from 52.2 in 2019 to 51.9 in 2020 primarily due to the reduction in the real economic growth rate for 2020.

Japan

Japan's retirement income system comprises a flat-rate basic pension; an earnings-related pension; and voluntary supplementary pension plans.

The overall index value for the Japanese system could be increased by:

- Raising the level of household saving
- Continuing to increase the level of pension coverage and hence the level of contributions and assets
- Introducing a requirement that part of the retirement benefit must be taken as an income stream
- Announcing a further increase in the state pension age as life expectancy continues to increase
- Reducing government debt and spending on pensions as a percentage of GDP

The Japanese index value increased slightly from 48.3 in 2019 to 48.5 in 2020. An improvement in the sustainability sub-index was largely offset by a reduction in the net replacement rates published by the OECD.

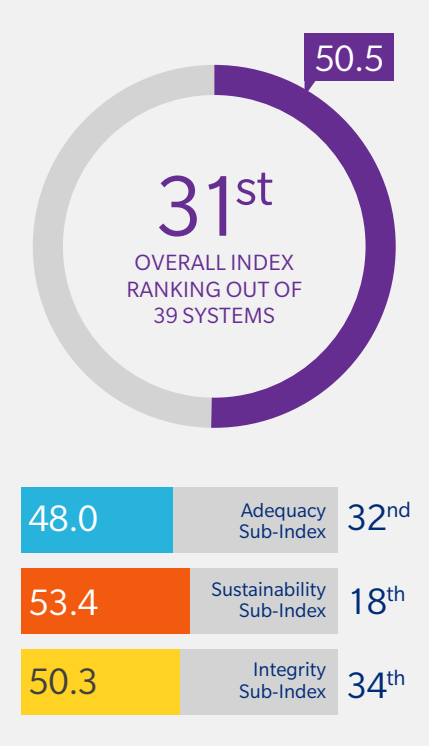
Korea (South)

Korea's retirement income system comprises a public earnings-related pension scheme with a progressive formula, based on both individual earnings and the average earnings of the insured as a whole, and statutory private pension plans.

The overall index value for the Korean system could be increased by:

- Improving the adoption of ERSA scheme plans
- Improving the level of support provided to the poorest pensioners
- Introducing a requirement that part of the retirement benefit from private pension arrangements must be taken as an income stream
- Increasing the level of funded contributions thereby increasing the level of assets over time
- Improving portfolio diversification and thereby increase the level of growth assets
- Improving the governance requirements for the private pension system

The Korean index value increased from 49.8 in 2019 to 50.5 in 2020 due a small improvement in each sub-index.



Malaysia

Malaysia's retirement income system is based on the Employee Provident Fund (EPF) which covers all private sector employees and non-pensionable public sector employees. Under the EPF, some benefits are available to be withdrawn at any time (under pre-defined circumstances including education, home loans, or severe ill health) with other benefits preserved for retirement.

The overall index value for the Malaysian system could be increased by:

- Increasing the minimum level of support for the poorest aged individuals
- Raising the level of household saving and lowering the level of household debt
- Introducing a requirement that part of the retirement benefit must be taken as an income stream
- Increasing the pension age as life expectancy continues to increase

The Malaysian index value decreased from 60.6 in 2019 to 60.1 in 2020 due to several small movements in the sustainability sub-index.

Mexico

Mexico's retirement income system comprises a mandatory and funded scheme which is in transition since 1997 from a defined benefit to a defined contribution scheme for private companies and a 2007 transition from a defined benefit into a defined contribution scheme for government employees; these schemes include a minimum public pension and in some cases non mandatory supplemental private sector plans.

From 2019 there is a new universal retirement pension that is paid to all Mexicans from age 68

The overall index value for the Mexican system could be increased by:

- Introducing a requirement that part of the retirement benefit from private pension arrangements must be taken as an income stream
- Increasing the level of funded contributions thereby increasing the level of assets over time
- Improving the governance requirements for the private pension system, including the need for minimum levels of funding in defined benefit plans
- Improving the level of communication required to members from pension plans

The Mexican index value decreased from 45.3 in 2019 to 44.7 in 2020 due to several small movements in the adequacy and sustainability sub-indices.

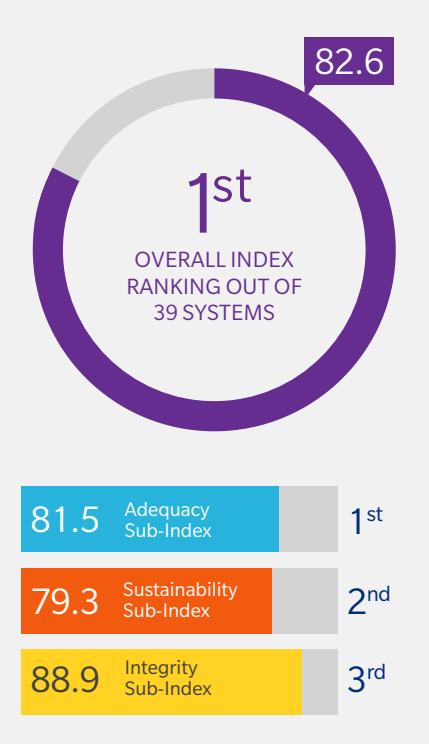
The Netherlands

The Netherlands' retirement income system comprises a flat-rate public pension and a quasi-mandatory earnings-related occupational pension linked to industrial agreements. Most employees belong to these occupational schemes which are industry-wide defined benefit plans with the earnings measure based on lifetime average earnings.

The overall index value for the Dutch system could be increased by:

- Increasing the level of household saving and reducing the level of household debt
- Increasing the labour force participation rate at older ages as life expectancies rise

The Dutch index value increased from 81.0 in 2019 to 82.6 in 2020 primarily due to an increase in the minimum pension and the net replacement rates published by the OECD. Although the Netherlands has retained a high ranking this year, it is noted that their system is currently undergoing significant reform. However, it needs to be recognised that this system will continue to provide very good benefits, has excellent pension coverage in the private sector, has a significant level of assets set aside for the future and receives high scores in every sub-index.



New Zealand

New Zealand's retirement income system comprises a universal public pension, voluntary private pensions, and the KiwiSaver direct contribution retirement savings schemes. KiwiSaver is a voluntary scheme with contributions from the Government, employers and members. New employees who are not already members of KiwiSaver are automatically enrolled by their employer and can remain in KiwiSaver unless they elect to opt out within a limited time of joining. KiwiSaver allows all members, once they've been a member for 12 months, to take a break from saving.

The overall index value for the New Zealand system could be increased by:

- Increasing the level of KiwiSaver contributions
- Raising the level of household savings and reducing the level of household debt
- Introducing a requirement that part of the retirement benefit must be taken as an income stream
- Continuing to expand the coverage of KiwiSaver thereby raising the level of pension assets

The New Zealand index value decreased from 70.1 in 2019 to 68.3 in 2020 primarily due to reductions in the net replacement rates published by the OECD.

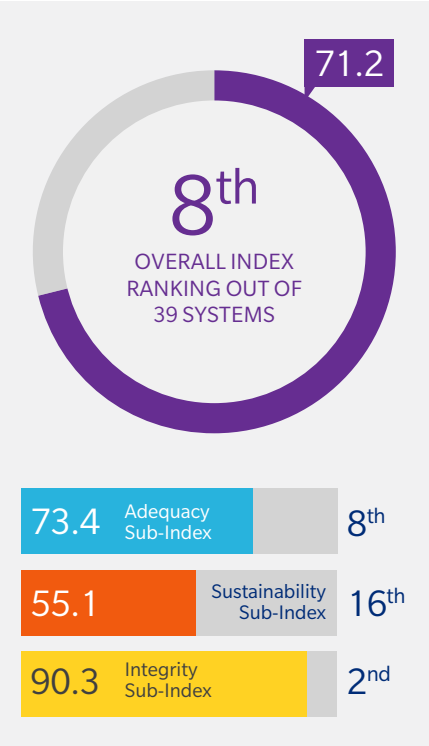
Norway

Norway's retirement income system comprises an earnings-related social security pension with a minimum pension level, and mandatory occupational pension plans. There are also many voluntary arrangements to provide additional benefits.

The overall index value for the Norwegian system could be increased by:

- Raising the level of household saving and reducing the level of household debt
- Increasing the level of mandatory contributions into the defined contribution plans thereby raising the level of pension assets
- Introducing the option for voluntary contributions with tax relief for members of defined contribution plans
- Introducing arrangements to protect all the pension interests of both parties in a divorce

The Norwegian index value remained unchanged at 71.2 from 2019 to 2020 although there were small movements in each sub-index.



Peru

Peru's retirement income system comprises a means-tested pension paid to the needy and two parallel and mutually exclusive pension systems. People are able to choose between a pay-as-you-go defined benefit public system and a fully funded defined contribution system managed by the private sector. Only people under the defined benefit scheme can change, as it is an irreversible decision. Employers don't contribute to the system, all contributions are made by the employee; however, voluntary employer contributions are permissible.

The overall index value for the Peruvian system could be increased by:

- Introducing a minimum level of support for the poorest aged individuals
- Increasing coverage of employees in occupational pension schemes thereby increasing the level of contributions and assets
- Enabling individuals to retire gradually whilst receiving a part pension
- Improving the governance requirements for the private pension system

The Peruvian index value decreased from 58.5 in 2019 to 57.2 in 2020 primarily due to the lower real economic growth rates in 2019 and 2020 and the life expectancy changes described in Chapter 3.

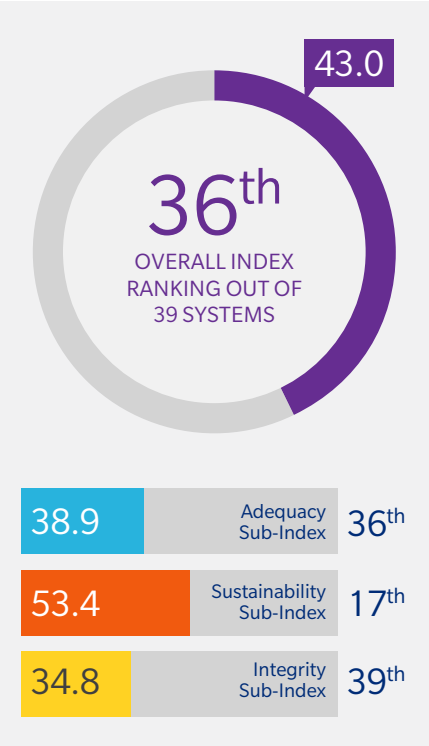
Philippines

The Philippines retirement income system comprises a small basic pension and an earnings-related Social Security System (SSS). Members can receive a lifetime pension if they have contributed for a minimum of 120 months. If this requirement is not met, the retiree will receive a lump sum upon retirement equal to the member and employer contributions plus interest.

The overall index value for the Philippines system could be increased by:

- Increasing the minimum level of support for the poorest aged individuals
- Increasing coverage of employees in occupational pension schemes thereby increasing the level of contributions and assets
- Setting aside funds in the public system for the future thereby reducing reliance on the pay-as-you-go system
- Introducing non-cash out options for retirement plan proceeds to be preserved for retirement purposes

The Philippines index value decreased from 43.7 in 2019 to 43.0 in 2020 primarily due to the life expectancy changes described in Chapter 3.



Poland

Poland's retirement income system was reformed in 1999 with additional major changes in 2014, 2016 and 2019. The new system, which applies to people born after 1968, comprises a minimum public pension and an earnings-related system with notional accounts. The overall system is in transition from a pay-as-you-go system to a funded approach. There are also voluntary employer sponsored pension plans and individual pension accounts. In 2014 the government introduced laws which aim to limit activity of Pillar 2 pension funds through transferring 51.5% of their assets invested in bonds to fund the Social Security Institution.

In 2016 government decreased retirement age from 67 to 65 for men and 60 for women. In 2019 mandatory for employers auto enrolment plans PPE were introduced to increase coverage among employees.

Recently an additional payment for pensioners has been introduced.

The overall index value for the Polish system could be increased by:

- Increasing retirement age to reflect longer life expectancy
- Raising the minimum level of support available to the poorest pensioners
- Raising the level of household saving
- Increasing the level of funded contributions thereby increasing the level of assets over time
- Increasing the labour force participation rate at older ages as life expectancies rise

The Polish index value decreased from 57.4 in 2019 to 54.7 in 2020 primarily due to reductions in the net replacement rates published by the OECD and the reduced real economic growth rate for 2020.

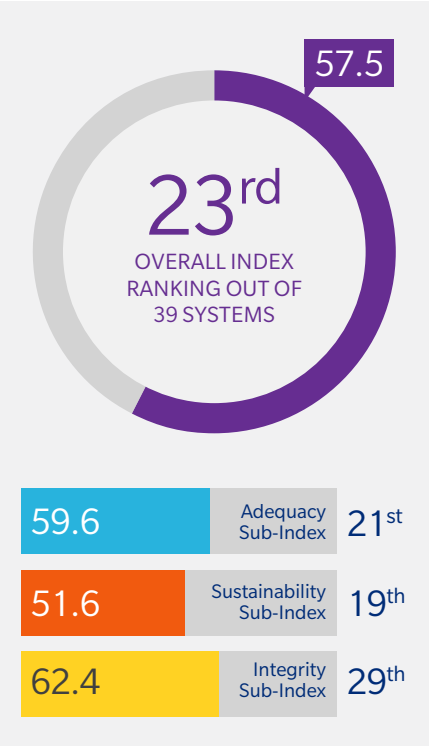
Saudi Arabia

Saudi Arabia's retirement income system comprises an earnings-related pension or an earnings-related lump sum retirement benefit for individuals who do not fulfil any of the retirement conditions.

The overall index value for the Saudi Arabian system could be increased by:

- Further increasing the state pension age
- Increasing the labour force participation rate at older ages as life expectancies rise
- Improving the required level of communication to members from pension arrangements

The Saudi Arabian index value increased slightly from 57.1 in 2019 to 57.5 in 2020 primarily due to the life expectancy changes described in Chapter 3.



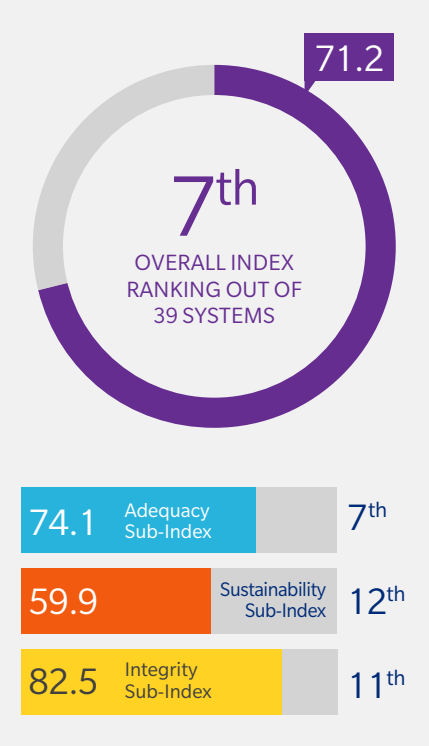
Singapore

Singapore's retirement income system is based on the Central Provident Fund (CPF) which covers all employed Singaporean residents. Under the CPF, some benefits are available to be withdrawn at any time for specified housing and medical expenses with other benefits preserved for retirement. A prescribed minimum amount is required to be drawn down at retirement age in the form of a lifetime income stream (through CPF Life). The Singapore government has implemented changes to CPF in 2016 which include providing minimum pension top-up amounts for the poorest individuals, more flexibility in drawing down retirement pension amounts and increases to certain contribution rates and interest guarantees.

The overall index value for the Singaporean system could be increased by:

- Reducing the barriers to establishing tax-approved group corporate retirement plans
- Opening CPF to non-residents (who comprise a significant percentage of the labour force)
- Increasing the age at which CPF members can access some of their savings before age 65

The Singaporean index value increased slightly from 70.8 in 2019 to 71.2 in 2020 due to small increases in all sub-indices.



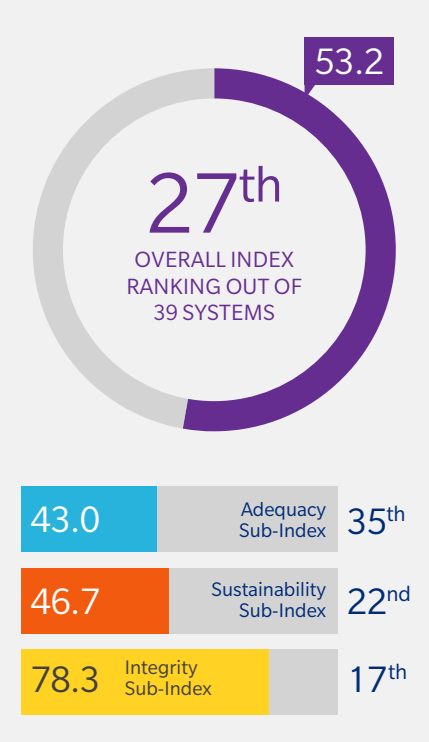
South Africa

South Africa's retirement income system comprises a means-tested public pension and tax-supported voluntary occupational schemes.

The overall index value for the South African system could be increased by:

- Increasing the minimum level of support for the poorest aged individuals
- Increasing the coverage of employees in occupational pension schemes thereby increasing the level of contributions and assets
- Introducing a minimum level of mandatory contributions into a retirement savings fund
- Introducing preservation requirements when members withdraw from occupational funds
- Introducing a requirement that part of the retirement benefit from provident fund arrangements must be taken as an income stream (this requirement currently only applies to pension funds and retirement annuities)

The South African index value increased from 52.6 in 2019 to 53.2 in 2020 primarily due to a small increase in the net replacement rates published by the OECD.



Spain

Spain's retirement income system comprises an earnings-related public pension system and a minimum means-tested social assistance benefit. Voluntary personal and occupational pension schemes exist but coverage is low compared to the public pension.

The overall index value for the Spanish system could be increased by:

- Increasing coverage of employees in occupational pension schemes through automatic membership or enrolment, thereby increasing the level of contributions and assets
- Continuing to increase labour force participation rate at older ages as life expectancies rise
- Raising the level of household saving

The Spanish index value increased from 54.7 in 2019 to 57.7 in 2020 primarily due to a several improvements in the integrity sub-index with the implementation of Directives from IORP II.

Sweden

Sweden's national retirement income system was reformed in 1999. The system is an earnings-related system with notional accounts. The overall system is in transition from a pay-as-you-go system to a funded approach. There is also an income-tested top-up benefit which provides a minimum guaranteed pension. Occupational pension schemes also have broad coverage.

The overall index value for the Swedish system could be increased by:

- Further increasing the state pension age to better reflect increasing life expectancy
- Ensuring that all employees can make contributions into employer sponsored plans
- Reintroducing tax incentives for individual contributions
- Introducing arrangements to protect all the pension interests of both parties in a divorce

The Swedish index value decreased from 72.3 in 2019 to 71.2 in 2020 due to reductions in the minimum pension and the net replacement rates published by the OECD.

Switzerland

Switzerland's retirement income system comprises an earnings-related public pension with a minimum pension; a mandatory occupational pension system where the contribution rates increase with age; and voluntary pension plans offered by insurance companies and authorised banking foundations.

The overall index value for the Swiss system could be increased by:

- Introducing a requirement that part of the retirement benefit must be taken as an income stream
- Increasing the state pension age over time
- Reducing the level of household debt
- Increasing the rate of home ownership
- Reducing pre-retirement leakage by further limiting access to funds before retirement

The Swiss index value increased slightly from 66.7 in 2019 to 67.0 in 2020 due to several small movements in the adequacy and sustainability sub-indices.

Thailand

Thailand's retirement income system provides broad coverage across 3 pillars, comprising of 1) an old-age pension, a Social Security Fund for private sector employees in the formal sectors, 2) Provident Fund, a voluntary-basis employer sponsored DC plans, and 3) individual savings product including the Retirement Mutual Fund which provides a tax free lump sum upon retirement and a large market of insurance/ endowment products.

The overall index value for Thailand's system could be increased by:

- Increasing the coverage of employees in occupational pension schemes thereby increasing the level of contributions and assets
- Increasing the minimum level of support for the poorest aged individuals
- Introducing a requirement that part of the retirement benefit from private pension arrangements must be taken as an income stream
- Improving the governance requirements for the private pension system

The Thai index value increased from 39.4 in 2019 to 40.8 in 2020 primarily due to an increase in the mandatory contributions set aside for retirement benefits.

Turkey

Turkey's retirement income system comprises an income-tested public pension and an earnings-related public scheme. There are voluntary private pension systems which people can join to supplement their income in retirement, but coverage is currently low.

The overall index value for Turkey's system could be increased by:

- Increasing the minimum public pension provided to the poorest aged individuals
- Increasing the coverage of employees in occupational pension schemes thereby increasing the level of contributions and assets
- Introducing a requirement that part of the retirement benefit must be taken as an income stream
- Reducing pre-retirement leakage by limiting the access to private pension funds before retirement

The Turkish index value increased slightly from 42.2 in 2019 to 42.7 in 2020 due to several small increases in the adequacy and integrity sub-indices.

United Kingdom

The United Kingdom's retirement income system comprises a single tier state pension supported by an income-tested pension credit, and supplemented by voluntary occupational and personal pensions. Auto enrolment now covers all employers, requiring them to enrol eligible employees (who can then choose to opt out) in pension schemes. Minimum contributions are currently 8%.

The overall index value for the British system could be increased by:

- Restoring the requirement to take part of retirement savings as an income stream
- Raising the minimum pension for low-income pensioners
- Further increasing the coverage of employees and the self-employed in pension schemes
- Increasing the level of contributions to occupational pension schemes
- Raising the level of household saving and reducing the level of household debt

The British index value increased from 64.4 in 2019 to 64.9 in 2020 due to a number of small changes in the sustainability sub-index, including the life expectancy changes described in Chapter 3.

United States of America

The United States' retirement income system comprises a social security system with a progressive benefit formula based on lifetime earnings, adjusted to a current dollar basis, together with a means-tested top-up benefit; and voluntary private pensions, which may be occupational or personal.

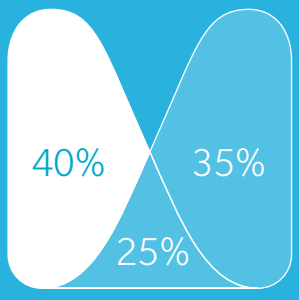
The overall index value for the American system could be increased by:

- Raising the minimum pension for low-income pensioners
- Improving the vesting of benefits for all plan members and maintaining the real value of retained benefits through to retirement
- Reducing pre-retirement leakage by further limiting the access to funds before retirement
- Introducing a requirement that part of the retirement benefit must be taken as an income stream
- Increasing the funding level of the social security program
- Expanding coverage by providing access to retirement plans on an institutional group basis for workers who don't have access to an employer sponsored plan

The American index value decreased slightly from 60.6 in 2019 to 60.3 in 2020 due to several small reductions in the sustainability sub-index.

CHAPTER 6
THE ADEQUACY SUB-INDEX

The adequacy sub-index considers the benefits provided to the poor and a range of income earners as well as several design features and characteristics which enhance the efficacy of the overall retirement income system. The net household saving rate, the level of household debt and the home ownership rate are also included representing non-pension savings and, as such, important indicators of financial security during retirement.



The countries with the highest value for the adequacy sub-index are the Netherlands (81.5) and Denmark (79.8) with Mexico (36.5) and Thailand (36.8) having the lowest values. Whilst several indicators influence these scores, the level of the minimum pension (expressed as a percentage of the average wage) and the net replacement rate for a range of incomes are the most important.

Full details of the values in respect of each indicator in the adequacy sub-index are shown in Attachment 1.

Question A1

What is the minimum pension, as a percentage of the average wage, that a single aged person will receive?

How is the minimum pension increased or adjusted over time? Are these increases or adjustments made on a regular basis?

Objective

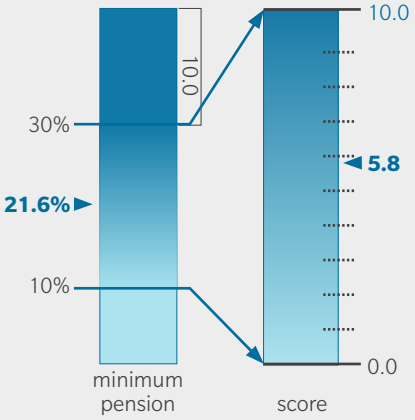
An important objective of any retirement income system is to provide a minimum pension to the aged poor. In terms of the World Bank's recommended multi-pillar system, it represents the non-contributory basic pension or Pillar 0, which provides a minimum level of income for all aged citizens. Eligibility for this minimum pension requires no period in the paid workforce, but will often require a minimum period of residency.

This question also considers how the minimum pension is increased or adjusted over time. The level and frequency of increases or adjustments are critical to ensure that the real value of the minimum pension is maintained.

Calculation

There is no single answer as to the correct level of the minimum pension, as it depends on a range of socio-economic factors. However, it is suggested that a minimum pension of about 30%[13] of average earnings adequately meets the poverty alleviation goal. Hence for the first part of this question a minimum pension below 30% will score less than the maximum value of 10, with a zero score if the pension is 10% or less of average earnings, as such a pension offers very limited income provision.

Calculating A1 Question 1 — Minimum Pension



The second part of this question is assessed on a four-point scale with the maximum score of 2 for increases granted on a regular basis related to wage growth, 1.5 for increases granted on a regular basis related to price inflation, 1 for increases that occur but not on a regular basis related to wage growth or price inflation and 0 where the minimum pension is not increased.

A maximum score is achieved for this question if the minimum pension is 30% or higher of average earnings and if it is increased on a regular basis in line with wages growth.

Commentary

The minimum pension ranges from less than 5% of the average wage in China, India, Malaysia, Philippines, Saudi Arabia and Thailand to 35% or more in Brazil, Denmark and New Zealand. Indonesia does not provide a minimum pension.

13 This level was chosen in 2009 when it was slightly higher than the OECD average of 27% for first tier benefits as shown in OECD (2009). The average residence-based basic pension in nine OECD countries (OECD (2019) p134) is 17% whereas the average minimum pension is 25.0% of average worker earnings. Hence a range of 10% to 30% remains reasonable

Weighting

The major objective of any nation's retirement income system is to provide income support for its older citizens. The level of actual benefits therefore represents the major measurable outcome from the system. Hence this measure (which considers the retirement income provided to the poorest in the community), together with the next measure (which considers the retirement income for a range of income earners), represent the two most important components within the adequacy sub-index. This indicator is therefore given a weighting of 17.5% in the adequacy sub-index with 15% for the first part of the question and 2.5% for the second part.

Question A2

What is the net pension replacement rate for a range of income earners?

Objective

In *"Averting the Old Age Crisis"*, the World Bank (1994) suggested that a target replacement rate for middle income earners from mandatory systems can be expressed in any of the following ways:

- 78% of the net average lifetime wage
- 60% of the gross average lifetime wage
- 53% of the net final year wage
- 42% of the gross final year wage

It also noted that "The government should not necessarily mandate the full pension that might be desirable for individual households."[14] That is, these targets could be met through a combination of mandatory and voluntary provisions.

The OECD calculates net pension replacement rates for a single person at a range of income levels (revalued with earnings growth) throughout his/her working career.

These calculations assume no promotion of the individual throughout his/her career; in other words, the individual earns a particular percentage of average earnings throughout.

To recognise that a range of income levels exist in practice, we have used the net replacement rates at three income levels; namely 50%, 100% and 150% of average earnings. The net replacement rates at these three income levels are given weightings of 30%, 60% and 10% respectively which recognises that there are more individuals who earn less than the average wage than above it. Whilst the use of a range of incomes is more comprehensive than a single point, the weighted answer will be similar to the net replacement rate for a median income earner in many cases.

14 World Bank (1994), p295.

The OECD expressed a target replacement rate of 70% of final earnings[15] which includes mandatory pension for private sector workers (publicly and privately funded) and typical voluntary occupational pension plans for those countries where such schemes cover at least 30% of the working population.

This indicator for the adequacy sub-index includes mandatory components of a retirement income system for private sector workers, as well as an allowance for voluntary plans that include more than 30% of the working age population. This allowance takes into account the level of coverage above 30% and the increase in the net replacement rate due to the voluntary schemes.[16]

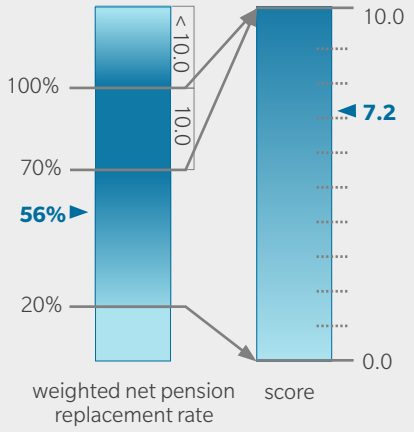
The target benefits should be less than 70% of final earnings to allow for individual circumstances and some flexibility. An objective of between 45% and 65% of final earnings is considered reasonable. Using the ratios between lifetime earnings and final earnings, the target for a net replacement rate (i.e. after allowing for personal income taxes and social security contributions) for a median-income earner should be within the range of 70 to 100% of average lifetime earnings (revalued with earnings growth).

A net replacement rate below 70% of lifetime earnings suggests a significant reliance on voluntary savings whereas a figure above 100% does not provide the flexibility for individual circumstances and may suggest overprovision.

Calculation

The maximum score for this indicator is obtained for any country with a result between 70% and 100%. Argentina, Austria, Brazil, Denmark, France, Italy, the Netherlands, Philippines, Spain and Turkey are within this range. Any score outside this range scores less than the maximum with a zero score being obtained for a result of less than 20%.

Calculating A2 — Weighted Net Pension Replacement Rate



Commentary

With the exception of the countries mentioned above that have a result between 70% and 100%, most countries have a result between 22% (South Africa) and 68% (Belgium). The Chinese, Indian and Indonesian figures have been adjusted to reflect the varying levels of replacement rates that exist in practice.

Weighting

The net pension replacement rates for a range of income earners represent a major outcome in the assessment of any retirement income system. As this indicator reflect the benefits provided to a broad group of retirees, this indicator is given the highest weighting in the adequacy sub-index, namely 25%.

15 OECD (2012a) p 161.
16 OECD (2017), p109.

Question A3

What is the net household saving rate in the country?

What is the level of household debt in the country, expressed as a percentage of GDP?

Objective

The living standards of the aged will depend on the benefits arising from the total pension system (which was covered in the previous two questions) as well as the level of household savings outside the pension system. In some countries, these savings represent an important factor in determining the financial security for the aged.

Calculation

For countries where the Economist Intelligence Unit (EIU) data was used, we calculated the saving rate in the following way:

$$\text{Household Saving Rate} = \frac{(\text{PDIN} - \text{PCRD})}{\text{PDIN}}$$

PDIN = Personal disposable income

PCRD = Private consumption

To remove some volatility that may occur in annual figures, we have averaged the 2018 and 2019 measurements.

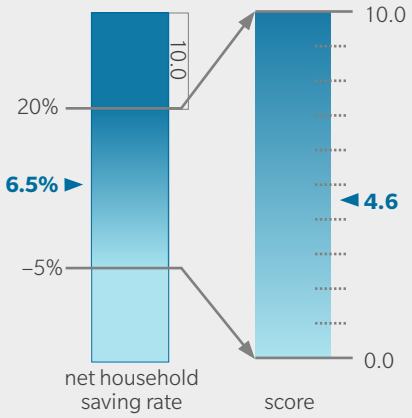
The EIU data for Singapore was adjusted to remove the impact of the estimation method change.

OECD measures were used for Ireland and South Africa due to changes in data sources and estimation methods.

The calculated household saving rates ranged from minus 11.4% in Belgium to plus 24.9% in Saudi Arabia. A maximum score is obtained for any country with a saving rate of 20% or higher, and a zero score for any country with a saving rate of less than minus 5%.

It is noted that the EIU's calculation excludes contributions to pension plans. The OECD measure also excludes contributions to social security and employer contributions. This is consistent with our approach as we allow for both pension plan assets and the level of pension contributions as part of the sustainability sub-index.

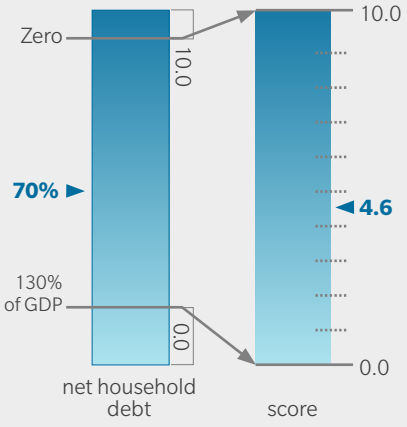
Calculating A3a — Net Household Saving Rate



While the level of household savings represents the current flow of household savings, the level of household debt represents the financial liabilities that must be paid by households in the future. In many cases, these liabilities will be repaid by accumulated benefits from the pension system, thereby reducing the adequacy of the remaining pension benefits.

The level of household debt ranges from 5% of GDP in Argentina and 10% in the Philippines to 123% of GDP in Australia and 131 percent of GDP in Switzerland. A maximum score is obtained for any country with zero household debt, and a zero score for any country with household debt of 130 percent of GDP or higher.

Calculating A3b — Net Household Debt



Commentary

The net household saving rate provides some indication of the level of current income that is voluntarily being set aside from current consumption, either for retirement or other purposes while net household debt provides an indication of the debt levels that will need to be repaid by households in the future.

Weighting

The weighting for these two measures have been set at 5% each of the adequacy sub-index. This indicates the importance of both net household savings and debt, as individuals plan for their future.

Question A4

Are voluntary member contributions made by a median-income earner to a funded pension plan treated by the tax system more favourably than similar savings in a bank account?

Is the investment income earned by pension plans exempt from tax in the pre-retirement and/or post-retirement periods?

Objective

The level of total retirement benefits received by an aged person will depend on both the mandatory level of savings and any voluntary savings, which are likely to be influenced by the presence (or otherwise) of taxation incentives designed to change individual behaviour. The investment earnings (and the related compounding effect over decades) are critical in respect of adequacy as most of an individual's retirement benefits are due to investment earnings and not contributions.

Calculation

This indicator is concerned with any taxation incentives or tax exemptions of investment earnings that make savings through a pension plan more attractive than through a bank account. The benchmark of a bank account was chosen as this saving alternative is readily available in all countries.

Both questions were assessed with a score of 2 for "yes" and 0 for "no". There were three cases where the response to the first question was neither a clear "yes" or "no", so a score of 1 was given.

Commentary

All countries offer some taxation incentive for voluntary contributions except for the Philippines, Turkey and Saudi Arabia (where there is no income tax). In Norway and Sweden, additional employee contributions are encouraged in certain circumstances. Twenty nine systems offer a tax exemption on investment earnings of pension plans in both the pre- and post-retirement periods.

Weighting

Taxation incentives or tax exemptions represent important measures that governments can introduce to encourage pension savings and long-term investments. Such incentives provide a desirable design feature of retirement income systems. We have therefore given this measure a total weighting of 5% in the adequacy sub-index, split into 2% for the first question and 3% for the second question.

Question A5

Is there a minimum access age to receive benefits from private pension plans[17] (except for death, invalidity and/or cases of significant financial hardship)? If so, what is the current age?

Objective

The primary objective of a private pension plan should be to provide retirement income; hence the availability of these funds at an earlier age reduces the efficacy of such plans as it leads to leakage from the system.

Calculation

The first question was assessed on a three-point scale with a score of 2 for "yes", 1 if it was applied in some cases and 0 for "no". The second question was scored on a scale for those who said "yes" to the first question; ranging from a score of 0 for age 55 to a score of 1 for age 60. A maximum score is achieved if a minimum access age exists and this age is at least age 60.

Commentary

Many countries have introduced a minimum access age, while others have access provisions described in each plan's set of rules. In some cases, early access is not prohibited although the taxation treatment of the benefit discourages such behaviour.

Weighting

Ensuring that the accumulated benefits are preserved until the later years of life represents an important design feature of all pension arrangements. Hence, this desirable feature has been given a 10% weighting in the adequacy sub-index.

Question A6

What proportion, if any, of the retirement benefit from the private pension arrangements is required to be taken as an income stream?

Are there any tax incentives that exist, or favourable conversion rates, to encourage the taking up of income streams?

Objective

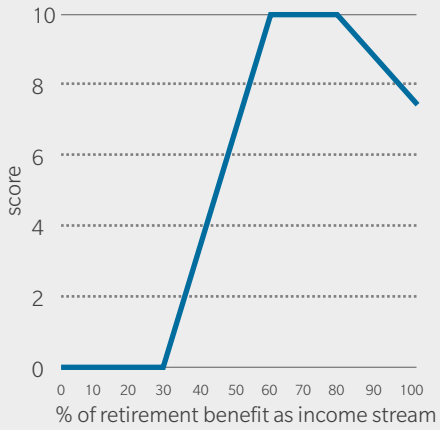
The primary objective of a private pension system should be to provide income during retirement. Of course, this does not imply that a lump-sum payment is not a valuable benefit; it often is. Indeed, both Rocha and Vittas (2010) and the OECD (2012b) suggest that policymakers should target an adequate level of annuitisation but should be wary of causing excessive annuitisation. Hence, this indicator focuses on whether there are any requirements in the system for at least part of the benefit to be taken as an income stream, or if there are any tax incentives to encourage the take-up of income streams.

Calculation

There is no single answer that represents the correct proportion of a retirement benefit that should be annuitised. For the first question, a maximum score is achieved where between 60% and 80% of the benefit is required to be converted into an income stream. A percentage above 80% reduces the flexibility that many retirees need whilst an answer below 60% is not converting a sufficient proportion of the benefit into an income stream. A percentage below 30% results in a score of zero. For the second question, where there is no requirement for an income stream, half the maximum score could be achieved where significant tax incentives exist to encourage income streams.

17 Private pension plans include both defined benefit and defined contribution plans and may pay lump-sum or pension benefits. They also include plans for public sector and military employees.

Calculating A6a Question 1 — Conversion to Income Streams



Commentary

There is considerable variety between countries with some countries requiring all of the benefit to be converted into a lifetime annuity (e.g. Chile, Colombia, Finland, Israel, the Netherlands, Norway, Peru, Saudi Arabia and Sweden) whereas many countries have no requirement at all (e.g. Argentina, Australia, Belgium, China, France, Hong Kong SAR, Japan, Korea (South), Malaysia, Mexico, New Zealand, the Philippines Spain, Switzerland, Thailand, Turkey, the United Kingdom and the United States). Of these countries, only Australia and Korea (South) have direct tax incentives to encourage income streams.

Weighting

The requirement that part of a member's accumulated retirement benefit be turned into an income stream (which need not necessarily be a lifetime annuity) or the existence of tax incentives to encourage the take up of income streams represent desirable features of a retirement income system and therefore a weighting of 10% has been used in the adequacy sub-index.

Question A7

On resignation from employment, are plan members normally entitled to the full vesting of their accrued benefit?

After resignation, is the value of the member's accrued benefit normally maintained in real terms (either by inflation-linked indexation or through market investment returns)?

Can a member's benefit entitlements normally be transferred to another private pension plan on the member's resignation from an employer?

Objective

Most individuals now have many employers during their career and do not stay with a single employer throughout their working life. It is therefore important that individuals receive the full value of any accrued benefit on leaving an employer's service and that the real value of this benefit is maintained until retirement, either in the original plan or in another plan. Further, the availability of portability between schemes provides greater flexibility for individuals and should lead to a more efficient outcome.

Calculation

Each question was assessed with a score of 2 for "yes", 0 for "no" and between 0.5 and 1.5 if it was applied in some cases. The actual score depended on the actual circumstances.

Commentary

There is considerable diversity to the extent that the real value of members' benefit entitlements can be transferred or retain their real value after changing employment. That is, in only 19 of the 39 systems is full vesting present, the real value of the benefits maintained after resignation, and the accrued benefit can be transferred, thereby obtaining the maximum score.

Weighting

Maintaining the real value of a member's accrued benefit entitlements during a member's working life represents an important feature of all retirement income systems. Hence, this desirable feature has been given a 7.5% weighting in the adequacy sub-index.

Question A8

Upon a couple's divorce or separation, are the individuals' accrued pension assets normally taken into account in the overall division of assets?

Objective

The adequacy of an individual's retirement income can be disrupted by a divorce or separation. In many cases, the female can be adversely affected as most of the accrued benefits may have accrued in the male's name during the marriage or partnership. It is considered desirable that upon a divorce or separation, the pension benefits that have accrued during the marriage be considered as part of the overall division of assets. This outcome can be considered to be both equitable and provide greater adequacy in retirement for both individuals, rather than just the main income earner.

Calculation

The question was assessed on a three-point scale with a score of 2 for "yes", 1 if it was applied in some cases and 0 for "no".

Commentary

In 19 of the 39 systems, it is normal practice for the accrued pension benefits to be taken into account in the overall division of assets upon a divorce or separation.

Weighting

With a relatively high level of divorce or separation occurring in many countries the adequacy of retirement income for the lower income partner is improved if pension assets are considered in the overall division of assets. This desirable feature has been given a 3% weighting in the adequacy sub-index.

Question A9

What is the level of home ownership in the country?

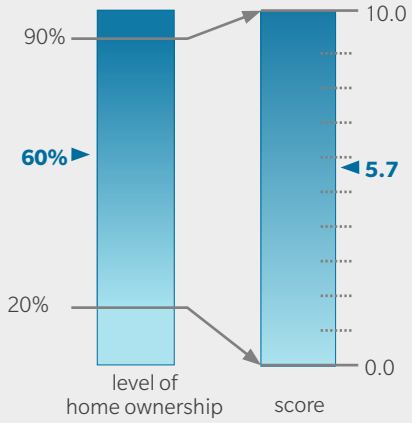
Objective

In addition to regular income, home ownership represents an important factor affecting financial security during retirement. In some countries, taxation support encourages home ownership.

Calculation

A maximum feasible level is considered to be 90%. Hence a home ownership level of 90% or more scores maximum results whilst a level of 20% or less scores zero.

Calculating A9
— Home Ownership



Commentary

The level of home ownership ranged from 38% in Switzerland to more than 85% in China, India and Singapore.

Weighting

Home ownership represents an important feature of financial security in retirement. Hence, this indicator has been given a 5% weighting in the adequacy sub-index.

Question A10

What is the proportion of total pension assets invested in growth assets?

Objective

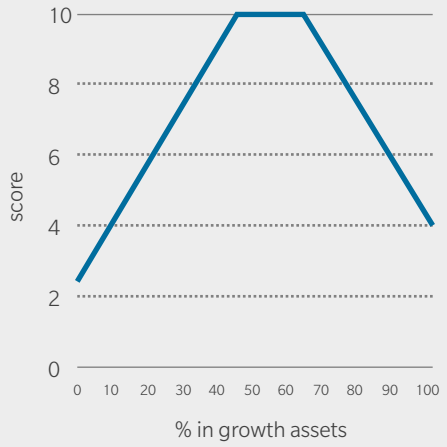
The investment performance of funded pension funds over the long-term, after allowing for costs and any taxation, represents a key input into the provision of adequate retirement income. Yet, as Hinz et al (2010)[18] noted, international comparisons of investment returns might not be totally meaningful. They also note that any benchmarks need to consider a range of factors including the age of the plan member, the availability of other income (such as social security), the contribution rates, the target replacement rate, the risk tolerance of the member and the types of retirement income products available. It is apparent that there is no ideal asset allocation that is appropriate for all members at all ages. The growing interest in life cycle funds suggests that the best approach may be a changing asset allocation during an individual's lifetime.

It is also important to recognise that the investment performance of a pension fund needs to focus on the longer term and not on short term returns. With this in mind, we believe that it is appropriate for the investments of pension funds within any country to be diversified across a range of asset classes, thereby providing the opportunity for higher returns with reduced volatility.

Calculation

Many countries have pension fund assets invested in a range of assets ranging from cash and short term securities through bonds and equities to alternative assets such as property, venture capital, private equity and infrastructure. As a proxy to this diversified approach, we have used the percentage of growth assets (including equities and property) in the total pension assets in each country.

Calculating A10 — Percentage of Growth Assets



A zero percentage in growth assets highlights the benefit of security for members but without the benefits of diversification and the potential for higher returns. In some emerging markets, it is also recognised that the capital markets are underdeveloped. No exposure to growth assets scores 2.5 out of 10. This score increases to the maximum score of 10 as the proportion in growth assets increases to 45% of all assets. If the proportion in growth assets exceeds 65% the score is reduced to reflect the higher level of risk and volatility.

Commentary

The level of growth assets ranges from less than ten% in India to approximately 70% in South Africa. Fifteen of the 39 systems have a percentage between 45% and 65%, which indicates a reasonable level of exposure to growth assets.

Weighting

Asset allocation represents an important feature of all funded retirement systems. This indicator has therefore been given a 5% weighting in the adequacy sub-index.

18 Hinz R, Rudolph H P, Antolin P and Yermo J (2010), p2.

Question A11

Is it a requirement that an individual continues to accrue their retirement benefit in a private pension plan when they receive income support such as a disability pension or paid maternity leave?

Does your system provide any additional contributions or benefits for parents who are caring for young children whilst the parent is not in the paid workforce?

Objective

The adequacy of an individual's retirement income can be affected if there is no requirement for benefits to accrue in (or for contributions to be made to) a pension scheme when a worker is temporarily out of the workforce and may be receiving income support; for example due to parental leave, ill health or disability. Although these benefit accruals or actual contributions may be for a relatively short period, it is desirable that pension contributions (or the ongoing benefit accrual) are a compulsory component of income support payments. In addition, to help reduce the gender gap that exists in many retirement income systems, it is desirable that parents who are caring for young children should receive some additional retirement benefit.

Calculation

These questions were assessed on a three-point scale with a score of 2 for "yes", 1 if contributions are paid in some cases and 0 for "no".

Commentary

In 18 of the 39 systems, it is a requirement for contributions to be paid to a pension scheme if a worker receives income support while they are temporarily out of the workforce.

14 systems provide additional pension contributions or benefits from the Government for parents who are caring for young children.

Weighting

The requirement for contributions to be paid while a worker is receiving income support or a parent is caring for young children represent desirable features and are important signals in the design of the best retirement income systems. These two features have each been given a one% weighting in the adequacy sub-index.

Sources of data for the adequacy sub-index

Question A1

The answers for the first question were taken from the following sources:

OECD (2018), unpublished data for Colombia;

OECD (2018a), p13 for Hong Kong SAR, India, Indonesia, Malaysia, the Philippines and Thailand

OECD (2019a), country profiles for Argentina, Brazil, Saudi Arabia and South Africa;

OECD (2019a) all other OECD countries;

Mercer calculations for Singapore using government websites;

Mercer calculations for Peru using websites; and

Mercer calculations for China using data sourced from Mercer consultants;

The answers for the second question were sourced from Mercer consultants in each country.

Question A2

OECD (2018a) for Hong Kong SAR, the Philippines, Singapore and Thailand

OECD (2018) unpublished data for Colombia, Malaysia and Peru.

OECD (2019a) for all other countries.

Question A3

Data from the Economist Intelligence Unit was used for the first question for all systems except Ireland and South Africa;

OECD (2019b) for Ireland; and

OECD (2019c) for South Africa.

The answers for the second question used an average of data taken from Trading Economics (2020) and CEIC (2019).

Question A9

The answers were sourced from relevant Mercer consultants except China.

World Bank (2012) for China.

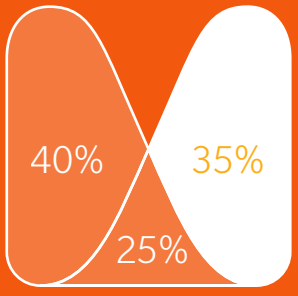
Questions A4, A5, A6, A7, A8, A10 and A11

The answers were sourced from relevant Mercer consultants.

CHAPTER 7

THE SUSTAINABILITY SUB-INDEX

The sustainability sub-index considers a number of indicators which influence the long-term sustainability of current systems. These include factors such as the economic importance of the private pension system, its level of funding, the length of expected retirement both now and in the future, the labour force participation rate of the older population, the current levels of public pension expenditure and government debt, and the level of real economic growth.



The system with the highest value for the sustainability sub-index is Denmark (82.6) with the lowest value being for Italy (18.8). Whilst several indicators influence these scores, the level of coverage of private pension plans, the projected demographic factors and the level of pension assets as a proportion of GDP are the most important.

Full details of the values in respect of each indicator in the sustainability sub-index are shown in Attachment 2.

Question S1

What proportion of the working age population are members of private pension plans?

Objective

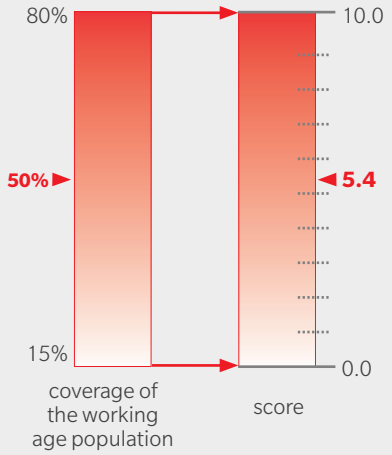
Private pension plans (including pension plans for public sector employees and the military) represent an important pillar within all retirement income systems. Hence, a higher proportion of coverage amongst the workforce increases the likelihood that the overall retirement income system will be sustainable in the future as it reduces pressure on future government expenditure.

Calculation

The rates of coverage ranged from nil in Argentina and about six% in India to more than 80% of the working age population in Chile, Denmark, Finland, France, the Netherlands, New Zealand and Sweden. Each system's score is related to its coverage, with a maximum score for 80% or above and a zero score relating to coverage of 15% or less, as such coverage represents a minimal contribution to the future provision of retirement income.

The coverage figure also allows for public pension arrangements where the public pension reserve fund exceeds ten% of GDP and the arrangements are available to most of the workforce.

Calculating S1
— Coverage



Commentary

Only 13 of the 39 systems have coverage rates over 64% of the working age population (that is, a score of 7.5 or more), indicating a heavy reliance on the social security system in the future for a substantial proportion of the workforce in many countries.

Weighting

Private pension plans play a critical role in a multi-pillar retirement income system, particularly with the financial pressures associated with ageing populations. Hence, this indicator was given a weighting of 20% in the sustainability sub-index.

Question S2

What is the level of pension assets, expressed as a percentage of GDP, held in private pension arrangements, public pension reserve funds, protected book reserves and pension insurance contracts?

Objective

The level of current assets set aside for future pensions, when expressed as a percentage of GDP, represents a good indicator of an economy's ability to meet these payments in the future.

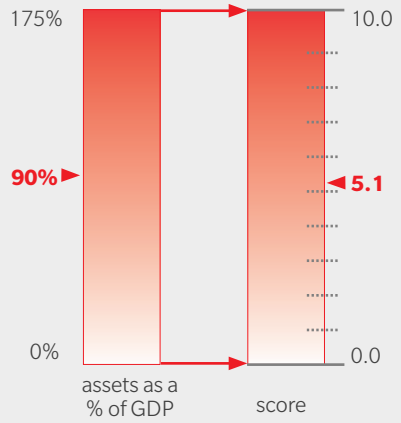
Calculation

We have included assets from many types of funds to calculate the total level of assets held within each system to pay future pensions, irrespective of whether the pensions are paid through public pension provision or from private pension plans. After all, in many systems an individual's retirement income includes both a public pension and a private pension. The types of funds that have been included are:

- assets held in autonomous private pension plans
- assets held by insured or protected book reserves which are being accounted for to pay future pensions
- social security reserve funds
- sovereign reserve funds which have been set aside for future pension payments
- assets held to support pension insurance contracts

The level of assets ranged from less than 10% of GDP for Austria, China, India, Indonesia, the Philippines, Thailand and Turkey to more than 175% for Canada and Denmark. A maximum score was achieved for 175% of GDP and a minimum score for zero%.

Calculating S2
— Level of Assets



Commentary

There is considerable variety in the size of assets set aside for future pensions around the world, reflecting the relative importance of pay-as-you-go social security and funded pension funds. In addition, many countries are part-way through a reform process which is expected to increase the level of assets over many decades. In these cases, we would expect the score for this indicator to gradually increase in the future.

The level of private pension assets goes beyond pension funds and includes book reserves, pension insurance contracts and funds managed by financial institutions such as Individual Retirement Accounts. These assets have been included as they represent assets set aside to provide future retirement benefits.

Weighting

This indicator shows the level of assets already set aside to fund retirement benefits and represents a key indicator in the ability of each system to pay future benefits. Hence, this indicator was given a weighting of 15% in the sustainability sub-index.

Question S3

a. What is the current life expectancy at the state pension age?

b. What is the projected life expectancy at the expected state pension age in 2050? (This calculation allows for mortality improvement.)

c. What is the projected old-age dependency ratio in 2050?

d. What is the estimated Total Fertility Rate (TFR) for 2015-2020?

Objective

A retirement income system is designed to provide benefits to an individual after the person leaves the workforce to his/her death. The longer the period, the larger the total value of benefits that will be needed and hence there will be an increased financial strain placed on the overall system. Although individuals retire for many reasons, the state pension age represents a useful proxy that guides many retirement decisions. As life expectancy increases, one way of reducing the strain is to encourage later retirement.

In the second question, we project this life expectancy indicator to 2050 to highlight the fact that many governments have already taken action and increased the state pension age, thereby reducing the forthcoming pension burden. The projected old age dependency ratio question highlights the impact of the ageing population between now and 2050 and therefore the likely effects on the funding requirements for pensions, health and aged care.

Consideration of the TFR provides an even longer term perspective as it provides an indication of the likely balance between workers and retirees in future decades.

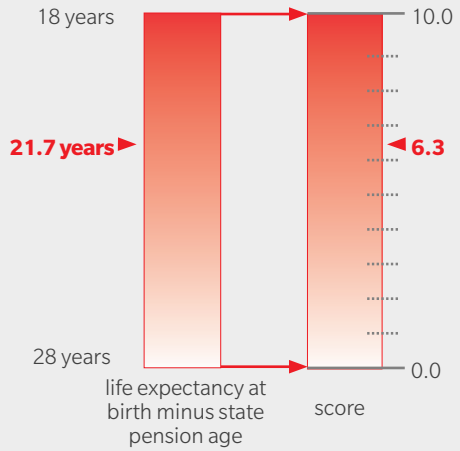
Calculations

a. Life expectancy at the existing state pension age ranges from 16.7 in South Africa to 26.8 in Japan. A maximum score is achieved with a life expectancy of 18 years or less and a zero score with a life expectancy of 28 years or more.

b. For 2050, the results range from 17.9 in South Africa to 27.8 in China. The same scoring system is used as for the previous question.

The life expectancies for these two questions are averaged for males and females.

Calculating S3 — Life Expectancy at State Pension Age



c. The old-age dependency ratio is the population aged 65 and over divided by the population aged between 15 and 64. The projected dependency ratios for 2050 vary from 15% in South Africa to 73% in Korea (South) and 74% in Japan. A maximum score is achieved with a projected dependency ratio of 20% or lower and a zero score with a ratio of 70% or higher.

d. The TFR ranges from 1.11 in Korea (South) to 3.04 in Israel. In view of these scores and the likely range in the future, a minimum score of zero is achieved for a TFR of 1.0 or less with a maximum score for a TFR of 2.5 or higher.

Commentary

All countries have current life expectancies at the state pension age of less than 27 years, although China and France are expected to exceed this figure by 2050.

A TFR of less than 1.5 in Hong Kong SAR, Italy, Japan, Korea (South), Poland, Singapore and Spain raises serious issues for their future age structures. Whilst immigration can assist in the short term, it is unlikely to provide sound long-term solutions.

Weighting

These demographic-related indicators have a total weighting of 20% in the sustainability sub-index with a five% weighting for each question.

Question S4

What is the level of mandatory contributions that are set aside for retirement benefits (i.e. funded), expressed as a percentage of wages? These include mandatory employer and/or employee contributions towards funded public benefits (i.e. social security) and/or private retirement benefits.[19]

Objective

Mandatory contributions from employers and/or employees represent a feature of every retirement income system. In some cases these contributions are used to fund social security benefits immediately whereas in other cases the contributions are invested, either through a central fund (such as Singapore's Central Provident Fund or a reserve fund) or through a range of providers in the private sector. In terms of longer-term sustainability, the important issue is whether the contributions are set aside to pay for the future benefits of the contributors, irrespective of the vehicle used for the saving.

Calculation

There is considerable variety in the extent to which the contributions paid are actually invested into a fully funded investment vehicle. This calculation multiplies the level of mandatory contributions by the percentage of these funds that are invested to provide for future retirement benefits. For example, in Australia, Chile, Denmark, Hong Kong SAR, Israel, New Zealand and Norway the mandatory contributions are fully invested for the individuals concerned. On the other hand, Argentina, Austria, Belgium, Brazil, France, Germany, Ireland, Poland, South Africa, Spain and Thailand adopt a pay-as-you-go basis.

In some cases, neither extreme is adopted. For instance, the Canada Pension Plan adopts a 'steady-state' funding basis so that contributions will remain constant for 75 years. In this case we have assumed that 75% of the contributions are invested.

For India and Indonesia, we have used 50% of the required level of contributions due to the limited coverage in these countries. For Sweden, which is transitioning from a pay-as-you-go approach to a fully funded one, we used the contributions to the defined contribution funded system plus the contributions to the quasi-mandatory occupational schemes.

19 This question does not include contributions arising from statutory minimum levels of funding for defined benefit plans as these plans do not represent mandatory arrangements.

While Italy's mandatory scheme is funded on a pay-as-you-go basis we have assumed that 25% of the mandatory contributions required to fund termination indemnity benefits are invested. For Finland, we have assumed that 20% of the mandatory contributions paid by employers and employees are invested with the remainder used to fund pensions in payment.

In line with OECD data, we have assumed that 35% of all contributions to Singapore's Central Provident Fund are invested which gives them the maximum score. For Malaysia, we have assumed that 70% of all contributions to the Employee Provident Fund are invested for retirement which also gives them the maximum score.

Colombia has two systems – a funded system and a pay-as-you-go system, both with contributions of 16%. Assuming that about half the contributions are in the funded system and allowing for less than full coverage, we have used 6%.

In other cases, social security reserve funds are funded by the difference between contributions and current benefit payments or through top-up contributions from the government. Japan, Korea (South) and the USA are examples of this approach. In these cases, we have assumed that 15%, 50% and 20% of the contributions are funded respectively.

The results of the above calculations have meant that the net funded level of mandatory contributions (expressed as a percentage of earnings) range from zero% in several systems to 12% or more in Denmark, Israel, Malaysia, the Netherlands, the Philippines, Saudi Arabia and Singapore. In view of this range and likely developments in some countries, a maximum score is achieved with a contribution level of 12% invested into a fund for future payments with a zero score being obtained where there are no funded mandatory contributions.

Calculating S4 — Funded Mandatory Contributions

Commentary

The level of mandatory contributions to a funded arrangement paid by employers and employees around the world varies considerably.

In some cases, they represent taxation for social security purposes and are not used to fund future benefits. On the other hand, funded retirement savings with the associated investment funds provide a better level of sustainability for the system and greater security for future retirees.

Weighting

This item represents one of several key indicators representing desirable features of a sustainable retirement income system. A weighting of 10% in the sustainability sub-index is used for this indicator.

Question S5

What is the labour force participation rate for those aged 55–64?

What is the labour force participation rate for those aged 65 or over?

Objective

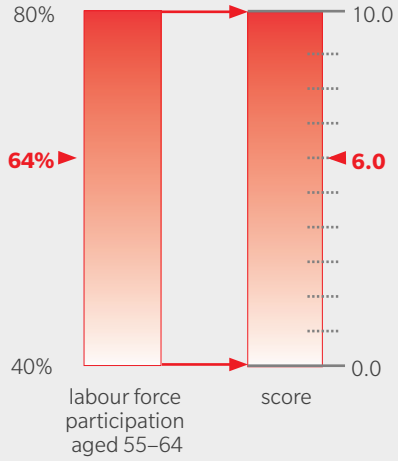
Higher labour force participation at older ages means that individuals are retiring later thereby reducing both the number of years in retirement and the level of retirement benefits needed, as well as accumulating greater savings for retirement during the working years.

Calculation

For those aged 55 to 64, the percentages range from 37.8% in Turkey to 81.6% in Sweden. A maximum feasible score is considered to be 80% for this age bracket. Hence a participation rate of 80% or more scores maximum results whilst a participation rate of 40% or less scores zero.

For those aged 65 and over, the percentages range from 2.3% in Spain to 42.2% in Indonesia. A maximum feasible score is considered to be 30% or more. Hence a participation rate of 30% or more scores maximum results whilst a participation rate of nil at these ages scores zero.

Calculating S5a — Labour Force Participation Rate aged 55–64



Commentary

With the increasing awareness of longer life expectancies and the pressures associated with an ageing population, it is important that governments continue to encourage higher labour force participation at older ages. It is pleasing to note that many countries are now experiencing increases in their labour force participation rates at these ages. This trend should continue to be encouraged.

Weighting

This item has a weighting of 10% in the sustainability sub-index, split into eight% for the first question and two% for the second question.

Question S6

What is the level of adjusted government debt (being the gross public debt reduced by the size of any sovereign wealth funds that are not set aside for future pension liabilities[21]), expressed as a percentage of GDP?

What is the level of public expenditure on pensions expressed as a percentage of GDP, averaged over the latest available figure and the projected figure for 2050?

Objective

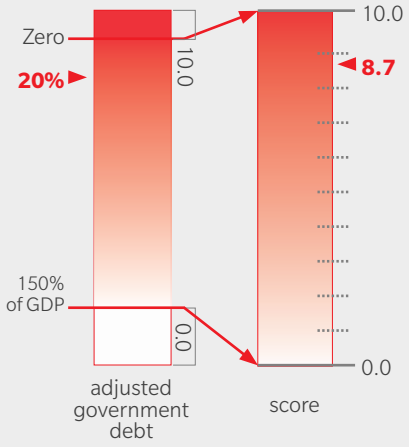
As social security payments represent an important source of income in most retirement income systems, the ability of future governments to pay these pensions and other benefits represents a critical factor in the sustainability of current systems. Clearly, higher government debt increases the likelihood that there will need to be reductions in the level or coverage of future benefits.

Similarly, higher pension payments lead to larger financial strains on government budgets.

Calculation

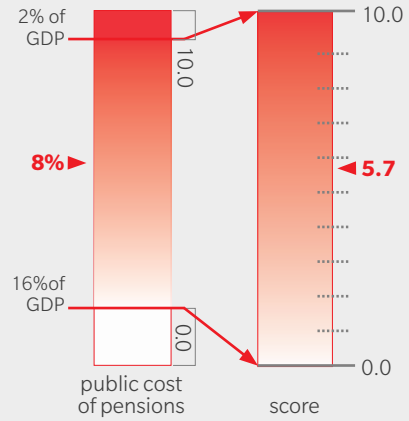
The level of the adjusted government debt ranges from less than zero for Norway and Singapore to 237% of GDP in Japan. A maximum score was achieved for countries with a zero or negative level of adjusted government debt (i.e. a surplus), with a zero score for countries with an adjusted government debt of 150% of GDP or higher.

Calculating S6a — Adjusted Government Debt



The size of government pension payments varies considerably between retirement income systems. For example, the public expenditure on pensions within the OECD in 2015-16 varied from 1.8% in Mexico to 15.6% in Italy in 2015-16. The projected 2050 figures range from 3.0% in Mexico to 17.3% in Italy.[20] A maximum score was achieved for systems with public pension costs of 2% of GDP or less (recognising that some costs are desirable to alleviate poverty), with a zero score for systems with costs of 16% of GDP or higher.

Calculating S6b — Public cost of pensions



20 OECD (2019a), Table 8.5

21 This reduction does not include sovereign wealth funds that have been set aside for future pension payments as these have been included in Question S2

Commentary

Government debt is likely to restrict the ability of future governments to support their older populations, either through pensions or through the provision of other services such as health or aged care. Hence, governments with lower levels of debt are in a stronger financial position to be able to sustain their current level of pension and other payments into the future. The level of debt has increased in many countries following the COVID-19 pandemic. However with historic low interest rates, the cost of this debt is less than previously. On the other hand, the cost of public pension payments are actual cash flows which have a direct impact on a government's fiscal position.

Weighting

These two indicators have a total weighting of 10 percent in the sustainability sub-index with a five% weighting for each question.

Question S7

In respect of private pension arrangements, are older employees able to access part of their retirement savings or pension and continue working (e.g. part time)? If yes, can employees continue to contribute and accrue benefits at an appropriate rate?

Objective

A desirable feature of any retirement income system, particularly with ageing populations, is to permit individuals to phase into retirement gradually by reducing their reliance on earned income whilst at the same time enabling them to access part of their accrued retirement benefit through an income stream. It is also important that such individuals can continue to contribute or accrue benefits whilst working.

Calculation

The first question was assessed with a score of 2 for "yes" and 0 for "no". However, in many cases it may depend on the particular fund's rules. In these cases, a score between 0 and 2 was given depending on the circumstances and practice. A maximum score was achieved where the answer was yes for the majority of older employees.

If the answer to the first question was yes, an additional score between 0 and 2 was given to the second question depending on the ability of employees to continue to contribute and accrue benefits during the transition period.

Commentary

In most systems employees are able, at least to some extent, to continue working at older ages whilst also accessing an income stream from their accumulated benefits, continuing to contribute and accruing benefits.

Weighting

This item has a weighting of five% in the sustainability sub-index as it is not considered as critical as the previous indicators. The total weighting was split into four% for the first question and one% for the second question.

Question S8

What is the real economic growth rate averaged over seven years (namely the last four years and projected for the next three years)?

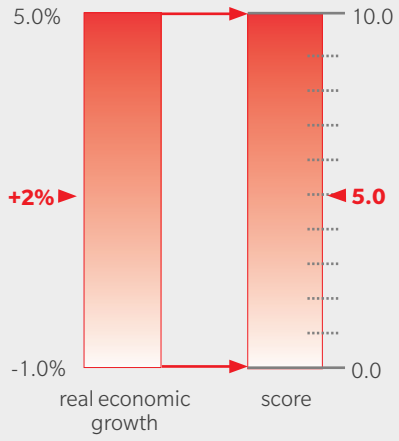
Objective

Adequate pension provision is a long term issue and significant real growth of the economy will make the system more sustainable through an improvement in the Government's financial position, thereby improving the likelihood of social security payments continuing, as well as permitting higher levels of savings in the private sector.

Calculation

The real economic growth rate, averaged over the last four years and the projected rates for the next three years, range from less than zero% in Argentina and Brazil to 7.2% in Ireland. A maximum feasible score over the long term is considered to be 5% per annum. Therefore, real growth of 5% or more scores the maximum whilst a rate of minus 1% or lower scores zero.

Calculating S8 — Real Economic Growth



Commentary

Long term real economic growth means that the country's GDP is growing faster than inflation. This result can have several benefits including higher average incomes, lower unemployment, reduced government borrowing, higher levels of savings and often improved investment returns. Most of these outcomes lead to a stronger and more robust retirement income system which, in turn, provides more sustainable pension benefits.

Weighting

This item has a weighting of 9% in the sustainability sub-index.

Question S9

Is it a requirement for the pension plan's trustees/ executives/fiduciaries to consider Environmental, Social and Governance (ESG) issues in developing their investment policies or strategies?

Objective

It is critical that private pension plans provide sustainable investment returns over many decades. Hence, there has been growing awareness in many countries of the importance of ESG-related issues. Therefore it is appropriate for plan trustees and fiduciaries to take ESG factors into account when framing their investment strategy.

Calculation

This question was assessed on a three-point scale with a score of 2 for "yes", 1 if it is to some extent and 0 for "no".

Commentary

In 6 of the 39 systems, it is a requirement for trustees or fiduciaries to consider ESG factors when developing their investment strategy.

Weighting

This indicator has been given a 1% weighting in the sustainability sub-index as it represents an important signal in the development of long term sustainable investment strategies.

Sources of data for the sustainability sub-index

Question S1

Mercer calculations for Brazil, Colombia, France, Saudi Arabia and Sweden.

OECD (2011), p173 for South Africa.

OECD (2014), p69 for Argentina and Peru.

OECD (2018a), p13 for China, Hong Kong SAR, India, Indonesia, Malaysia, the Philippines, Singapore & Thailand

OECD (2019a), p207 for all other countries although adjustments were needed when data was not available or comprehensive.

Question S2

Mercer calculations for Malaysia, the Philippines, Saudi Arabia and Singapore.

OECD (2011), p179 in relation to pension insurance contracts for Germany.

OECD (2015), p191 in relation to pension insurance contracts for Norway.

OECD (2019a), p211 in relation to public pension reserve as% of GDP.

OECD (2019d) in relation to all retirement vehicles as% of GDP for all countries.

Question S3

Life expectancy (2020-2025 and 2045-2050), aged dependency (2050) and total fertility rate (2015-2020) data were from United Nations (2019).

State pension ages were sourced from relevant Mercer consultants.

Question S5

International Labour Organization (2016), for China and 65+ age group for Malaysia.

International Labour Organization (2020), for all other systems.

Question S6

Government debt as percentage of GDP

International Monetary Fund (2019).

Sovereign Wealth Fund Institute: www.swfinstitute.org

Public expenditure on pensions

Standard & Poor's (2016), p30 for Colombia, Hong Kong SAR, Malaysia, Peru, the Philippines, Singapore & Thailand

OECD (2019a), p203 for all other systems

Question S8

International Monetary Fund (2019).

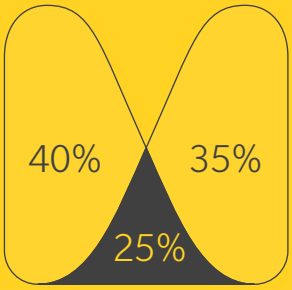
Questions S4, S7 and S9

Answers were sourced from relevant Mercer consultants.

CHAPTER 8

THE INTEGRITY SUB-INDEX

The integrity sub-index considers three broad areas of the pension system, namely regulation and governance; protection and communication for members; and operating costs. This sub-index asks a range of questions about the requirements that apply to funded pension plans which normally exist in the private sector. Well operated and successful private sector plans are critical because without them the government becomes the only provider, which is not a desirable or sustainable long-term outcome. Hence they represent a critical component of a well-governed and trusted pension system, which has the long term confidence of the community.



The system with the highest value for the integrity sub-index is Finland (93.5), with the lowest value being for the Philippines (34.8). The better scores were achieved by the retirement income systems with well-developed private pension industries.

Full details of the values in respect of each indicator in the integrity sub-index are shown in Attachment 3.

Regulation and governance

Question R1

Do private sector pension plans need regulatory approval or supervision to operate?

Is a private pension plan required to be a separate legal entity from the employer?

Objective

These questions were designed to assess the extent to which a private sector pension plan is required to be a separate entity from any sponsoring employer (which usually entails holding assets that are separate from the employer) and is subject to some level of regulatory oversight.

29 of the 39 systems obtained the maximum score indicating the presence of the basic groundwork needed for a sound governance framework.

Calculation

Each question in this section was assessed with a score of 2 for "yes" and 0 for "no". In some cases the response was neither a clear "yes" nor "no" so that the score may be between 0 and 2 depending on the actual circumstances.

Weighting

The first question was given a 2.5% weighting and the second question was given a 5% weighting, giving a total weighting of 7.5% in the integrity sub-index for these two questions.

Question R2

Are private sector pension plans required to submit a written report in a prescribed format to a regulator each year?

Does the regulator make industry data available from the submitted forms on a regular basis?

How actively does the regulator discharge its supervisory responsibilities? Please rank on a scale of 1 to 5.

The following table was provided to assist in answering the third question.

Table 6: Supervisory responsibilities scaling system.

Scale	Description	Examples of Activity by the Regulator
1	Inactive	Receives reports from plans but does not follow up
2	Occasionally active	Receives annual reports, follows up with questions but has limited communication with plans on a regular basis
3	Moderately active	Receives annual reports, follows up with questions and has regular communication with plans, including on-site visits
4	Consistently active	Obtains information on a regular basis from plans and has a focus on risk-based regulation. That is, there is a focus on plans with higher risks
5	Very active	Obtains information on a regular basis from plans and has a focus on risk-based regulation. In addition, the regulator often leads the industry with ideas, discussion papers and reacts to immediate issues

Objective

These questions were designed to assess the level of supervision and the involvement of the regulator within the industry.

Calculation

The first two questions in this section were assessed with a score of 2 for "yes" and 0 for "no". In some cases the response was neither a clear "yes" nor "no" so that the score may be between 0 and 2 depending on the actual circumstances.

The last question was assessed on a five-point scale as shown in the above table. It is important to note that this question did not assess the quality of the supervision; rather it considered the activity of the regulator.

The results highlight that the role of the pension regulator varies greatly around the world. Generally speaking, the pension regulator plays a stronger role where the pension industry has developed over many decades. In Malaysia and Singapore the activity of the authority overseeing their central funds has been recognised.

Weighting

The first and third questions were each given a 4% weighting, with the second question being given a 2% weighting, resulting in a total weighting of 10% in the integrity sub-index for these three questions.

Question R3

Where assets exist, are the private pension plan's trustees/executives/fiduciaries required to prepare an investment policy?

Are the private pension plan's trustees/executives/fiduciaries required to prepare a risk management policy?

Are the private pension plan's trustees/executives/fiduciaries required to prepare a conflicts of interest policy?

Are the private pension plan's trustees/executives/fiduciaries required to have:

- one or more independent members included in the governing body?
- equal member and employer representation on the governing body?

Objective

These questions are designed to assess the regulatory requirements in respect of certain functions that may be required in respect of the fiduciaries who oversee private pension plans.

The third question takes into account fiduciaries who may have a number of roles in various entities, including the pension plan, the sponsoring employer, a provider (such as an investment house) or, indeed, another pension plan. Good governance practice means pension plans should have a clear policy to handle such situations.

The two parts of the fourth question reflect that it is no longer appropriate for the governance structure of pension schemes to be restricted or controlled by a particular entity. Good governance practice includes independent trustees or fiduciaries and/or a balance between employer and member representatives on the governing board.

Calculation

The first three questions in this section were assessed with a score of 2 for "yes" and 0 for "no". In some cases the response was neither a clear "yes" nor "no" so that the score may be between 0 and 2 depending on the actual circumstances.

The fourth question was scored out of 2, with an answer of "yes" to the first part immediately scoring 2 out of 2. If the answer to the first part was "no" but the answer to the second part was "yes" to equal member representation, then the score was 1 out of 2. All other answers score 0, even if there is a member representation requirement but it is less than equal representation.

Israel, Malaysia, Norway, Peru, Saudi Arabia and Singapore received the maximum score of 10.0 for these questions while eleven systems scored less than 6.0. This indicates that there is still scope to improve governance requirements in many systems.

Weighting

The first and second questions were each given a 4% weighting, with the third question given a 2.5% weighting and the fourth question given a 2% weighting, resulting in a total of 12.5% in the integrity sub-index for these four questions.

Question R4

Do the private pension plan's trustees/executives/ fiduciaries have to satisfy any personal requirements set by the regulator?

Are the financial accounts of private pension plans (or equivalent) required to be audited annually by a recognised professional?

Objective

These questions were designed to assess the regulatory requirements in respect of these two aspects of the governance of private sector pension plans.

Calculation

Each question in this section was assessed with a score of 2 for "yes" and 0 for "no". In some cases the response was neither a clear "yes" nor "no" so that the score may be between 0 and 2 depending on the actual circumstances.

23 of the 39 systems received the maximum score indicating that several systems could improve their requirements, particularly in respect of the first question.

Weighting

Each question was given a 2.5% weighting in the integrity sub-index, resulting in a total of 5% for these two questions.

Question R5

What is the government's capacity to effectively formulate and implement sound policies and to promote private sector development?

What respect do citizens and the state have for the institutions that govern economic and social interactions among them?

How free are the country's citizens to express their views? What is the likelihood of political instability or politically-motivated violence?

Objective

These questions were designed to assess the integrity of the government which plays a critical role in the ongoing governance, legal framework, regulation, policy development and stability of the retirement income system.

Calculation

The World Bank publishes results from the Worldwide Governance Indicators project for 214 economies for the following six dimensions of governance:

- Government Effectiveness
- Regulatory Quality
- Rule of Law
- Control of Corruption
- Voice and Accountability
- Political Stability and Absence of Violence / Terrorism

From this publicly available source, each indicator provided a score for each country in the standard normal units, ranging from approximately -2.5 to +2.5. These six scores were summed and then increased by 3 to avoid any negative scores. The scores ranged from 0.14 for Turkey to 13.87 for New Zealand out of a maximum score of 15.

Weighting

Each question was given a 5% weighting in the integrity sub-index, resulting in a total of 15% for these three questions.

Commentary on the total regulation and governance results

The scores ranged from 13.5 for Mexico to 47.8 for Norway out of a maximum of 50. The low score for Mexico is indicative of the fact that the regulator has minimal requirements when compared to the more developed pension industries.

Protection and communication for members

With the exception of question P1 dealing with funding, each question in this section is assessed with a score of 2 for "yes" and 0 for "no". In some cases the response is neither a clear "yes" nor "no" so that the score may be between 0 and 2 depending on the actual circumstances.

Question P1

For defined benefit schemes:

- are there minimum funding requirements?
- what is the period over which any deficit or shortfall is normally funded?
- describe the major features of the funding requirements.

For defined contribution schemes, are the assets required to fully meet the members' accounts?

Objective

These questions are designed to assess the level of funding required in respect of both defined benefit (DB) and defined contribution (DC) plans. Funding levels are critical in securing members' future retirement benefits.

Calculation

The calculation considered the requirements for both DB and DC plans (where relevant). For the DB funding assessment, we considered both the extent of the funding requirement and the period over which any deficit must be rectified. The maximum score for DB was given where funding requirements included regular actuarial involvement and funding of a deficit or shortfall over periods of up to four years.

Commentary

All systems require full funding of DC plans; in fact, many respondents noted that this feature is the essence of such a plan. However the requirements for funding DB plans vary considerably. There are, in effect, no requirements in some systems whereas in other cases any deficit requires rectification within a specified period. Australia, Belgium, Chile, Denmark, Finland, Hong Kong SAR, Ireland, Israel, Korea (South), the Netherlands, Norway, Poland, South Africa and Spain received the maximum score.

Weighting

The funding of a member's retirement benefit in a private sector pension plan represents a basic protection of the member's accrued benefits and this indicator is therefore given a 10% weighting in the integrity sub-index.

Question P2

Are there any limits on the level of in-house assets held by a private sector pension plan? If yes, what are they?

Objective

An essential characteristic of a sound retirement income system is that a member's accrued retirement benefit is not subject to the financial position of the member's employer.

Commentary

Most systems have a restriction on the level of in-house assets held by a pension plan. These restrictions are often set at 5 to 10% of the plan's assets. A maximum score was given where in-house assets are restricted to 5%. There are no restrictions in Argentina, Indonesia, Italy, Japan, the Philippines and Thailand.

Weighting

This requirement represents an important way of protecting the member's accrued benefits and is given a 5% weighting in the integrity sub-index.

Question P3

Are the members' accrued benefits provided with any protection or reimbursement from an act of fraud or mismanagement within the fund?

In the case of employer insolvency (or bankruptcy), do any unpaid employer contributions receive priority over payments to other creditors, and/or are members' accrued benefits protected against claims of creditors?

Objective

There are many risks faced by members of pension plans. These two questions consider what protection, if any, the members receive in the case of fraud, mismanagement or employer insolvency. In the latter case, the employer may not be able to pay any contributions that are owed.

Commentary

The answers to these questions vary considerably. In some cases, there are some restricted arrangements in place to support the member whereas in the UK (for example) a fraud compensation scheme exists.

Weighting

Whilst these issues are very important where such incidents occur, experience in most countries suggests that it is not a common event or that its financial effect is relatively minor. Hence each question is given the weighting of 2.5% in the integrity sub-index, resulting in a total of 5% for these two questions.

Question P4

When joining the pension plan, are new members required to receive information about the pension plan?

Objective

It is important that members receive information when joining a pension plan, including a description of the benefits and the risks they may face, particularly with the global growth of DC plans.

Commentary

All systems, except China, India (for some DB plans), the Philippines and Thailand, require information to be provided when members join the plan.

Weighting

The weighting for this question is 5% in the integrity sub-index.

Question P5

Are plan members required to receive or have access to the annual report from the pension plan?

Is the annual report required to show:

- the allocation of the plan's assets to major asset classes?
- the major investments of the plan?

Objective

Annual reports present the opportunity for pension plans to communicate with their members, highlighting plan information and contemporary issues that may need to be considered by the members.

As defined contribution arrangements become more prevalent, it is becoming even more important for members to receive information about the investments in which their accumulated benefits are invested.

Commentary

There is considerable variety in the responses, with eight of the 39 systems having no requirements in respect of annual reports.

The responses for disclosure of investment allocation and major investments ranged from no requirement through to disclosure of all investments. A maximum score was given where major investments of the plan's assets are required to be disclosed.

Weighting

The first question relating to annual reports was given a 2.5% weighting in the integrity sub-index, with the same weighting given to the two questions relating to assets resulting in a total of 5%.

Questions P6

Are plan members required to receive an annual statement of their current personal benefits from the plan?

Is this annual statement to individual members required to show any projection of the member's possible retirement benefits?

Objective

Although an annual report about the plan is valuable, most members are more interested in their personal entitlement. The first question therefore ascertains whether the provision of such information is a requirement, whilst the second question considers whether this requirement includes any projections about the member's future retirement benefit.

Commentary

The majority of systems have a requirement concerning annual personal statements with Austria, Belgium, Chile, Finland, Germany, Ireland, Israel, Italy, the Netherlands, New Zealand, Norway, Sweden and Switzerland requiring some form of benefit projection. As account balances increase and individuals take on greater responsibility for their retirement benefits, the provision of this type of information will become increasingly important to members.

Weighting

The first question was given a 5% weighting in the integrity sub-index whilst the second question was given a 2.5% weighting in this sub-index, resulting in a total of 7.5% for these two questions.

Question P7

Do plan members have access to a complaints tribunal which is independent from the pension plan?

Objective

A common way to provide some protection to individuals who receive benefits from a contract with a financial services organisation (such as a bank or insurance company) is to provide them with access to an independent complaints tribunal or ombudsman.

As the provision of retirement benefits can represent an individual's most important financial asset, there is good reason for such a provision to exist in respect of private sector pension plans.

Commentary

Twenty two systems have a complaints arrangement that is independent from both the provider and the regulator while nine other systems have a range of processes that can be used for this purpose.

Weighting

Whilst this indicator is not as important as funding or communication to members, it represents a desirable feature as it provides all members with access to an independent body, should any disputes arise. It is given a 2.5% weighting in the integrity sub-index.

Commentary on the total protection and communication results

The scores ranged from 10.0 for the Philippines to 39.5 for Finland out of a maximum of 40. The very low score for the Philippines is primarily caused by having virtually no requirements in terms of communicating with plan members.

Costs

What percentage of total pension assets is held in various types of pension funds?

What percentage of total pension assets is held by the largest ten pension funds/providers?

Objective

As noted by Luis Viceira in Hinz et al. (2010), costs are one of the most important determinants of the long run efficiency of a pension system. He goes on to comment that:

> "Unfortunately, there is very little transparency about the overall costs of running most pension systems or the total direct and indirect fees that they charge to participants and sponsors."[22]

This is generally correct. The huge variety of pension systems around the world, with a great diversity of retail, wholesale and employer-sponsored arrangements means that some administrative or investment costs are clearly identified whereas others are borne indirectly or directly by providers, sponsors or third parties. Comparisons are therefore very difficult.

Yet, in the final analysis many costs will be borne by members and thereby affect the provision of their retirement income. We have therefore used two proxies for this indicator.

The first question represents an attempt to ascertain the proportions in each pension industry that are employer-sponsored plans, not-for-profit plans or retail funds, which may be employer based or individual contracts. Each type of plan is likely to have a different cost structure which, in turn, influences the overall cost structure of the industry.

The second question highlights the fact that economies of scale matter. That is, it is likely that as funds increase in size, their costs as a proportion of assets will reduce and some (or all) of these benefits will be passed onto members.

Calculation

For the first question, each type of plan was given a weight ranging from 1 for individual retail or insurance contracts to 10 for a centralised fund. These scores were then weighted by the actual characteristics of each pension system.

For the second question, we considered the size of the assets held by the largest ten providers or funds. A score of 1 was given when these assets were less than 10% of all assets rising to a maximum score of 5 when these assets represented more than 75% of all assets.

Weighting

Each question was given a 5% weighting in the integrity sub-index, resulting in a total of 10% for these two questions.

Commentary on the costs results

The scores for these two indicators ranged from 3.6 for the USA and 4.1 in France to 10.0 for both Malaysia and Singapore. The high scores for these two countries are not surprising as each country has a central fund which should provide administrative savings. In addition, larger funds have the opportunity to add value through a broader range of investment opportunities.

It is recognised there is a tension between a system with a single fund (or relatively few funds) which should be able to keep costs down and a competitive system where individuals have greater choice and freedom. The ideal system should encourage competition and flexibility to suit members' needs whilst at the same time encouraging economies of scale (as illustrated by this question) to minimise costs and improve benefits.

Sources of data for integrity sub-index

As the integrity sub-index is primarily based on the operations of the private sector pension industry, answers to all but one of the questions were sourced from relevant Mercer consultants in each country. The exception was Question R5 which used Worldwide Governance Indicators from The World Bank (2019).

22 Hinz R, Rudolph H P, Antolin P and Yermo J (2010), p259.

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Attachment 1: Score for each country for each indicator in the adequacy sub-index

	Question	Question weight	Score for each system																		
			Argentina	Australia	Austria	Belgium	Brazil	Canada	Chile	China	Colombia	Denmark	Finland	France	Germany	Hong Kong SAR	India	Indonesia	Ireland	Israel	Italy
A1	What is the minimum pension, as a percentage of the average wage, that a single aged person will receive? How is the minimum pension increased or adjusted over time? Are these increases or adjustments made on a regular basis?	17.5%	5.8	9.0	5.9	8.7	9.6	9.6	2.5	1.1	1.1	10.0	4.1	7.3	5.7	3.8	0.0	0.0	7.5	7.5	4.8
A2	What is the net replacement rate for a range of incomes earner?	25.0%	10.0	6.0	10.0	9.6	10.0	6.9	3.6	7.7	7.2	10.0	8.9	10.0	7.9	5.2	3.4	1.8	6.0	7.7	10.0
A3	What is the net household saving rate in the country? What is the net household debt to GDP ratio?	10.0%	7.2	2.0	5.5	2.6	6.3	1.9	6.0	6.1	5.7	0.5	3.1	6.2	5.5	4.1	7.2	8.2	5.5	7.4	4.7
A4	Are voluntary member contributions made by a median-income earner to a funded pension plan treated by the tax system more favourably than similar savings in a bank account? Is the investment income earned by pension plans exempt from tax in the pre retirement and/or post retirement periods?	5.0%	4.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	4.0	7.0	10.0	10.0	10.0	10.0	7.0	10.0	7.0	7.0
A5	Is there a minimum access age to receive benefits from the private pension plans (except for death, invalidity and/or cases of significant financial hardship)? If so, what is the current age?	10.0%	0.0	9.3	0.0	10.0	0.0	3.3	5.0	8.3	9.7	10.0	10.0	10.0	10.0	10.0	0.0	6.7	6.7	5.0	0.0
A6	What proportion, if any, of the retirement benefit from the private pension arrangements is required to be taken as an income stream? Are there any tax incentives that exists, or favourable conversion rates, to encourage taking up of income streams?	10.0%	0.0	2.0	6.7	0.0	5.5	4.5	7.5	0.0	7.5	7.5	7.5	5.0	10.0	0.0	2.5	6.7	10.0	6.0	6.7
A7	On resignation from employment, are plan members normally entitled to the full vesting of their accrued benefit? After resignation, is the value of the member's accrued benefit normally maintained in real terms (either by inflation-linked indexation or through market investment returns)? Can a member's benefit entitlements normally be transferred to another private pension plan on the member's resignation from an employer?	7.5%	2.0	10.0	7.0	10.0	9.0	8.0	10.0	8.0	10.0	10.0	10.0	9.0	9.0	10.0	10.0	9.0	9.0	6.0	10.0
A8	Upon a couple's divorce or separation, are the individuals' accrued pension assets normally taken into account in the overall division of assets?	3.0%	0.0	10.0	0.0	10.0	0.0	10.0	10.0	10.0	0.0	0.0	0.0	5.0	10.0	0.0	5.0	0.0	10.0	10.0	10.0
A9	What is the level of home ownership in the country?	5.0%	7.6	6.5	4.0	7.5	6.6	6.6	6.9	9.7	4.0	5.5	6.1	5.4	3.9	4.5	9.5	8.6	7.3	6.6	7.4
A10	What is the proportion of total pension assets invested in growth assets?	5.0%	7.8	10.0	8.4	7.5	5.7	10.0	9.2	5.8	8.3	10.0	9.7	5.8	9.5	10.0	3.6	6.3	10.0	8.3	8.3
A11	Is it a requirement that an individual continues to accrue their retirement benefit in a private pension plan when they receive income support such as a disability pension or on paid maternity leave? Does your system provide any additional contributions or benefits for parents who are caring for young children whilst the parent is not in the paid workforce?	2.0%	5.0	2.5	10.0	0.0	5.0	10.0	5.0	0.0	5.0	10.0	10.0	3.8	10.0	10.0	0.0	10.0	5.0	0.0	0.0
	Adequacy sub-index	40%	54.5	66.8	64.4	74.6	72.6	68.2	56.5	57.4	62.5	79.8	71.0	78.7	78.8	54.5	38.8	45.7	74.7	70.7	66.7

Each question is scored for each country with a minimum score of 0 and a maximum score of 10.

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Attachment 1: *(continued)* Score for each country for each indicator in the adequacy sub-index

Question		Question weight	Score for each system																			
			Japan	Korea (South)	Malaysia	Mexico	Netherlands	New Zealand	Norway	Peru	Philippines	Poland	Saudi Arabia	Singapore	South Africa	Spain	Sweden	Switzerland	Thailand	Turkey	UK	USA
A1	What is the minimum pension, as a percentage of the average wage, that a single aged person will receive? How is the minimum pension increased or adjusted over time? Are these increases or adjustments made on a regular basis?	17.5%	4.7	2.0	0.0	1.1	9.6	10.0	9.6	0.1	0.0	3.3	0.0	5.1	3.0	4.6	5.9	5.9	0.0	1.2	6.4	3.8
A2	What is the net replacement rate for a range of incomes earner?	25.0%	5.1	5.5	7.4	2.0	10.0	6.5	6.5	7.4	10.0	2.5	9.1	6.8	0.5	10.0	7.4	5.1	3.7	10.0	3.5	8.0
A3	What is the net household saving rate in the country? What is the net household debt to GDP ratio?	10.0%	4.7	3.7	2.4	6.4	2.7	1.4	2.2	7.3	6.7	4.6	9.5	6.8	4.5	4.2	3.7	2.9	4.3	6.3	3.4	5.3
A4	Are voluntary member contributions made by a median-income earner to a funded pension plan treated by the tax system more favourably than similar savings in a bank account? Is the investment income earned by pension plans exempt from tax in the pre retirement and/or post retirement periods?	5.0%	10.0	10.0	10.0	7.0	10.0	4.0	8.0	10.0	0.0	10.0	5.0	10.0	10.0	10.0	2.0	10.0	7.0	6.0	10.0	10.0
A5	Is there a minimum access age to receive benefits from the private pension plans (except for death, invalidity and/or cases of significant financial hardship)? If so, what is the current age?	10.0%	5.0	6.7	6.7	6.7	5.0	8.3	10.0	1.7	0.0	10.0	7.0	6.7	0.0	10.0	6.7	9.3	6.7	0.0	6.7	6.3
A6	What proportion, if any, of the retirement benefit from the private pension arrangements is required to be taken as an income stream? Are there any tax incentives that exists, or favourable conversion rates, to encourage taking up of income streams?	10.0%	0.0	2.0	0.0	0.0	7.5	0.0	7.5	7.5	0.0	10.0	7.5	10.0	7.5	0.0	7.5	1.5	0.0	0.0	3.5	0.0
A7	On resignation from employment, are plan members normally entitled to the full vesting of their accrued benefit? After resignation, is the value of the member's accrued benefit normally maintained in real terms (either by inflation-linked indexation or through market investment returns)? Can a member's benefit entitlements normally be transferred to another private pension plan on the member's resignation from an employer?	7.5%	7.0	8.0	10.0	4.0	10.0	10.0	9.0	9.0	0.0	10.0	4.0	10.0	10.0	10.0	10.0	10.0	6.0	2.0	10.0	5.0
A8	Upon a couple's divorce or separation, are the individuals' accrued pension assets normally taken into account in the overall division of assets?	3.0%	10.0	0.0	4.0	5.0	10.0	10.0	0.0	10.0	0.0	10.0	0.0	10.0	10.0	5.0	2.5	10.0	0.0	0.0	10.0	10.0
A9	What is the level of home ownership in the country?	5.0%	6.0	5.4	7.6	7.0	6.1	4.5	8.1	8.0	6.4	7.0	4.6	10.0	4.8	8.0	6.2	2.6	8.6	5.6	6.3	6.5
A10	What is the proportion of total pension assets invested in growth assets?	5.0%	10.0	7.5	10.0	8.0	10.0	10.0	8.7	10.0	7.0	8.3	10.0	7.5	9.1	9.5	10.0	10.0	4.9	5.0	10.0	10.0
A11	Is it a requirement that an individual continues to accrue their retirement benefit in a private pension plan when they receive income support such as a disability pension or on paid maternity leave? Does your system provide any additional contributions or benefits for parents who are caring for young children whilst the parent is not in the paid workforce?	2.0%	5.0	5.0	0.0	5.0	5.0	2.5	7.5	2.5	2.5	0.0	0.0	2.5	10.0	5.0	5.0	5.0	10.0	5.0	10.0	2.5
Adequacy sub-index		40%	52.9	48.0	50.1	36.5	81.5	63.8	73.4	59.5	38.9	59.9	59.6	74.1	43.0	71.0	65.2	59.5	36.8	44.2	59.2	58.9

Each question is scored for each country with a minimum score of 0 and a maximum score of 10.

Attachment 2: Score for each country for each indicator in the sustainability sub-index

Question		Question weight	Score for each system																			
			Argentina	Australia	Austria	Belgium	Brazil	Canada	Chile	China	Colombia	Denmark	Finland	France	Germany	Hong Kong SAR	India	Indonesia	Ireland	Israel	Italy	Japan
S1	What proportion of the working age population are members of private pension plans?	20.0%	0.0	9.3	1.6	5.5	0.0	6.8	10.0	3.8	3.1	10.0	10.0	10.0	6.2	5.7	0.0	0.0	2.9	9.7	0.9	6.0
S2	What is the level of pension assets, expressed as a percentage of GDP, held in private pension arrangements, public pension reserve funds, protected book reserves and pension insurance contracts?	15.0%	0.6	8.5	0.3	0.6	1.5	10.0	5.5	0.3	1.4	10.0	4.9	0.7	1.2	2.3	0.3	0.2	1.9	3.3	0.6	3.6
S3	What is the current life expectancy at the State pension age? What is the projected life expectancy at the legislated State pension age in 2050? What is the projected old-age dependency ratio in 2050? What is the Total Fertility Rate (TFR) averaged over 2015 - 2020?	20.0%	7.6	6.1	4.3	5.7	6.8	5.0	4.6	3.5	4.6	7.0	5.1	3.6	5.5	2.6	8.5	8.0	6.5	7.4	4.4	1.6
S4	What is the level of mandatory contributions that are set aside for retirement benefits (ie funded), expressed as a percentage of wages? These include mandatory employer and/or employee contributions towards funded public benefits (ie social security) and/or private retirement benefits.	10.0%	0.0	7.9	0.0	0.0	0.0	6.6	9.6	0.0	6.8	10.0	3.7	0.0	0.0	8.3	3.5	3.6	0.0	10.0	1.5	0.0
S5	What is the labour force participation rate for those aged 55-64? What is the labour force participation rate for those aged 65+?	10.0%	5.8	6.3	3.6	2.7	3.1	6.2	7.4	5.3	7.1	7.1	6.5	3.4	7.2	4.0	3.0	7.8	5.4	7.4	3.7	9.0
S6	What is the level of adjusted government debt (being the gross public debt reduced by the size of any sovereign wealth funds that are not set aside for future pension liabilities), expressed as a percentage of GDP?	10.0%	4.6	8.0	3.2	2.5	3.2	5.5	8.3	6.9	7.7	6.4	4.0	2.3	4.7	9.0	7.7	9.0	6.4	6.6	0.6	2.2
S7	In respect of private pension arrangements, are older employees able to access part of their retirement savings or pension and continue working (eg part time)? If yes, can employees continue to contribute and accrue benefits at an appropriate rate?	5.0%	0.0	10.0	0.0	0.0	0.0	8.0	6.0	0.0	4.0	10.0	10.0	9.0	8.0	10.0	5.0	0.0	6.0	9.0	0.0	4.0
S8	What is the real economic growth averaged over the last four years and projected for the next three years?	9.0%	1.0	4.4	3.4	3.1	0.4	3.2	4.3	10.0	4.9	4.5	3.1	2.8	3.3	3.8	10.0	9.7	10.0	5.4	1.8	2.3
S9	Is it a requirement for the trustees/ fiduciaries to consider Environmental, Social and Governance (ESG) issues in developing their investment policies or strategies?	1.0%	0.0	0.0	0.0	10.0	0.0	5.0	5.0	0.0	0.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sustainability sub-index		35%	27.6	74.6	22.1	32.4	22.3	64.4	70.0	36.2	45.5	82.6	60.5	40.9	44.1	50.0	43.1	45.6	45.6	72.4	18.8	35.9

Each question is scored for each country with a minimum score of 0 and a maximum score of 10.

Continues next page

Attachment 2: *(continued)* Score for each country for each indicator in the sustainability sub-index

Question		Question weight	Score for each country																		
			Korea (South)	Malaysia	Mexico	Netherlands	New Zealand	Norway	Peru	Philippines	Poland	Saudi Arabia	Singapore	South Africa	Spain	Sweden	Switzerland	Thailand	Turkey	UK	USA
S1	What proportion of the working age population are members of private pension plans?	20.0%	7.0	2.8	8.0	10.0	10.0	6.6	0.3	0.6	8.2	6.6	5.3	1.3	1.7	10.0	9.0	2.1	0.0	4.8	7.6
S2	What is the level of pension assets, expressed as a percentage of GDP, held in private pension arrangements, public pension reserve funds, protected book reserves and pension insurance contracts?	15.0%	3.6	3.5	0.9	9.9	2.3	4.2	1.2	0.4	0.6	1.1	4.1	5.4	0.7	6.7	7.3	0.4	0.1	6.0	8.5
S3	What is the current life expectancy at the State pension age? What is the projected life expectancy at the legislated State pension age in 2050? What is the projected old-age dependency ratio in 2050? What is the Total Fertility Rate (TFR) averaged over 2015 - 2020?	20.0%	2.1	6.6	8.5	6.3	5.8	6.4	7.9	8.7	5.0	7.2	3.0	9.9	3.8	5.7	4.1	3.5	5.3	6.4	6.8
S4	What is the level of mandatory contributions that are set aside for retirement benefits (ie funded), expressed as a percentage of wages? These include mandatory employer and/or employee contributions towards funded public benefits (ie social security) and/or private retirement benefits.	10.0%	3.8	10.0	5.2	10.0	4.2	1.7	8.3	10.0	0.0	10.0	10.0	0.0	0.0	5.7	7.5	5.8	0.0	6.7	2.1
S5	What is the labour force participation rate for those aged 55-64? What is the labour force participation rate for those aged 65+?	10.0%	8.0	3.4	5.1	6.7	9.6	7.4	8.6	6.7	2.4	1.1	7.6	1.5	4.3	9.2	7.9	7.2	0.8	6.2	6.3
S6	What is the level of adjusted government debt (being the gross public debt reduced by the size of any sovereign wealth funds that are not set aside for future pension liabilities), expressed as a percentage of GDP?	10.0%	8.2	7.8	8.1	6.2	7.6	6.7	8.8	8.6	5.1	7.9	10.0	7.8	2.8	6.8	5.7	7.0	7.4	5.0	5.3
S7	In respect of private pension arrangements, are older employees able to access part of their retirement savings or pension and continue working (eg part time)? If yes, can employees continue to contribute and accrue benefits at an appropriate rate?	5.0%	10.0	10.0	0.0	10.0	3.0	9.0	0.0	0.0	0.0	0.0	10.0	8.0	8.0	10.0	6.0	8.0	0.0	10.0	6.0
S8	What is the real economic growth averaged over the last four years and projected for the next three years?	9.0%	5.4	9.2	3.3	3.3	5.5	2.7	5.6	10.0	6.6	3.7	5.1	2.2	4.1	4.3	3.2	5.6	6.6	3.2	4.3
S9	Is it a requirement for the trustees/ fiduciaries to consider Environmental, Social and Governance (ESG) issues in developing their investment policies or strategies?	1.0%	0.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	5.0	0.0	0.0	0.0	0.0	10.0	0.0
Sustainability sub-index		35%	53.4	58.6	55.8	79.3	62.9	55.1	49.2	53.4	40.7	51.6	59.9	46.7	27.5	72.0	64.2	40.8	24.9	58.0	62.1

Each question is scored for each country with a minimum score of 0 and a maximum score of 10.

Attachment 3: Score for each country for each indicator in the integrity sub-index

	Question	Question weight	Score for each system																				
			Argentina	Australia	Austria	Belgium	Brazil	Canada	Chile	China	Colombia	Denmark	Finland	France	Germany	Hong Kong SAR	India	Indonesia	Ireland	Israel	Italy	Japan	Korea (South)
Regulation and Governance (R1 - R5)	Do private sector pension plans need regulatory approval or supervision to operate? Is a private pension plan required to be a separate legal entity from the employer?	7.5%	0.0	10.0	8.3	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	6.7	10.0	10.0	10.0	10.0	10.0	10.0	6.7	8.3
	Are private sector pension plans required to submit a written report in a prescribed format to a regulator each year? Does the regulator make industry data available from the submitted forms on a regular basis? How actively does the regulator (or protector) discharge its supervisory responsibilities?	10.0%	0.8	9.6	4.2	9.2	9.2	8.7	10.0	4.4	9.2	10.0	9.2	8.2	9.0	10.0	8.2	9.2	8.2	10.0	9.2	7.6	3.6
	Where assets exist, are the private pension plan's trustees/executives/fiduciaries required to prepare an investment policy? Are the private pension plan's trustees/executives/ fiduciaries required to prepare a risk management policy? Are the private pension plan's trustees/executives/ fiduciaries required to prepare a conflicts of interest policy? i) Are the private pension plan's trustees/executies/ fiduciaries required to have an independent member included in the governing body? ii) Are the private pension plan's trustees/executives/fiduciaries required to have equal member and employer representation on the governing body?	12.5%	8.4	8.4	9.2	8.4	8.2	8.4	8.4	3.6	9.0	7.4	9.0	5.2	8.4	6.8	3.2	7.4	3.2	10.0	9.2	4.0	0.0
	Do the private pension plan's trustees/executives/ fiduciaries have to satisfy any personal requirements set by the regulator? Are the financial accounts of private pension plans (or equivalent) required to be audited annually by a recognised professional?	5.0%	10.0	10.0	5.0	10.0	10.0	7.5	7.5	10.0	7.5	10.0	10.0	10.0	7.5	10.0	5.0	10.0	6.3	10.0	10.0	7.5	2.5
	What is the capacity of the government to effectively formulate and implement sound policies? What respect do citizens and the state have for the institutions that govern economic and social interactions among them? How free are the country's citizens to express their views? What is the likelihood of political instability or politically-motivated violence?	15.0%	2.0	8.3	7.8	6.7	1.0	8.4	6.0	0.8	1.3	8.7	9.0	6.5	8.0	7.9	1.6	1.5	7.6	4.6	3.9	7.4	5.6
Protection and communication for members (P1 - P7)	For defined benefit schemes, are there minimum funding requirements? What is the period over which any deficit or shortfall is normally funded? For defined contribution schemes, are the assets required to fully meet the members' accounts?	10.0%	5.0	10.0	7.5	10.0	9.0	9.0	10.0	7.5	5.0	10.0	10.0	6.0	8.0	10.0	5.0	7.0	10.0	10.0	9.0	9.0	10.0
	Are there any limits on the level of in-house assets held by a private sector pension plan? If yes, what are they?	5.0%	0.0	10.0	5.0	10.0	7.5	8.8	10.0	7.5	7.5	10.0	10.0	5.0	8.8	7.5	8.8	0.0	10.0	10.0	0.0	0.0	10.0
	Are the members' accrued benefits provided with any protection or reimbursement from an act of fraud or mismanagement within the fund? In the case of employer insolvency (or bankruptcy), do any unpaid employer contributions receive priority over payments to other creditors, and/or are members' accrued benefits protected against claims of creditors?	5.0%	0.0	5.0	5.0	10.0	0.0	2.5	7.5	2.5	10.0	2.5	10.0	2.5	7.5	10.0	10.0	5.0	3.8	5.0	5.0	2.5	0.0
	When joining the pension plan, are new members required to receive information about the pension plan?	5.0%	10.0	10.0	10.0	10.0	10.0	10.0	10.0	0.0	10.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
	Are plan members required to receive or have access to an annual report about the pension plan? Is the annual report required to show: i. The allocation of the plan's assets to major asset classes? ii. The major investments of the plan?	5.0%	2.5	9.0	8.0	8.0	10.0	6.5	0.0	0.0	10.0	0.0	9.0	0.0	7.0	9.0	8.0	8.0	10.0	8.0	8.0	3.8	0.0
	Are plan members required to receive an annual statement of their current personal benefits from the plan? Is this annual statement to individual members required to show any projection of the member's possible retirement benefits?	7.5%	3.3	6.7	10.0	10.0	8.3	6.7	10.0	6.7	6.7	6.7	10.0	3.3	10.0	6.7	5.0	6.7	10.0	10.0	10.0	3.3	3.3
	Do plan members have access to a complaints tribunal which is independent from the pension plan?	2.5%	10.0	10.0	10.0	10.0	10.0	7.5	7.0	0.0	10.0	10.0	10.0	5.0	5.0	10.0	5.0	10.0	10.0	5.0	5.0	0.0	0.0
Costs	What percentage of total pension assets is held in various types of pension funds? What percentage of total pension assets is held by the largest ten pension funds/providers?	10.0%	8.8	5.9	6.9	7.6	5.6	5.0	5.9	6.7	5.7	8.8	7.4	4.1	5.4	8.5	9.8	9.6	5.5	7.0	6.1	7.2	8.2
	Integrity sub-index	25.0%	44.4	85.5	74.6	88.9	70.7	77.8	79.6	46.7	70.5	82.4	93.5	57.0	81.4	87.1	60.3	68.7	76.5	84.2	74.4	59.2	50.3

Each question is scored for each country with a minimum score of 0 and a maximum score of 10.

Continues next page

Attachment 3: *(continued)* Score for each country for each indicator in the integrity sub-index

	Question	Question weight	Malaysia	Mexico	Netherlands	New Zealand	Norway	Peru	Philippines	Poland	Saudi Arabia	Singapore	South Africa	Spain	Sweden	Switzerland	Thailand	Turkey	UK	USA
			Score for each country																	
Regulation and Governance (R1 - R5)	Do private sector pension plans need regulatory approval or supervision to operate? Is a private pension plan required to be a separate legal entity from the employer?	7.5%	10.0	1.7	10.0	10.0	10.0	8.3	6.7	6.7	10.0	10.0	10.0	10.0	8.3	10.0	10.0	10.0	10.0	10.0
	Are private sector pension plans required to submit a written report in a prescribed format to a regulator each year? Does the regulator make industry data available from the submitted forms on a regular basis? How actively does the regulator (or protector) discharge its supervisory responsibilities?	10.0%	7.2	7.6	9.2	9.2	9.2	3.2	0.8	7.6	6.2	8.2	9.2	10.0	9.2	8.4	6.1	10.0	10.0	7.6
	Where assets exist, are the private pension plan's trustees/executives/fiduciaries required to prepare an investment policy? Are the private pension plan's trustees/executives/ fiduciaries required to prepare a risk management policy? Are the private pension plan's trustees/executives/ fiduciaries required to prepare a conflicts of interest policy? i) Are the private pension plan's trustees/executies/ fiduciaries required to have an independent member included in the governing body? ii) Are the private pension plan's trustees/executives/fiduciaries required to have equal member and employer representation on the governing body?	12.5%	10.0	1.0	9.2	4.8	10.0	10.0	3.2	7.2	10.0	10.0	9.2	8.4	7.2	6.0	0.0	6.4	9.2	0.0
	Do the private pension plan's trustees/executives/ fiduciaries have to satisfy any personal requirements set by the regulator? Are the financial accounts of private pension plans (or equivalent) required to be audited annually by a recognised professional?	5.0%	10.0	5.0	10.0	10.0	10.0	10.0	10.0	7.5	10.0	7.5	10.0	10.0	7.5	7.5	10.0	10.0	7.5	5.0
	What is the capacity of the government to effectively formulate and implement sound policies? What respect do citizens and the state have for the institutions that govern economic and social interactions among them? How free are the country's citizens to express their views? What is the likelihood of political instability or politically-motivated violence?	15.0%	3.9	0.6	8.8	9.2	9.1	1.5	0.7	4.6	1.1	8.6	2.5	5.2	8.8	9.1	0.9	0.1	7.3	7.0
Protection and communication for members (P1 - P7)	For defined benefit schemes, are there minimum funding requirements? What is the period over which any deficit or shortfall is normally funded? For defined contribution schemes, are the assets required to fully meet the members' accounts?	10.0%	5.0	6.0	10.0	8.0	10.0	5.0	5.0	10.0	6.0	5.0	10.0	10.0	8.0	9.0	5.0	5.0	9.0	8.0
	Are there any limits on the level of in-house assets held by a private sector pension plan? If yes, what are they?	5.0%	10.0	7.5	10.0	10.0	10.0	8.8	0.0	7.5	10.0	7.5	10.0	10.0	10.0	10.0	0.0	10.0	10.0	5.0
	Are the members' accrued benefits provided with any protection or reimbursement from an act of fraud or mismanagement within the fund? In the case of employer insolvency (or bankruptcy), do any unpaid employer contributions receive priority over payments to other creditors, and/or are members' accrued benefits protected against claims of creditors?	5.0%	10.0	0.0	2.5	5.0	5.0	5.0	5.0	2.5	5.0	7.5	5.0	0.0	5.0	7.5	5.0	5.0	10.0	5.0
	When joining the pension plan, are new members required to receive information about the pension plan?	5.0%	10.0	10.0	10.0	10.0	10.0	10.0	0.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	2.5	10.0	10.0	10.0
	Are plan members required to receive or have access to an annual report about the pension plan? Is the annual report required to show: i. The allocation of the plan's assets to major asset classes? ii. The major investments of the plan?	5.0%	10.0	0.0	8.0	9.0	5.3	10.0	0.0	0.0	3.3	8.0	8.0	7.0	3.8	8.0	5.0	8.0	4.5	8.0
Costs	Are plan members required to receive an annual statement of their current personal benefits from the plan? Is this annual statement to individual members required to show any projection of the member's possible retirement benefits?	7.5%	6.7	6.7	10.0	10.0	10.0	6.7	0.0	6.7	0.0	6.7	6.7	6.7	10.0	10.0	6.7	6.7	6.7	6.7
	Do plan members have access to a complaints tribunal which is independent from the pension plan?	2.5%	0.0	0.0	10.0	10.0	10.0	10.0	10.0	5.0	0.0	5.0	10.0	10.0	0.0	10.0	10.0	10.0	10.0	5.0
	What percentage of total pension assets is held in various types of pension funds? What percentage of total pension assets is held by the largest ten pension funds/providers?	10.0%	10.0	9.0	7.3	6.3	7.4	6.1	9.0	7.4	9.5	10.0	7.4	6.6	8.6	5.5	8.6	5.7	6.2	3.6
	Integrity sub-index	25.0%	78.0	42.2	88.9	82.9	90.3	64.6	34.8	65.9	62.4	82.5	78.3	78.5	79.8	83.1	47.3	65.3	83.7	59.9

Each question is scored for each country with a minimum score of 0 and a maximum score of 10.

HISTORICAL PERFORMANCE

System	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Argentina	na	na	na	na	na	na	na	37.7	38.8	39.2	39.5	42.5
Australia	74.0	72.9	75.0	75.7	77.8	79.9	79.6	77.9	77.1	72.6	75.3	74.2
Austria	na	na	na	na	na	52.8	52.2	51.7	53.1	54.0	53.9	52.1
Belgium	na	na	na	na	na	na	na	na	na	na	na	63.4
Brazil	na	59.8	58.4	56.7	52.8	52.4	53.2	55.1	54.8	56.5	55.9	54.5
Canada	73.2	69.9	69.1	69.2	67.9	69.1	70.0	66.4	66.8	68.0	69.2	69.3
Chile	59.6	59.9	64.9	63.3	66.4	68.2	69.1	66.4	67.3	69.3	68.7	67.0
China	48.0	40.3	42.5	45.4	47.1	49.0	48.0	45.2	46.5	46.2	48.7	47.3
Colombia	na	na	na	na	na	na	na	na	61.7	62.6	58.4	58.5
Denmark	na	na	na	82.9	80.2	82.4	81.7	80.5	78.9	80.2	80.3	81.4
Finland	na	na	na	na	na	74.3	73.0	72.9	72.3	74.5	73.6	72.9
France	na	54.6	54.4	54.7	53.5	57.7	57.4	56.4	59.6	60.7	60.2	60.0
Germany	48.2	54.0	54.2	55.3	58.5	62.2	62.0	59.0	63.5	66.8	66.1	67.3
Hong Kong SAR	na	na	na	na	na	na	na	na	na	56.0	61.9	61.1
India	na	na	43.4	42.4	43.3	43.5	40.3	43.4	44.9	44.6	45.8	45.7
Indonesia	na	na	na	na	42.0	45.3	48.2	48.3	49.9	53.1	52.2	51.4
Ireland	na	na	na	na	na	62.2	63.1	62.0	65.8	66.8	67.3	65.0
Israel	na	na	na	na	na	na	na	na	na	na	na	74.7
Italy	na	na	na	na	na	49.6	50.9	49.5	50.8	52.8	52.2	51.9
Japan	41.5	42.9	43.9	44.4	44.4	44.4	44.1	43.2	43.5	48.2	48.3	48.5
Korea (South)	na	na	na	44.7	43.8	43.6	43.8	46.0	47.1	47.3	49.8	50.5
Malaysia	na	na	na	na	na	na	na	55.7	57.7	58.5	60.6	60.1
Mexico	na	na	na	na	50.1	49.4	52.1	44.3	45.1	45.3	45.3	44.7
Netherlands	76.1	78.3	77.9	78.9	78.3	79.2	80.5	80.1	78.8	80.3	81.0	82.6
New Zealand	na	na	na	na	na	na	na	na	67.9	68.5	70.1	68.3
Norway	na	na	na	na	na	na	na	na	74.7	71.5	71.2	71.2
Peru	na	na	na	na	na	na	na	na	na	62.4	58.5	57.2
Philippines	na	na	na	na	na	na	na	na	na	na	43.7	43.0
Poland	na	na	58.6	58.2	57.9	56.4	56.2	54.4	55.1	54.3	57.4	54.7
Saudi Arabia	na	na	na	na	na	na	na	na	na	58.9	57.1	57.5
Singapore	57.0	59.6	56.7	54.8	66.5	65.9	64.7	67.0	69.4	70.4	70.8	71.2
South Africa	na	na	na	na	na	54.0	53.4	48.6	48.9	52.7	52.6	53.2
Spain	na	na	na	na	na	na	na	na	na	54.4	54.7	57.7
Sweden	73.5	74.5	73.4	73.4	72.6	73.4	74.2	71.4	72.0	72.5	72.3	71.2
Switzerland	na	75.3	72.7	73.3	73.9	73.9	74.2	68.6	67.6	67.6	66.7	67.0
Thailand	na	na	na	na	na	na	na	na	na	na	39.4	40.8
Turkey	na	na	na	na	na	na	na	na	na	na	42.2	42.7
UK	63.9	63.7	66.0	64.8	65.4	67.6	65.0	60.1	61.4	62.5	64.4	64.9
USA	59.8	57.3	58.1	59.0	58.2	57.9	56.3	56.4	57.8	58.8	60.6	60.3
Number of systems	11	14	16	18	20	25	25	27	30	34	37	39

Mercer CFA Institute Global Pension Index

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Lead Author:
Dr David Knox (Mercer)

Project Managers:
Nicola McGarel (Mercer), Rebecca Fender, CFA (CFA Institute) and Dr Nga Pham (Monash)

Marketing, Media & Communications Support:
Dina Gouda, Cassie Lenski, Bradley Priest (Mercer), Helen Westerman, Nga Pham (Monash), Joe Clift, Sarah-Jane Manco, Elizabeth Barber (CFA Institute)

Mercer Worldwide Consultants:
Mazen Abukhater, Martin Albinsson, Simon Barker, Anne Bennett, Richard Bjaernehaell, Christel Bonnet, Bruna Borges, James Campbell, Oscar Castanon, Jonathan Chae, Preeti Chandrashekhar, Scott Clausen, David Cuervo, Luca De Biasi, Dirk Kemkers, Chin Yee Koh, Roland Guggenheim, Garry Hawker, Marc Heemskerk, Miguel Menendez, Udo Mueller, Andrzej Narkiewicz, Taketsugu Okuhira, Heine Olsen, Serap Ozalp, Michaela Plank, Ibrahim Rachman, Joaquin Ramirez, Paul Shallue, Juha Soikkanen, Peter Stewart, Kasin Sutuntivorakoon, Adeline Tan, Harold Tan, Alex Tschai, Florencia Vaquer

Other contributors:
Sarig Gafny (Zviran), Mikko Kautto (The Finnish Centre for Pensions), Vickie Lange (Alexander Forbes)

Advisory Board members:
Professor Keith Ambachtsheer (Rotman ICPM), Professor Hazel Bateman (Centre for Pensions and Superannuation), Syd Bone (CP2 Chair), Richard Boyfield (Mercer), Professor Joseph Cherian (National University of Singapore), Professor Kevin Davis (The University of Melbourne), Rebecca Fender, CFA (CFA Institute) Dr Vince Fitzgerald (ACIL Allen Consulting), Professor Deep Kapur (MCFS), Dr David Knox (Mercer), Professor Deborah Ralston (Monash University), Paul Schroder (Australian Super), Professor Susan Thorp (University of Sydney), Maria Wilton, CFA (CFA Institute)

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Contact: Dr David Knox; david.knox@mercer.com
www.mercer.com.au

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Contact: Nicole Haroutunian;
nicole.haroutunian@cfainstitute.org

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Contact: Professor Deep Kapur; mcfsinfo@monash.edu
Tel: +61 3 99903 8315
www.monash.edu/business/monash-centre-for-financial-studies

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