



**Mercer  
CFA Institute  
Global  
Pension  
Index**

**2021**

**Pension reform in  
challenging times**



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# Mercer preface

The impact of the COVID-19 pandemic continues to affect the well-being of millions of individuals around the world. Its effects, however, are not confined to the health systems or those who contract the virus. There are broader economic effects with higher government debt and restricted economic activity in many countries. While it would be easy for governments to concentrate on these short term challenges, it would be a mistake to do so.

With ageing populations, low or negative interest rates for longer, and uncertain investment returns in the future, the financial wellbeing of our future retirees cannot be left to chance. It must be considered now, leading to our recommendations for urgent long-term pension reform in these challenging times.

The 2021 Mercer CFA Institute Global Pension Index compares 43 retirement income systems from around the world and compares each system in respect of adequacy, sustainability and integrity. Or, to put it another way:

- What benefits are future retirees likely to receive?
- Can the existing systems continue to deliver, notwithstanding the demographic and economic pressures?
- Are the systems well governed to encourage long-term community confidence?

Four new systems have been added to the Index this year, namely Iceland, Taiwan, UAE and Uruguay. In its first appearance in the Index, Iceland has just pipped the Netherlands to receive the highest index value. So what are the features of the Icelandic system that generates this result? They include:

- A relatively generous state pension;
- A private pension system that covers all employees with a high contribution rate that leads to significant assets being set aside for the future; and
- A well-governed and regulated private pension system that has good design features.

This year's report also considers the gender differences in pension outcomes that exist in every retirement income system. The causes are many and varied and the impacts differ considerably between systems. Nevertheless it is clear that the average female pension is lower, and in some situations much lower, than the average male pension. Such an outcome is not fair and must be addressed. The report makes several recommendations for employers, the pension industry and governments to consider with the goal of reducing the gender pension gap in the future.

The primary objective of the research covered by this report 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 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 respond to these challenges are also similar. They relate to:

- benefit levels
- pension coverage
- retirement ages
- encouraging people to work a little longer
- increasing the level of funding set aside for retirement
- benefit design to reduce leakage before retirement and
- the development of appropriate retirement income products, particularly with the growing importance of defined contribution arrangements.

However, these necessary reforms are not always straightforward and some may require long transition periods.

I am delighted to recognise the CFA Institute as our major sponsor and sincerely thank them for their enthusiasm and participation. The Index is 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 pension experts who have provided insightful comments.

Finally, we are very grateful to the Mercer consultants around the world who have been invaluable in providing information in respect of their retirement income systems and checking our interpretation of the data. We also appreciate the support of the Finnish Centre for Pensions and the Icelandic Pension Funds Association.

We 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 honored to sponsor the Mercer CFA Institute Global Pension Index and to again collaborate with Mercer and the Monash Centre for Financial Studies to continue the important work of development and distribution of this research.**

At CFA Institute, our mission is to lead the investment profession globally by promoting the highest standards of ethics, education, and professional excellence for the ultimate benefit of society. In particular, the closing words – “the ultimate benefit of society” – speak directly to our desire to increase the positive real-world impact of investment management. Retirement systems that meet the adequacy, sustainability, and integrity standards of the index contribute to the health of the financial system.

We at CFA Institute seek to shape the future of the investment industry and the profession, which includes advocating for the structural resilience of capital markets. Pension systems and retirement plans are important building blocks of market resilience across the globe.

This year’s index includes an additional focus on a timely and relevant issue: the gender pensions pay gap. This gap represents a critical challenge that we must work quickly to address since women are more likely to face their retirement years with fewer benefits than their male counterparts. The inclusion of women in the retirement discussion cannot and should not be overlooked.

Analysis and understanding of data and trends, and informed recommendations based upon those findings, will shape how the leaders of each pension system included in the index can improve the effectiveness and sustainability of their individual system. This information will foster important dialogue about how pension systems compare, and ways to implement findings from one pension system to improve another.

Pension plans face extraordinary challenges due to historically low interest rates and in some cases negative yields. A kaleidoscope of asset classes will be required to address these concerns in order to ultimately deliver returns for the end beneficiaries. We must, as investment professionals, lead the effort for greater retirement security for individuals. We must work together with public authorities to evaluate the status of pension plans in their jurisdictions, challenge the status quo where necessary, and rebuild trust in pensions across the globe through the betterment of these systems.

We extend our deep gratitude to Dr. David Knox of Mercer and the entire Mercer team who have dedicated time and resources to this important research, as well as the Monash Centre for Financial Studies for their oversight, which ensures the integrity of the Index each year. Pension fund reform will be an ongoing societal challenge, and we are confident that the Mercer CFA Institute Pension Fund Index will help to catalyze important conversations and action in the months and years to come.



**Margaret Franklin, CFA**  
**President and CEO**  
**CFA Institute**



# 01/ 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 and 2021, many of these issues were accentuated by the COVID-19 pandemic. But, it is not only ageing populations and the effects of the coronavirus that represent challenges for pension systems around the world. The current economic environment with reduced wage growth, historically low interest rates and reduced investment returns in many asset classes, 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 OECD (2019a) comments: "Retirement-income regimes are diverse and often involve a number of different programmes."<sup>1</sup>

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<sup>1</sup> OECD (2019a), p132.

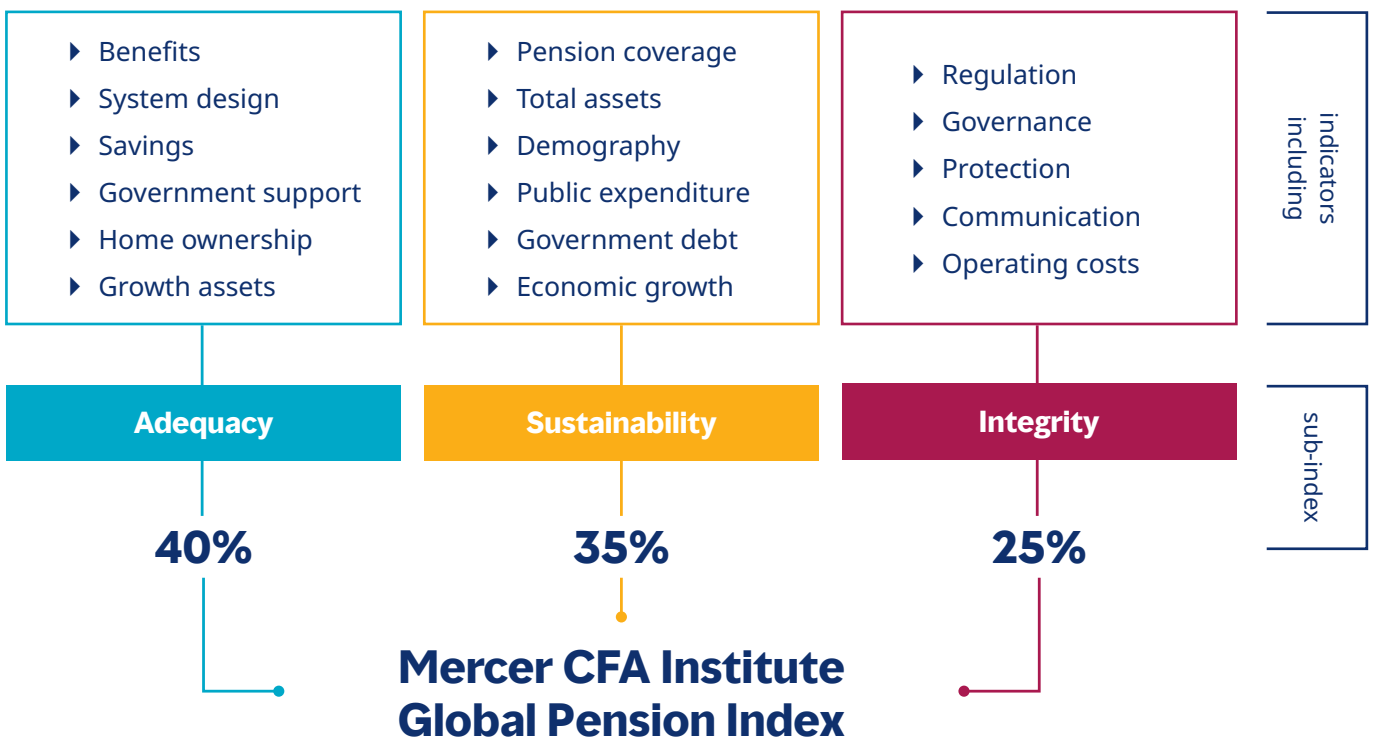


Any comparison of systems is likely to be controversial as each system has evolved from particular economic, social, cultural, political and historical circumstances. This means there is no single system that can be transplanted from one country and applied, without change, to another country. However, 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 (the 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

## 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 per cent for the adequacy sub-index, 35 per cent for the sustainability sub-index and 25 per cent for the integrity sub-index, all of 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 is 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 43 retirement income systems, representing more than 65 per cent of the world’s population, shows there is great diversity between the systems around the world with scores ranging from 40.6 for Thailand to 84.2 for Iceland.

# This year's results

This study shows that Iceland, the Netherlands and Denmark have the best systems, each receiving an A-grade in 2021.

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.

Table 1: Summary of 2021 results

Grade	Index Value	Systems	Description
A	>80	Iceland 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	Israel Norway Australia	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	Finland Sweden UK Singapore Switzerland Canada Ireland Germany New Zealand Chile	
C+	60-65	Belgium Hong Kong SAR USA Uruguay 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	UAE Malaysia Spain Colombia Saudi Arabia Poland China (see note) Peru Brazil South Africa Italy Austria Taiwan Indonesia	
D	35-50	Japan Mexico Korea (South) Turkey India Philippines 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.

**Note:** It should be recognised that in this report, China refers to the pension system in mainland China. The pension systems in Hong Kong SAR and Taiwan are shown separately as they have different pension systems.

**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 2021 index values do not yet fully recognise the longer-term effects of the COVID-19 pandemic on future pension payments.

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

System	Overall index value	Sub-Index Values		
		Adequacy	Sustainability	Integrity
Argentina	41.5	52.7	27.7	43.0
Australia	75.0	67.4	75.7	86.3
Austria	53.0	65.3	23.5	74.5
Belgium	64.5	74.9	36.3	87.4
Brazil	54.7	71.2	24.1	71.2
Canada	69.8	69.0	65.7	76.7
Chile	67.0	57.6	68.8	79.3
China	55.1	62.6	43.5	59.4
Colombia	58.4	62.0	46.2	69.8
Denmark	82.0	81.1	83.5	81.4
Finland	73.3	71.4	61.5	93.1
France	60.5	79.1	41.8	56.8
Germany	67.9	79.3	45.4	81.2
Hong Kong SAR	61.8	55.1	51.1	87.7
Iceland	84.2	82.7	84.6	86.0
India	43.3	33.5	41.8	61.0
Indonesia	50.4	44.7	43.6	69.2
Ireland	68.3	78.0	47.4	82.1
Israel	77.1	73.6	76.1	83.9
Italy	53.4	68.2	21.3	74.9
Japan	49.8	52.9	37.5	61.9
Korea	48.3	43.4	52.7	50.0
Malaysia	59.6	50.6	57.5	76.8
Mexico	49.0	47.3	54.7	43.8
Netherlands	83.5	82.3	81.6	87.9
New Zealand	67.4	61.8	62.5	83.2
Norway	75.2	81.2	57.4	90.2
Peru	55.0	58.8	44.2	64.1
Philippines	42.7	38.9	52.5	35.0
Poland	55.2	60.9	41.3	65.6
Saudi Arabia	58.1	61.7	50.9	62.5
Singapore	70.7	73.5	59.8	81.5
South Africa	53.6	44.3	46.5	78.5
Spain	58.6	72.9	28.1	78.3
Sweden	72.9	67.8	73.7	80.0
Switzerland	70.0	65.4	67.2	81.3
Taiwan	51.8	40.8	51.9	69.3
Thailand	40.6	35.2	40.0	50.0
Turkey	45.8	47.7	28.6	66.7
UAE	59.6	59.7	50.2	72.6
UK	71.6	73.9	59.8	84.4
Uruguay	60.7	62.1	49.2	74.4
USA	61.4	60.9	63.6	59.2
<b>Average</b>	<b>61.0</b>	<b>62.2</b>	<b>51.7</b>	<b>72.1</b>

As noted earlier, each overall index value takes into account more than 50 indicators, some of which are based on data measurements which can be difficult to compare between systems. 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 approach indicates the fact that some systems may have a weakness in one area (e.g. sustainability) while 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	Overall index value	Sub-Index Values		
		Adequacy	Sustainability	Integrity
Argentina	D	C	E	D
Australia	B+	B	B+	A
Austria	C	B	E	B
Belgium	C+	B	D	A
Brazil	C	B	E	B
Canada	B	B	B	B+
Chile	B	C	B	B+
China	C	C+	D	C
Colombia	C	C+	D	B
Denmark	A	A	A	A
Finland	B	B	C+	A
France	C+	B+	D	C
Germany	B	B+	D	A
Hong Kong SAR	C+	C	C	A
Iceland	A	A	A	A
India	D	E	D	C+
Indonesia	C	D	D	B
Ireland	B	B+	D	A
Israel	B+	B	B+	A
Italy	C	B	E	B
Japan	D	C	D	C+
Korea	D	D	C	C
Malaysia	C	C	C	B+
Mexico	D	D	C	D
Netherlands	A	A	A	A
New Zealand	B	C+	C+	A
Norway	B+	A	C	A
Peru	C	C	D	C+
Philippines	D	D	C	D
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	A
Switzerland	B	B	B	A
Taiwan	C	D	C	B
Thailand	D	D	D	C
Turkey	D	D	E	B
UAE	C	C	C	B
UK	B	B	C	A
Uruguay	C+	C+	D	B
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.**

Significant pension reform is never easy but an important starting point is to express the objectives of the overall system. As van Popta and Steenbeek (2021) recently noted: “The objective of pension reform must be crystal clear and the perspectives of all stakeholders – consumers, employers, government, industry – must be addressed.”<sup>2</sup> As the recent review into Australia’s retirement income system commented: “An agreed objective is needed to anchor the direction of policy settings, help ensure the purpose of the system is understood, and provide a framework for assessing the performance of the system.”<sup>3</sup>

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

- increasing 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
- increasing 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<sup>4</sup>
- promoting 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
- encouraging 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
- introducing measures to reduce the gender pension gap and those that exist for minority groups in many retirement income systems

- reducing 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
- reviewing the indexation of public pensions 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
- improving the governance of private pension plans and introducing 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 factors is 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.”<sup>5</sup>

<sup>2</sup> van Popta and Steenbeek (2021), Transition to a new pension contract in the Netherlands: Lessons from abroad, Netspar Industry Series, Occasional 3/21, p9.

<sup>3</sup> Australian Government the Treasury (2020), Retirement Income Review, Final Report, p27

<sup>4</sup> It should be noted that several systems 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.

<sup>5</sup> World Economic Forum (2017), p9.

# 02/ Background to the Index

**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 the current economic conditions, it is too important to ignore. Furthermore, there is no doubt that programs, policies and practices adopted in some retirement income systems provide valuable lessons, experience or ideas for the development or reform of other systems.

This edition of the Index compares 43 retirement income systems, highlighting both the considerable diversity and the positive features present in many systems. Notwithstanding these highlights, 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 for governments and policymakers around the world to review retirement income systems so that the outcomes for future retirees can be improved.

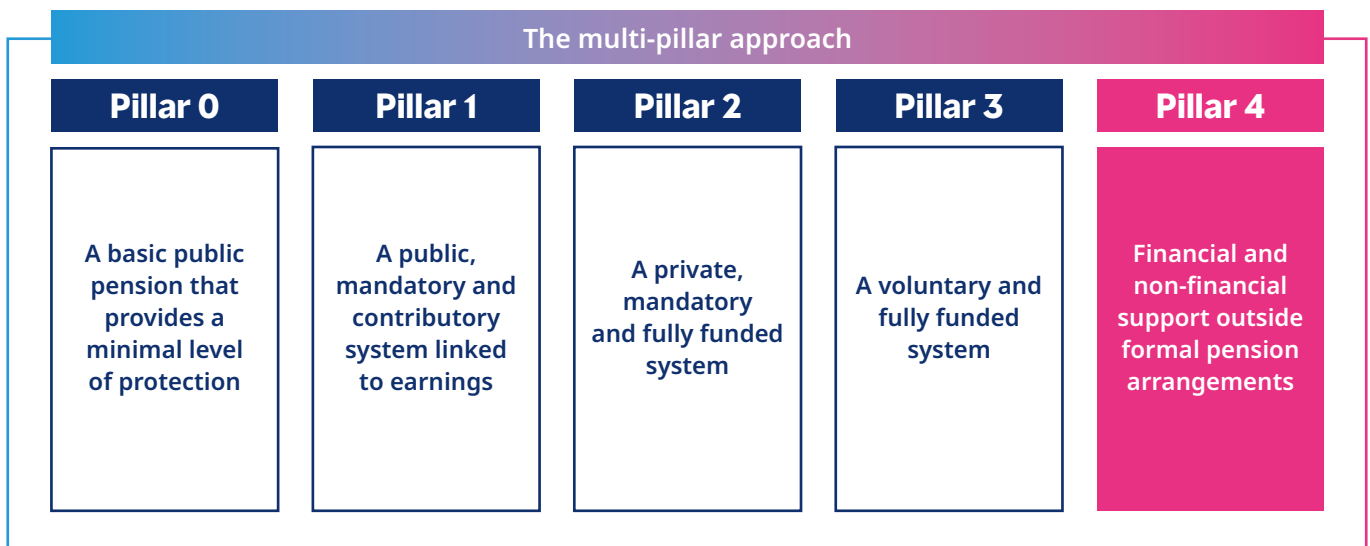
In its influential report *Averting the Old Age Crisis*, the World Bank (1994) recommended a multi-pillar system for the provision of old-age income security, comprising:

- **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 (2017a) 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.

While this three-tier approach is helpful in understanding the different roles for each type of pension, the Index continues to include non-pension factors such as home ownership, non-pension savings and household debt which can have a significant influence 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 country 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 provide a better understanding of how each system is tackling the provision of retirement income.

Since its inception, the 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. Hence 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 per cent to 150 per cent 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). Although 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 or pensions.
- 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 while 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 (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 investment 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 countries, particularly in light of the ageing population, the increasing old age dependency ratio, the public expenditure on pensions and substantial government debt. Indeed, the World Bank notes that:

"most public pension schemes are not viable financially and cannot keep their promises to younger cohorts that will retire in the future."<sup>6</sup>

This sub-index therefore brings together several measures that affect the sustainability of current programs. Although 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.

<sup>6</sup> World Bank (2019), Pensions Overview, 28 March.

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 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.

Given the growing importance and impact of climate change and other global-wide effects on future investment returns, the sub-index also explores the importance of environmental, social and governance factors on the investment policies or strategies adopted within each system.

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. As most systems are relying on private pensions 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 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 country.

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 objective comparison of the total costs of operating each system is virtually impossible, this sub-index includes some proxy measures relating to industry structure and scale which should provide a good indication.

## The construction of the Index

In the construction of the 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 artificial, at least to some extent, as it does not recognise the pension that any retired individual will actually 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 is 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 regions. Where this occurs, we have normally concentrated on the most common system or taken an average position.

Each system's overall index value is calculated by taking 40 per cent of the adequacy sub-index, 35 per cent of the sustainability sub-index and 25 per cent 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.<sup>7</sup>

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 and costs of aged care. However, some of these factors can be difficult to measure within different systems and, in particular, difficult to compare. 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 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.

<sup>7</sup> 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.

# 03/ Changes from 2020 to 2021

## Additional systems

The Index has been expanded in 2021 to include four new retirement income systems – Iceland, Taiwan, UAE and Uruguay. Iceland's score of 84.2 means that it is ranked in first place, slightly ahead of the Netherlands. 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 Index; to enable comparisons of different systems around the world with a range of design features operating within different contexts and cultures. The Index now includes 43 retirement income systems covering more than 65 per cent of the world's population.



## Revised questions

### Disclosing costs to members

As many private pension systems move gradually from defined benefit arrangements to defined contribution arrangements, it is important that members understand the fees they are paying. Hence we have introduced the following question into the integrity sub-index:

- Is the annual statement to individual members required to show any costs or fees charged to the member's account?

The rationale is simple: as individuals take greater responsibility for their own retirement income arrangements, as well as bearing increased risks, it is important that they are informed about the fees they pay. In some systems, this will also enable them to compare fees from different providers.

This new question is worth 1.5 per cent within the integrity sub-index. This disclosure relating to fees is required in respect of 18 pension systems.

Of course, it may be argued that this question is unnecessary for defined benefit arrangements, particularly where the employer or sponsor is picking up the economic risks as well as the associated administration and investment costs. However, even under these circumstances, it is appropriate that this underlying support is revealed to members in their annual statement.

### The importance of ESG investing

Last year an additional question was added to the sustainability sub-index relating to the consideration of Environmental, Social and Governance (ESG) issues in developing investment policies or strategies. The question asked whether it was a requirement for trustees/fiduciaries to consider these issues. In practice, the relevant pension regulator for many systems may strongly encourage such consideration although it may not be a legislative requirement. In these cases, we have updated the scoring so that half marks were awarded.

It is also noted that the weighting for this in the sustainability sub-index will increase from 1 per cent to 2 per cent with a corresponding reduction in the weighting for the economic growth indicator from 9 per cent to 8 per cent.

## Updated OECD data

Since publication of the previous Index, the OECD has not published an updated version for any of the *Pensions at a Glance* publications due, in part, to the impact of the pandemic. However, the OECD has been willing to share with us some updated but unpublished data in respect of net replacement rates, which is used within the adequacy sub-index. There were significant changes for China, India, Israel, Korea, Mexico, Norway, Sweden, Switzerland and the UK for a variety of reasons, including:

- A reduction in the basic pension when expressed as a percentage of the average wage
- A correction to the base earnings figure used by the OECD
- A major reform with significant increases in the contribution rates over the next few years
- Pension reform which increased the retirement age and thereby lengthened the number of years in the workforce
- Reclassification of a system by the OECD as a quasi-mandatory arrangement

## The impact of COVID-19

In the 2020 Report we considered the responses of governments around the world to the pandemic and how these short-term changes affected the provision of retirement benefits. Twelve months later, there have been some longer-term economic effects which influence some of the scores within this year's Index. These include:

- An increase in net household savings from 2019 to 2020 in many countries as individuals have increased their level of savings outside the pension system. Such behaviour is to be expected given the increased economic uncertainties arising from the pandemic as well as reduced opportunities to spend.
- Although the level of household savings increased during 2020, there was also a small increase in the average level of household debt across the 39 systems in the 2020 Index rising from 59 per cent to 63 per cent of GDP. About half this increase reflects a decline in GDP due to COVID-19 whereas the balance represents an actual increase in household debt. Of course, these are averages and there is significant variation between different economies.
- The average level of pension assets also increased, rising from 57 per cent to 61 per cent of GDP for the 39 systems in the 2020 Index. Again, part of this increase reflects a decline in GDP, but it also highlights the very good investment returns from many financial markets during the last 12 months, notwithstanding the initial downturn due to COVID-19.



## A comparison from 2020 to 2021

Table 4 compares the results for 39 systems from 2020 to 2021. Comments in respect of each system are made in Chapter 5.

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

System	Total		Adequacy		Sustainability		Integrity	
	2020	2021	2020	2021	2020	2021	2020	2021
Argentina	42.5	41.5	54.5	52.7	27.6	27.7	44.4	43.0
Australia	74.2	75.0	66.8	67.4	74.6	75.7	85.5	86.3
Austria	52.1	53.0	64.4	65.3	22.1	23.5	74.6	74.5
Belgium	63.4	64.5	74.6	74.9	32.4	36.3	88.9	87.4
Brazil	54.5	54.7	72.6	71.2	22.3	24.1	70.7	71.2
Canada	69.3	69.8	68.2	69.0	64.4	65.7	77.8	76.7
Chile	67.0	67.0	56.5	57.6	70.0	68.8	79.6	79.3
China	47.3	55.1	57.4	62.6	36.2	43.5	46.7	59.4
Colombia	58.5	58.4	62.5	62.0	45.5	46.2	70.5	69.8
Denmark	81.4	82.0	79.8	81.1	82.6	83.5	82.4	81.4
Finland	72.9	73.3	71.0	71.4	60.5	61.5	93.5	93.1
France	60.0	60.5	78.7	79.1	40.9	41.8	57.0	56.8
Germany	67.3	67.9	78.8	79.3	44.1	45.4	81.4	81.2
Hong Kong SAR	61.1	61.8	54.5	55.1	50.0	51.1	87.1	87.7
India	45.7	43.3	38.8	33.5	43.1	41.8	60.3	61.0
Indonesia	51.4	50.4	45.7	44.7	45.6	43.6	68.7	69.2
Ireland	65.0	68.3	74.7	78.0	45.6	47.4	76.5	82.1
Israel	74.7	77.1	70.7	73.6	72.4	76.1	84.2	83.9
Italy	51.9	53.4	66.7	68.2	18.8	21.3	74.4	74.9
Japan	48.5	49.8	52.9	52.9	35.9	37.5	59.2	61.9
Korea	50.5	48.3	48.0	43.4	53.4	52.7	50.3	50.0
Malaysia	60.1	59.6	50.1	50.6	58.6	57.5	78.0	76.8
Mexico	44.7	49.0	36.5	47.3	55.8	54.7	42.2	43.8
Netherlands	82.6	83.5	81.5	82.3	79.3	81.6	88.9	87.9
New Zealand	68.3	67.4	63.8	61.8	62.9	62.5	82.9	83.2
Norway	71.2	75.2	73.4	81.2	55.1	57.4	90.3	90.2
Peru	57.2	55.0	59.5	58.8	49.2	44.2	64.6	64.1
Philippines	43.0	42.7	38.9	38.9	53.4	52.5	34.8	35.0
Poland	54.7	55.2	59.9	60.9	40.7	41.3	65.9	65.6
Saudi Arabia	57.5	58.1	59.6	61.7	51.6	50.9	62.4	62.5
Singapore	71.2	70.7	74.1	73.5	59.9	59.8	82.5	81.5
South Africa	53.2	53.6	43.0	44.3	46.7	46.5	78.3	78.5
Spain	57.7	58.6	71.0	72.9	27.5	28.1	78.5	78.3
Sweden	71.2	72.9	65.2	67.8	72.0	73.7	79.8	80.0
Switzerland	67.0	70.0	59.5	65.4	64.2	67.2	83.1	81.3
Thailand	40.8	40.6	36.8	35.2	40.8	40.0	47.3	50.0
Turkey	42.7	45.8	44.2	47.7	24.9	28.6	65.3	66.7
UK	64.9	71.6	59.2	73.9	58.0	59.8	83.7	84.4
USA	60.3	61.4	58.9	60.9	62.1	63.6	59.9	59.2
<b>Average</b>	<b>59.7</b>	<b>60.7</b>	<b>60.8</b>	<b>62.3</b>	<b>50.0</b>	<b>50.9</b>	<b>71.3</b>	<b>71.8</b>

The results show that the average score for the overall index increased by 1.0 with increases in each sub-index for a variety of reasons.



# 04/ Gender differences in pension outcomes

The financial wellbeing of an individual in retirement will depend on several factors including the health and aged care systems, levels of home ownership as well as the overall pension arrangements. The pension system is a core component and the existence of any gender differences within the system is worthy of investigation and understanding.



# Gender differences in pension outcomes

**As highlighted in Chapter 2, most pension systems require or encourage the provision of financial support to older individuals from several sources including government-funded pensions, taxation support, private pensions as well as other financial resources. Yet, as illustrated below, the total pension outcomes in every system around the world provide higher retirement income for males than females.**

Before investigating the reasons for this disparity, it is helpful to recognise the two broad types of pension design which impact the pensions received in retirement.

The first is the Bismarckian social insurance arrangements where the resulting pension for each individual is linked to the number of years of contributions paid during the working years. There may also be a minimum pension (subject to residency requirements) and/or a formula which may favour those with lower incomes. These arrangements predominantly adopt a pay-as-you-go approach with contributions paid to the government to support the retirement pensions currently in payment.

The second is the Beveridgean multi-pillar approach where the government pays to all qualified individuals a flat rate pension, which may be universal or subject to a means test. A second pillar, normally operated in the private sector and funded by regular contributions, provides benefits which are directly related to past contributions, investment returns and/or periods of service.

Of course, many pension systems represent a mixture of both approaches but it is useful to recognise these contrasting starting points when considering the different pension outcomes received by men and women.

In essence, the pure Bismarckian approach provides pensions that are strongly linked to previous employment and earnings whereas the State pension provided under the Beveridgean approach is independent from previous employment.

The origins of the Bismarckian approach as well as the second pillar within the Beveridgean approach have been developed over many decades on the basis of a “normal life course” which inevitably defines what is normal or standard. As Kuitto et al (2021) point out, this assumption in many societies represents a highly gendered outcome

as “it is oriented upon a male-dominated biography of continuous full-time employment”. Hinrichs (2021) goes further and notes it is “based on the expectation of long-term continuous covered employment providing a living wage and performed up to the normal retirement age.”

Such assumptions no longer represent reality for many individuals in the workforce, male or female. Flexible, non-standard work patterns are increasing around the world with increasing mobility and greater digitization, which has been accentuated by the COVID-19 pandemic. However the shortcomings of these underlying assumptions in pension design affects many females who have shorter careers and/or care-related breaks which reduce their lifetime incomes.

However, before exploring ways to improve pension outcomes for females, let’s explore the underlying causes of the differences in the gender pension gaps around the world.



# A global comparison

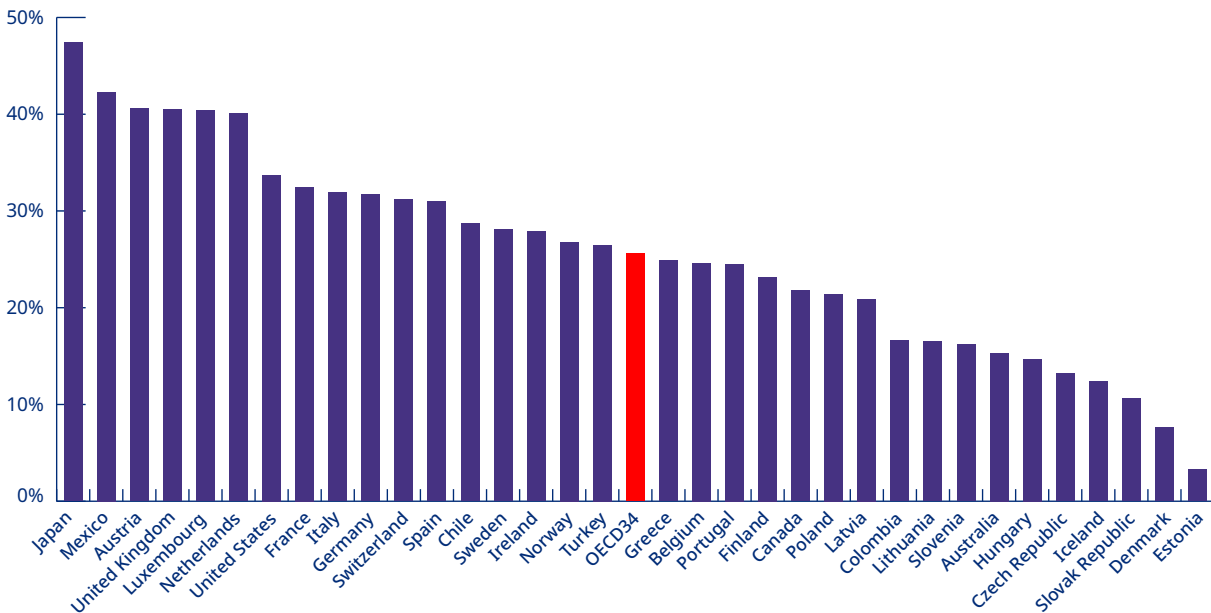
## A gender pension gap exists in every retirement income system around the world.

The gap is defined as the difference between the average male pension and the average female pension, expressed as a percentage of the average male pension.

That is, the calculation is based on those who are currently receiving a pension. Hence, if there is no difference in the current pensions, the gap is zero whereas if the average male pension is double that of the average female pension, the gap is 50 per cent.

Figure 3 shows the gender pension gap for most OECD countries and was published in March 2021 by the OECD to coincide with International Women’s Day. It shows the range is very broad with Japan having a gap of almost 50 per cent whereas Estonia’s gap is less than 5 per cent.

Figure 3: Gender gap in pensions in selected OECD countries



Source: OECD (2021), Figure 1.1

Given this range, an important question is the effects that employment and/or the design of the overall pension system (for example, private or public, pay-as-you-go or funded) may have on these results.



Table 5 highlights some of these characteristics for the four countries at the top and the bottom of the chart. Not surprisingly, the level of poverty among older women is higher than among older men in each of these countries. Some other observations are:

- The historical gender wage gap is often a major factor (for example, in Japan) but, surprisingly, it is not a universally dominant factor as countries with similar historical wage gaps are at either end of the chart.
- Differences in the historical employment rates have had an impact (for example, in Mexico and Japan) but countries with broadly similar employment rates for men and women (for example, Denmark and the UK) have quite different gender pension gaps.
- It could be suggested that different types of pension systems have an impact. Yet, Austria and the Slovak Republic, both of which rely very heavily on their public pension systems, have very different results. Hence the actual benefit design within such systems also influences the gender pension gap.



**Table 5:**  
**Comparison of employment history, pension systems and gender pension gap for various countries**

System	Gender Pension Gap	Income Poverty Rates for those aged over 65		Gender Wage Gap in 2000	Employment rates in 2000		Proportion of first-year retirement income that is publicly funded
		Men	Women		Men	Women	
Estonia	3.3%	21.4%	42.8%	25.0%	59.4%	50.6%	41.2%
Slovak Republic	7.6%	2.6%	5.5%	20.4%	55.3%	42.8%	100.0%
Denmark	10.6%	2.1%	3.7%	10.8%	68.4%	57.0%	31.9%
Czech Republic	12.4%	1.4%	6.9%	16.9%	64.7%	46.2%	100.0%
United Kingdom	40.5%	12.5%	17.7%	26.3%	66.9%	52.4%	42.6%
Austria	40.6%	5.9%	11.0%	23.1%	66.6%	47.1%	100.0%
Mexico	42.3%	23.3%	25.9%	16.7%	80.0%	37.6%	7.4%
Japan	47.4%	16.2%	22.3%	33.9%	72.6%	47.1%	57.3%

Sources: OECD (2019a), OECD (2020a), OECD (2021)

This brief global review highlights there is no single cause of the gender pension gap. It is much more complicated and is the result of a broad range of influences, from both within and beyond each pension system. It is therefore appropriate to broaden the discussion and ask: “what are the major causes of the gap around the world?”

# The many causes of the gender pension gap

The many causes of the gender pension gap can be broadly grouped into issues related to:

1. employment,
2. pension design, and
3. socio-cultural.

## Employment issues

As noted earlier, there is a direct relationship between employment patterns and the resulting pensions in most systems. Hence, on average, women's pensions are lower for the following reasons:

- A shorter career due to, on average, a slightly later start in the labour force and earlier retirement, which may relate to having an older partner.
- More part-time work which might be a choice but is often present to cover the requirements of the carer role.
- The long-term effects that reduced employment for a number of years have on the promotion opportunities and hence lifetime earnings for some women. This lack of job progression has a compounding effect on pay and the subsequent pension.
- Periods out of the workforce for caring responsibilities. For example, in the early 2000s, an average of 48 per cent of women aged 15-64 were working in OECD countries compared to 69 per cent of men<sup>8</sup>. The OECD study shows that the majority of the gender pension gap occurs between the ages of 25 and 44.
- Lower average salaries for full-time workers with the gender wage gap in the OECD being 13 per cent in 2018. This outcome is partly due to a lower average wage in female-dominated industries than in male-dominated industries. As Schuller notes: "In a nutshell, finance, engineering and the private sector generally pay better than care services, teaching, and the public sector, where women are far more frequently to be found."<sup>9</sup>
- Some examples where women get paid less than men for doing the same job – known as the 'unaccountable' pay gaps.

Given these historic and current differences in employment, it is not surprising that, on average, male pensions from employment-based pension arrangements, whether paid from social insurance or occupational-based pension schemes, are higher than female pensions.

## Pension design issues

Although the major cause of the gender pension gap is employment-related, there are also several design features in pension systems around the world which aggravate the issue. These include:

- Eligibility restrictions in some pension arrangements which require a minimum income or a minimum number of hours to be worked. It is interesting to note that 23 per cent of employed women and 13 per cent of employed men<sup>10</sup> in the UK do not meet the minimum income requirement to join a pension plan.
- Contributions or the accrual of pension benefits may not be required during periods of paid maternity or parental leave. Even where contributions are paid during these periods of leave, the earnings base used to calculate these contributions may be lower than the full salary.
- The absence of any pension credit while caring for young children in most systems. However there are examples where credits occur including:
  - in Canada where pension credits are given for the period you are the primary caregiver for a dependent child under the age of seven
  - in Finland where pensions accrue linked to the parental allowance (up to the child's age of three) and the child home care allowance thereafter
  - in Germany where the first three years of the child's life are treated in the statutory pension insurance as if the mother or father had earned the average income during this period
  - in the UK where National Insurance credits are available if you are a registered parent for a child under 12
- The absence of survivor's benefits when pensions are paid which affects more women than men due to their longer life expectancy and that, based on statistical data, wives are typically younger than their husbands.
- The lack of indexation of pensions during retirement which have a more significant impact on women due to their longer life expectancy.
- The gradual replacement of defined benefit pension schemes, where the same lifetime pension was payable to men and women, with defined contribution arrangements where the same accumulated benefit may generate a smaller lifetime income for women because, on average, they live longer than men.

<sup>7</sup> OECD (2021), p20,

<sup>8</sup> Schuller (2017), p54,

<sup>9</sup> OECD (2021), p27

<sup>10</sup> Ibid, p40



- A programmed withdrawal arrangement means that the income is more likely to run out for women due to their longer life expectancy.
- The use of gender-specific mortality tables will lead to smaller annuities or pensions for women due to their lower mortality rates.

It is also worth noting that the World Bank (2018) reported that in 2017, 66 per cent of males aged 15 and over who were in the labour force saved for old age during the last 12 months compared to 60 per cent of females.

## Socio-cultural issues

In addition to employment-related and pension design issues that generate the gender pension gap, there are several features or characteristics within many societies and cultures which restrict the opportunity to reduce the gap. These include:

- The absence of affordable and appropriate quality child care which restrict the work opportunities for parents (often women), including the lack of government-supported child care options.
- The impact of child care costs on voluntary pension contributions as these costs are sometimes paid directly by women rather than shared between both parents.
- Lower levels of financial literacy amongst some women<sup>11</sup> also affect their financial decisions.
- Communication and other campaigns from pension funds often ignore needs that are specific to women and use language that does not appeal to women .
- Pension rights accrued during a partnership are not normally split evenly on divorce or separation which can lead to many women having lower pension benefits than their former partner.
- Gender stereotyping can lead to educational differences (for example, in mathematics and the sciences) and an expectation that women do more unpaid family work.
- Variations in working patterns in some societies which reflect cultural differences or preferences.

In summary, the causes of the gender pension gap are mixed and varied. No two countries are the same, yet, in every pension system there is a range of employment-related, pension design and socio-cultural issues which mean there is a significant difference between the average level of retirement income received by men and women.

It should also be noted that in addition to the noted causes, the COVID-19 pandemic has affected the retirement savings of females to a greater extent than males due to its significant impact on part-time and casual workers, as well as its effect on some female-dominated industries such as hospitality and tourism.

Given the variety of causes, there is not a single solution. Rather, the issue needs to be tackled from several perspectives including employment differences, pension design and cultural issues that are present in most societies.



<sup>11</sup> Ibid, p40

# A case study of two A-grade pension systems

Interestingly, two of the top three systems in the 2021 Mercer CFA Institute Global Pension Index, namely the Netherlands and Denmark, are placed 29th and 3rd respectively in Figure 3 (page 19).

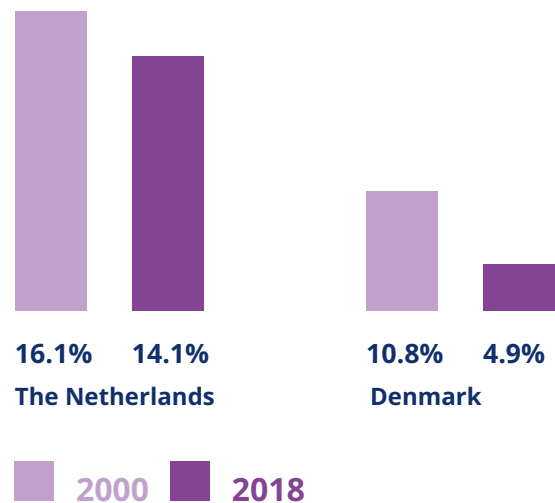
Before exploring this difference, it is worth noting that both countries have very low levels of poverty amongst older age groups. In fact, they have the second and third lowest rates amongst OECD countries, only beaten by Iceland as shown in OECD (2019a). However, the significant difference in the gender pension gap between these two systems requires further analysis to understand the causes of this outcome.

One of the reasons for the disparity is that the Netherlands have a very high level of part-time employment with 37 per cent of their employment being part-time compared to 19 per cent in Denmark.<sup>12</sup> In fact, 58 per cent of employed women in the Netherlands work part-time compared to the OECD average of 25 per cent.<sup>13</sup> This means that the average working hours for women in 2019 was 25-hours compared to 33-hours for men, which means lower earnings and hence lower pensions. This difference may reflect, at least in part, a cultural difference between these two countries.

However, the reported gender pension gaps do not reflect current employment arrangements. Rather, the current pensions in payment are caused by salary differences of 10, 20 and 30 years ago. For example, in the Netherlands in 2000, 57 per cent of women worked part-time compared to just 13 per cent of men according to OECD (2021). This was the largest difference for OECD countries and represented an outlier, even in 2000. It takes decades to remove the impact of employment differences on pensions in payment.

The gender pay gap has also been an important cause. In 2000 the gap was 16.1 per cent in the Netherlands and 10.8 per cent in Denmark. By 2018, these figures had reduced to 14.1 per cent and 4.9 per cent respectively.

## Gender pay gap



## There are three other reasons that have also influenced these contrasting results:

1. While both countries have a universal base pension, Denmark has an income-tested supplementary pension worth up to 17 per cent of the average wage which helps reduce the gender pension gap due to its income testing.
2. In contrast to the Danish system, which is defined contribution, the Netherlands currently has a defined benefit system where the pension benefit design includes a benefit offset to allow for the universal pension. This carve-out means the positive effect that a universal pension could have to reduce the gender pension gap does not exist.
3. In Denmark, women have a slightly higher average pension contribution than men, when expressed as a percentage of the salary, (11.2 per cent compared to 10.8 per cent) according to Fuglsbjerg et al (2020).

<sup>12</sup> Source: <https://data.oecd.org/emp/part-time-employment-rate.htm#indicator-chart>

<sup>13</sup> Source: <http://www.oecd.org/netherlands/PAG2019-NLD.pdf>

# Recommendations

## Recommendations to reduce the gender pension gap

### There are two distinct but related problems in tackling the gender pension gap

The first desired outcome is to reduce, and preferably remove, poverty amongst the aged which is highest amongst women. Ebbinghaus (2021) suggests that to reduce severe poverty amongst the retired population, a minimum income is needed; namely a sufficient basic, guaranteed or minimum pension while Mohring (2021) notes that basic or minimum pensions tend to mitigate the relationship between employment history and retirement income.

The recent Retirement Income Review in Australia made a similar conclusion when it observed that:

"Income inequality between women and men is lower in retirement than in working life, particularly for lower and middle income earners. This is due to the (means-tested) Age Pension, which women are more likely to receive, and for longer, than men."<sup>14</sup>

These comments highlight the importance of the interaction between the various pillars within a retirement income system.

The second desired outcome, which relates to the particular objectives of any retirement income system, is to reduce the inequality that is primarily caused by differences in employment and hence in the amount of contributions paid towards a retirement pension.

Of course, a basic or minimum pension will not, in itself, remove the pension inequality between males and females. Indeed the OECD (2021) recognised that closing the gender pension gap poses a particular challenge given the close link to employment and income patterns. However, notwithstanding this difficulty, inaction is not appropriate.



<sup>14</sup> Australian Government the Treasury (2020), Retirement Income Review, Final Report, p257.



## It is therefore recommended that the following actions should be taken to improve pension outcomes for women around the world:

### Actions by employers

- Encourage more flexible workplaces which will enable individuals to have more flexible working hours.
- Remove the range of distinctions that exist between part-time and full-time employees.
- Ensure that parental leave may be taken by either parent.
- Ensure improved gender balance at all levels within an organisation.

### Actions within the pension industry

- Remove all eligibility restrictions for individuals to join employment-related pension arrangements. Such restrictions may be related to their level of income, the number of hours worked or a required period of service.
- Introduce pension credits for carers so that those who are caring for young children or ageing relatives are not penalised in their retirement years.
- Remove any gender-based annuity rates which, after all, do not exist in defined benefit pension schemes.
- Require all pensions to have some form of indexation, even if it is not at the full inflation rate.
- Improve their forms of communication and recognise that both men and women are decision-makers in respect of pensions.
- Introduce publicly available models and calculators to show the impact of different working arrangements and career gaps on future retirement pensions.

### Actions by governments

- Provide affordable quality childcare which is likely to encourage women to return to the workforce earlier.
- Provide greater flexibility for pension contributions recognising that employment patterns over a working career can vary considerably. This flexibility should include mechanisms for individuals to “catch up” in respect of their pension contributions following periods out of the workforce due to caring, illness or unemployment.
- Require that pension contributions continue during periods of paid parental leave and carers leave.
- Permit pension contributions into the pension account of a spouse or partner.
- Ensure that pension rights accrued during a partnership are taken into account on divorce or separation.
- Ensure that there is no difference in the retirement ages for men and women.

Most of these changes can occur in the government-financed social insurance arrangements within the Bismarckian model as well as in the second pillar pension arrangements under the Beveridge model, with appropriate legislation and some government support. Now is the time to take action to reduce the gender pension gap in the future.



# 05/ A brief review of each system

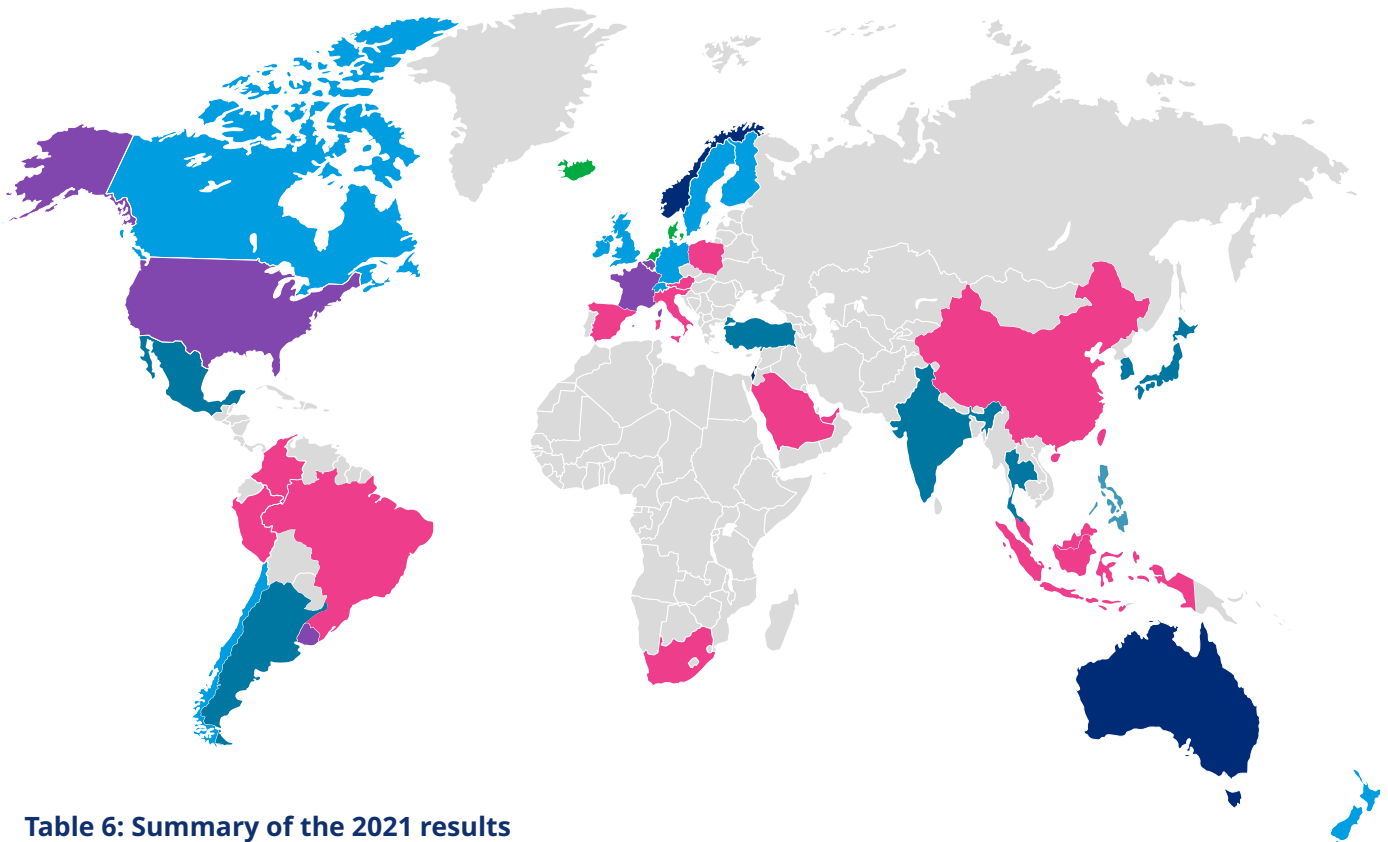
This chapter provides a brief summary of each retirement income system in this study, together with some suggestions that would — if adopted — raise the overall index value for that system. Of course, whether such developments are appropriate in the short-term depend on the current social, political and economic situation. Where relevant, a brief comment is also made about the change in the system's index value from 2020 to 2021.

As detailed in Chapter 3, many of these changes were due to updated OECD data used in the adequacy sub-index as well as the impact of COVID-19.





# Global Grades



**Table 6: Summary of the 2021 results**

Grade	Index Value	Systems	Description
A	>80	Denmark Netherlands Iceland	A first class and robust retirement income system that delivers good benefits, is sustainable and has a high level of integrity.
B+	75–80	Australia Israel Norway	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	Canada Chile Finland Germany Ireland New Zealand Singapore Sweden Switzerland UK	
C+	60–65	Belgium France Hong Kong SAR Uruguay 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 China Colombia Indonesia Italy Malaysia Peru Poland Saudi Arabia South Africa Spain Taiwan UAE	
D	35–50	Argentina India Japan Korea (South) 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

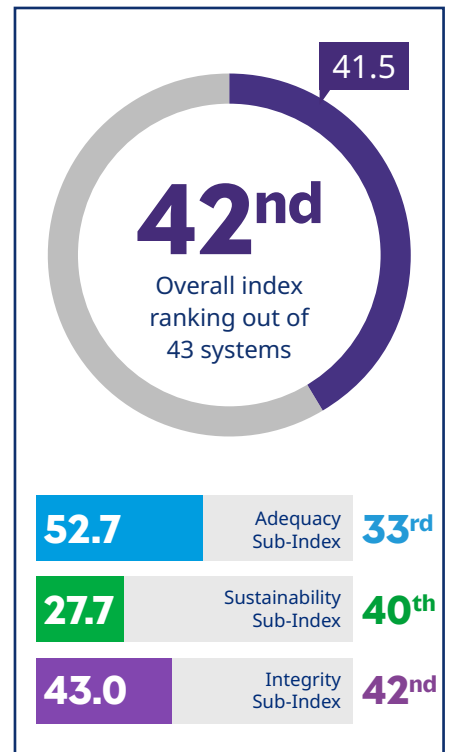
Argentina’s retirement income system comprises a pay-as-you-go social security system together with voluntary occupational corporate and individual pension plans which may be offered through employer book reserves, insurance companies or pension trusts.

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

- 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

- introducing a minimum age to access benefits from private pension plans
- improving the regulatory requirements for the private pension system

The Argentinian index value decreased from 42.5 in 2020 to 41.5 in 2021 primarily due to a reduction in home ownership and some data clarification in the adequacy sub-index.



# Australia

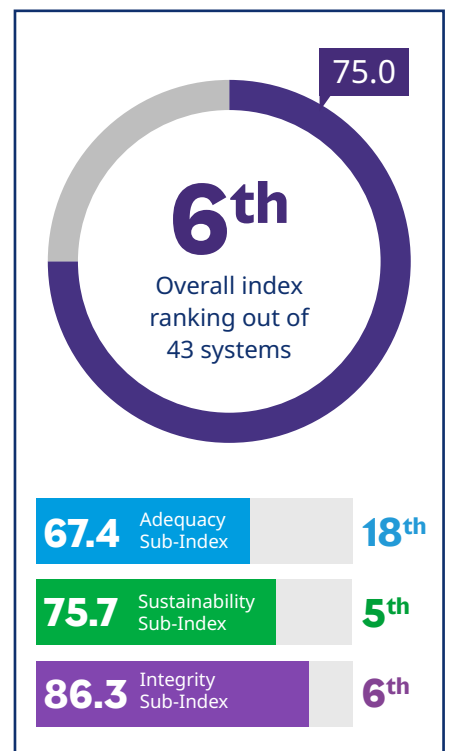
Australia’s retirement income system comprises a means-tested age pension (paid from general government revenue); a mandatory employer contribution paid into private sector arrangements (mainly DC plans); and additional voluntary contributions from employers, employees or the self-employed paid into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

- introducing a requirement that part of the retirement benefit be taken as an income stream in most circumstances
- increasing the labour force participation rate at older ages as life expectancies rise
- introducing a requirement to show benefit projections on annual statements

The Australian index value increased from 74.2 in 2020 to 75.0 in 2021 primarily due to an increase in the household savings rate in the adequacy sub-index.



# Austria

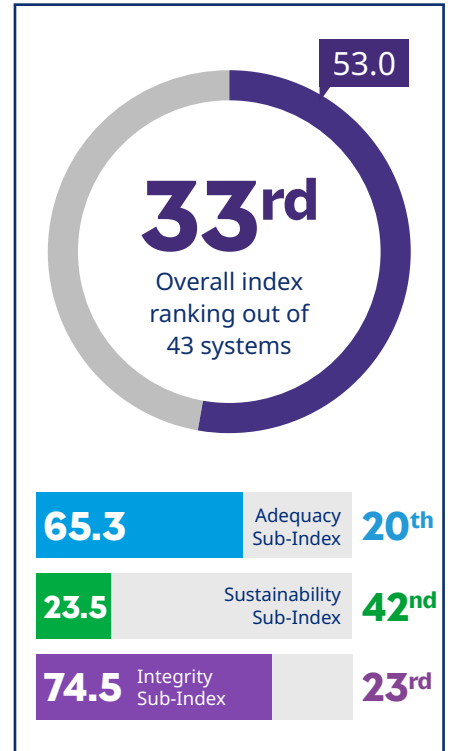
Austria’s retirement income system consists of a hybrid defined benefit public scheme with an income-tested top-up for low-income pensioners and voluntary private pension plans.

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

- increasing the minimum level of support for the poorest aged individuals
- 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)
- introducing arrangements to protect the pension interests of both parties in a divorce
- increasing the labour force participation rate at older ages

The Austrian index value increased from 52.1 in 2020 to 53.0 in 2021 due to small increases in the adequacy and sustainability sub-indices.



# Belgium

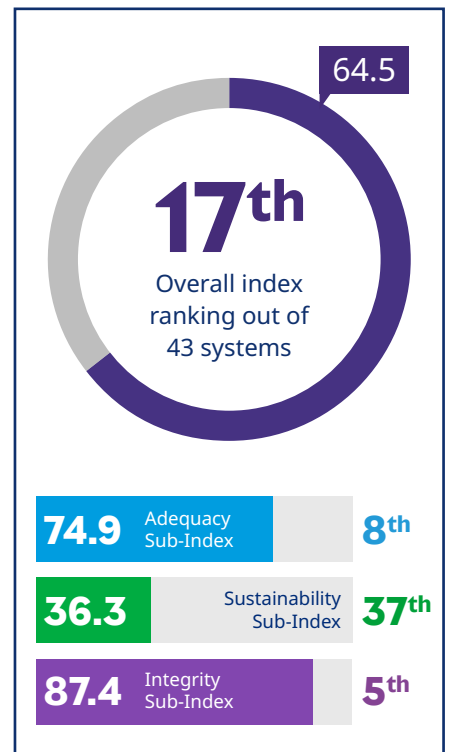
Belgium’s retirement income system comprises public, occupational and private pension schemes. The public pension scheme is earnings-related and has a means-tested safety net. Voluntary private pension arrangements are typically operated by insurance companies.

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 private pension arrangements thereby increasing the level of assets over time

- 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 increased from 63.4 in 2020 to 64.5 in 2021 primarily due to an increase in the level of pension assets reported by the OECD.



# Brazil

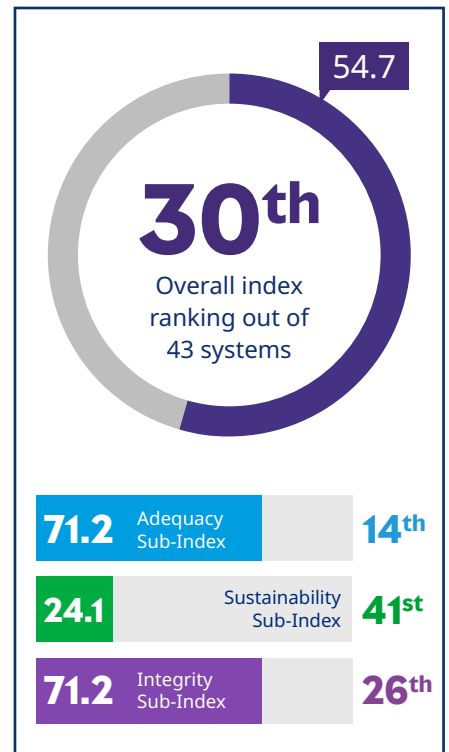
Brazil's retirement income system comprises a pay-as-you-go social security system with higher replacement rates for lower income earners; and voluntary occupational corporate and individual pension plans which may be offered through insurance companies or pension trusts.

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

- 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

- introducing a minimum access age so that the benefits are preserved for retirement purposes, mainly for the pension plans implemented in insurance companies
- enabling individuals to retire gradually whilst receiving a part pension

The Brazilian index value increased slightly from 54.5 in 2020 to 54.7 in 2021 primarily due to increased levels of real economic growth.



# 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 69.3 in 2020 to 69.8 in 2021 primarily due to increases in the higher household savings rate and the real economic growth rate.





# 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

- introducing 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 remained unchanged at 67.0 from 2020 to 2021 as gains from higher net replacement rates were offset by lower labour force participation rates at older ages.



# China

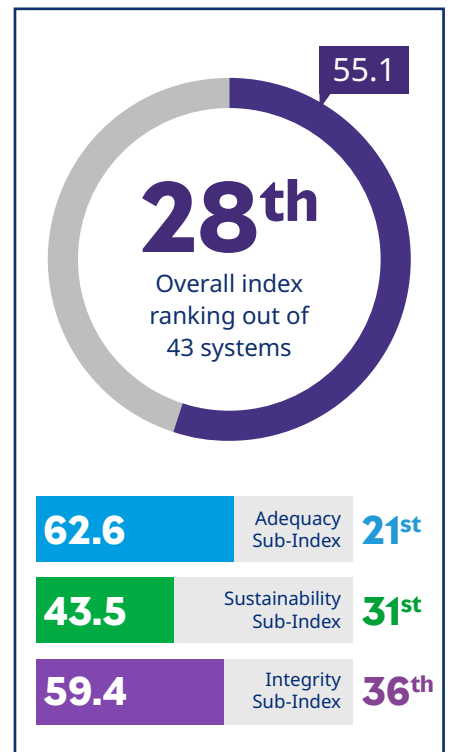
China's retirement income system comprises an urban system and a rural social system as well as systems for rural migrants and public sector workers. The urban and rural systems have a pay-as-you-go basic pension consisting of a pooled account (from employer contributions or fiscal expenditure) and funded 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

The Chinese index value increased from 47.3 in 2020 to 55.1 in 2021 primarily due to higher net replacement rates and improved regulations.



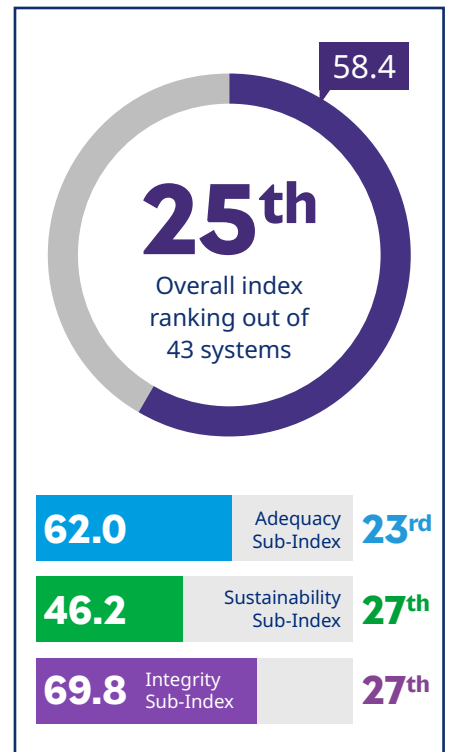
# Colombia

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 thereby gradually increasing the level of assets
- raising the state pension age over time
- introducing arrangements to protect the pension interests of both parties in a divorce

The Colombian index value decreased slightly from 58.5 in 2020 to 58.4 in 2021 primarily due to a fall in the labour force participation rates at older ages.



# Denmark

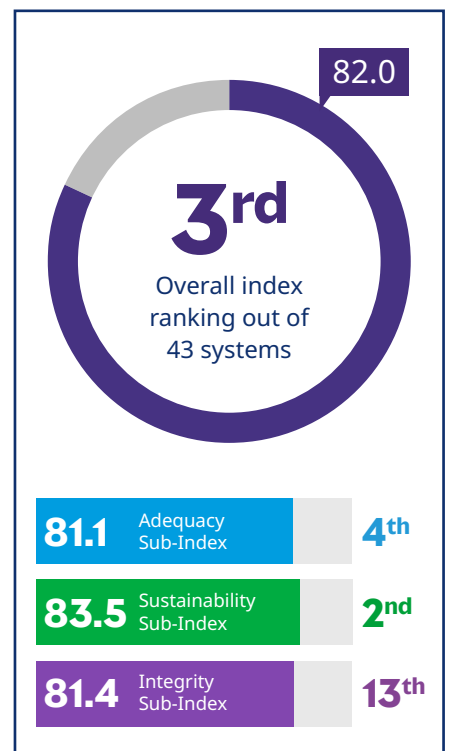
Denmark’s retirement income system comprises a public basic pension scheme, a means-tested supplementary pension benefit, a fully funded defined contribution scheme and mandatory occupational schemes.

- introducing a requirement for all pension plans to produce a publicly available annual report

The Danish index value increased from 81.4 in 2020 to 82.0 in 2021 primarily due to an increase in the net saving rate.

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



# Finland

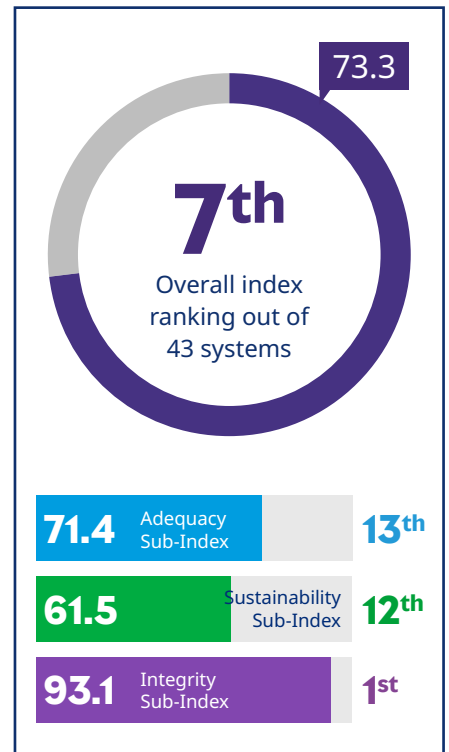
Finland’s retirement income system consists of a basic state pension, which is pension income-tested, and a range of statutory earnings-related schemes.

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

- increasing the minimum level of support for the poorest aged individuals
- 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

The Finnish index value increased slightly from 72.9 in 2020 to 73.3 in 2021 due to small changes in all sub-indices.



# France

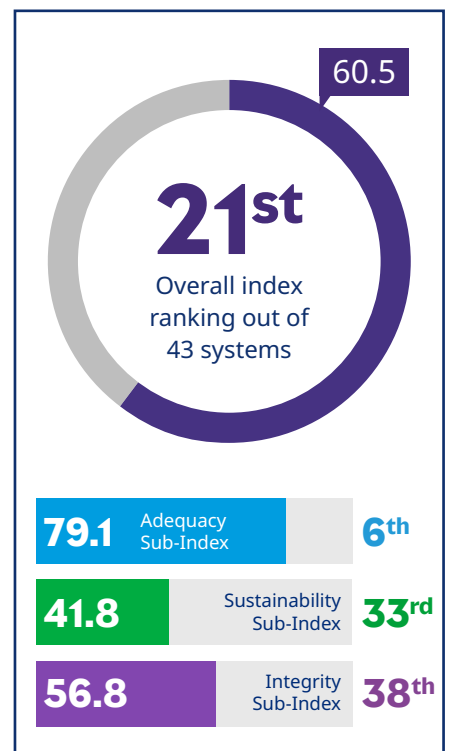
France’s retirement income system comprises an earnings-related public pension with a minimum pension level; two mandatory occupational pension plans for blue and white collar workers which merged on the 1 January 2019 (AGIRC-ARRCO); and voluntary occupational plans.

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 increased from 60.0 in 2020 to 60.5 in 2021 with small movements in each sub-index.



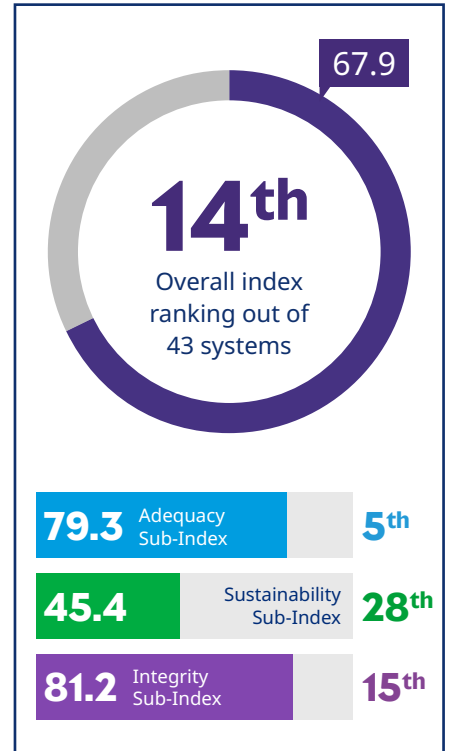
# Germany

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

The German index value increased from 67.3 in 2020 to 67.9 in 2021 due to small improvements in both the adequacy and sustainability sub-indices.



# Hong Kong SAR

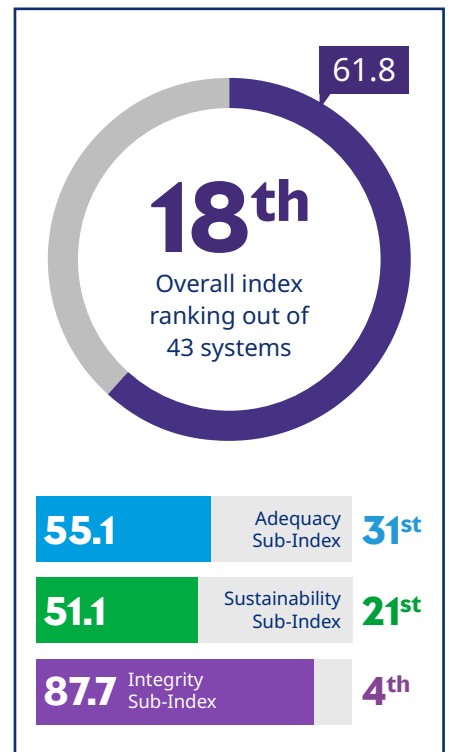
Hong Kong's retirement income system consists of mandatory provident funds where employers, most employees and the self-employed are each required to make mandatory contributions of 5 per cent of relevant income to the MPF scheme, subject to minimum and maximum relevant income levels. Scheme members 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 funds or products are developing and an official retirement income fund has just been launched.

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 increased from 61.1 in 2020 to 61.8 in 2021 due to small movements in several factors.





# Iceland

Iceland’s retirement income system comprises a state pension with two components (both of which are income tested according to different rules); mandatory occupational pension schemes with contributions from both employers and employees; and voluntary contributions in government-approved pension products.

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

- reducing the level of household debt as a percentage of GDP
- increasing the pension age as life expectancy continues to increase
- reducing government debt as a percentage of GDP

The Icelandic index value for 2021 is 84.2.



# 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.

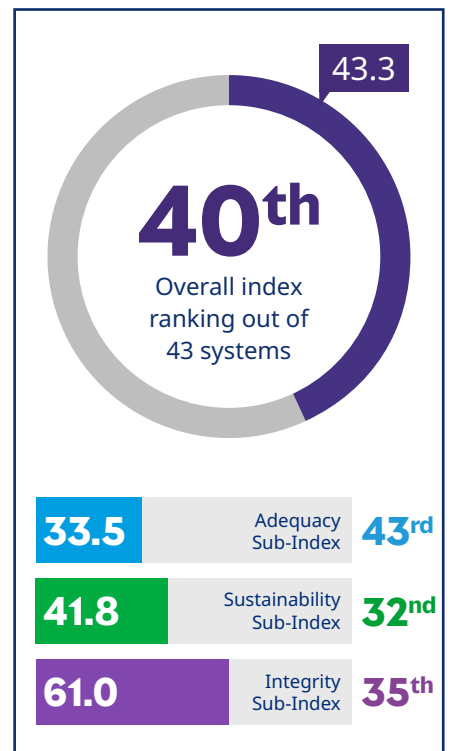
Government schemes have been launched as part of universal social security program aimed at benefiting the unorganised sector. The EPFO’s schemes continue to be the primary one for the organized sector. The National Pension System is gradually gaining popularity.

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

The Indian index value decreased from 45.7 in 2020 to 43.3 in 2021 primarily due to a fall in the net replacement rates, as discussed in Chapter 3.



# Indonesia

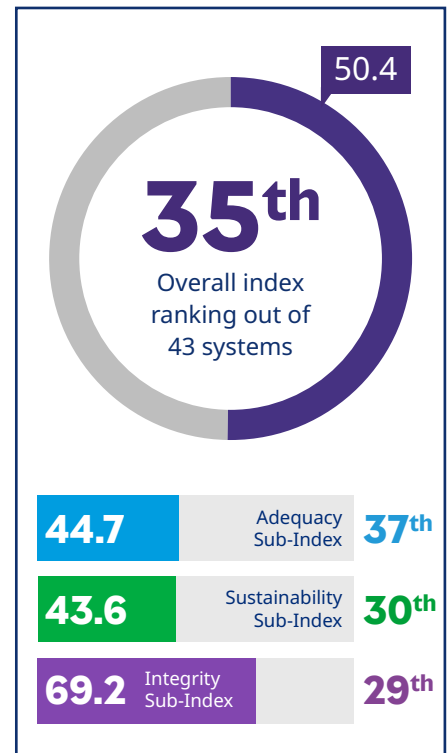
Indonesia’s retirement income system comprises earnings-related civil service pensions, mandatory defined contribution plans for private sector workers and voluntary defined contribution plans for other workers. The national pension scheme provides a defined benefit scheme funded through employer and 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
- increasing the pension age as life expectancy continues to rise
- improving the regulatory requirements for the private pension system
- improving the required level of communication to members of pension arrangements

The Indonesian index value decreased from 51.4 in 2020 to 50.4 in 2021 primarily due to a fall in the real economic growth rate.



# Ireland

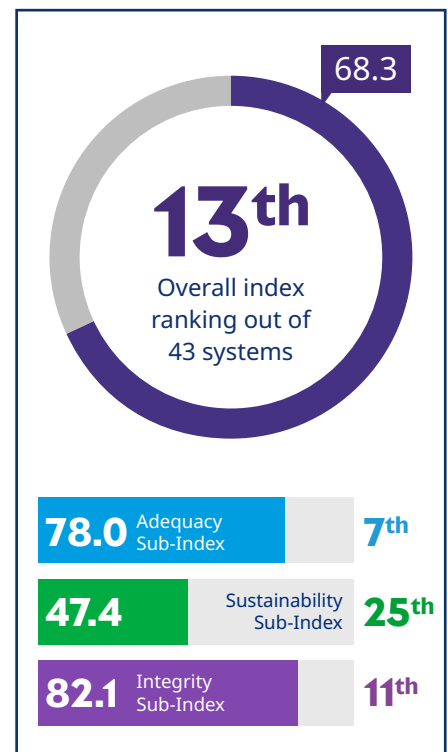
Ireland’s retirement income system comprises a flat-rate basic social security scheme and a means-tested benefit for those without sufficient social insurance contributions. Voluntary occupational pension schemes and personal pension schemes provide supplementary income in retirement but currently only cover about 65 per cent 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 State-sponsored automatic enrolment supplementary retirement savings system thereby increasing the level of assets
- increasing the labour force participation rate at older ages as life expectancies rise
- improving the regulatory requirements for private pension plans

The Irish index value increased from 65.0 in 2020 to 68.3 in 2021 primarily due to increases in the net replacement rates, higher household savings and implementation of the Directives from IORP II.



# Israel

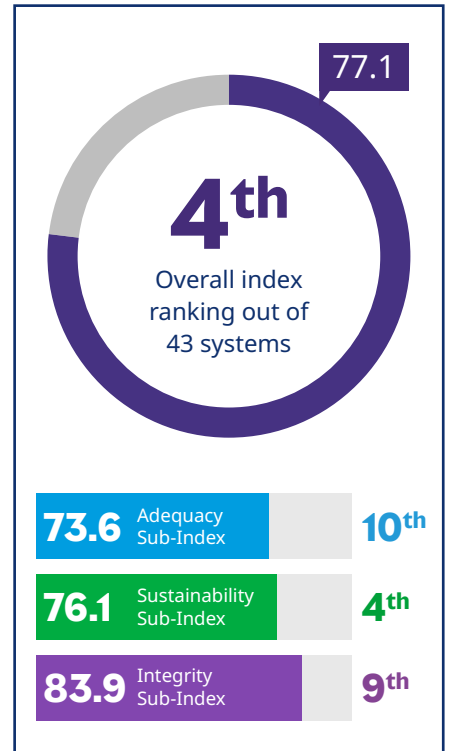
Israel's retirement income system comprises a universal state pension and private pensions with compulsory employer and employee contributions. Private pension plans in Israel pay mostly annuities.

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
- introducing a carer's pension credit for those caring for young children

The Israeli index value increased from 74.7 in 2020 to 77.1 in 2021 due to improvements in both the adequacy and sustainability sub-indices.



# Italy

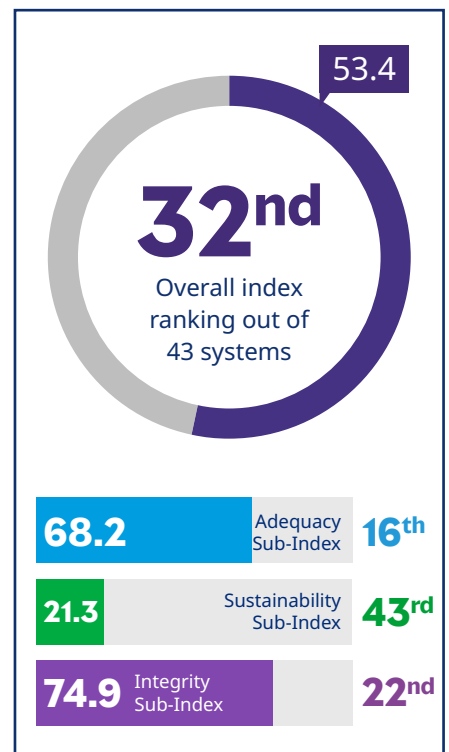
Italy's retirement income system comprises a notional defined contribution scheme for workers and a minimum means-tested social assistance benefit. Voluntary supplementary occupational schemes also exist; however coverage is low but gradually increasing.

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 increased from 51.9 in 2020 to 53.4 in 2021 primarily due to higher household savings rate and the implementation of Directives from IORP II.



# Japan

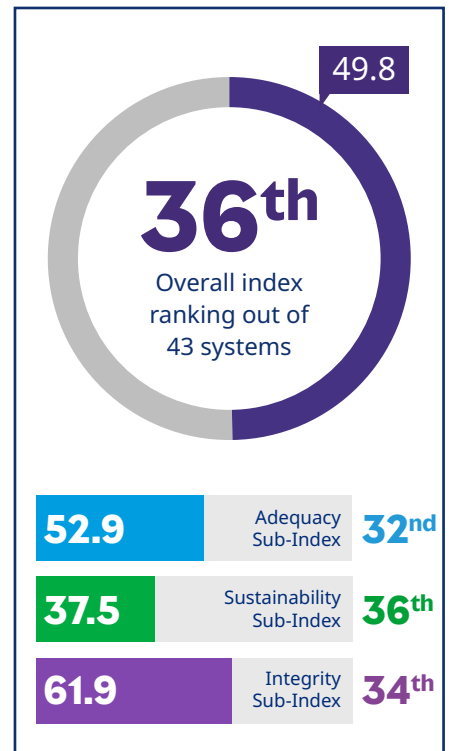
Japan’s retirement income system comprises a flat-rate basic pension; an earnings-related pension; and voluntary supplementary pension plans.

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

- 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 the level of government debt as a percentage of GDP

The Japanese index value increased from 48.5 in 2020 to 49.8 in 2021 primarily due to updated requirements which increased the score of the integrity sub-index.



# Korea (South)

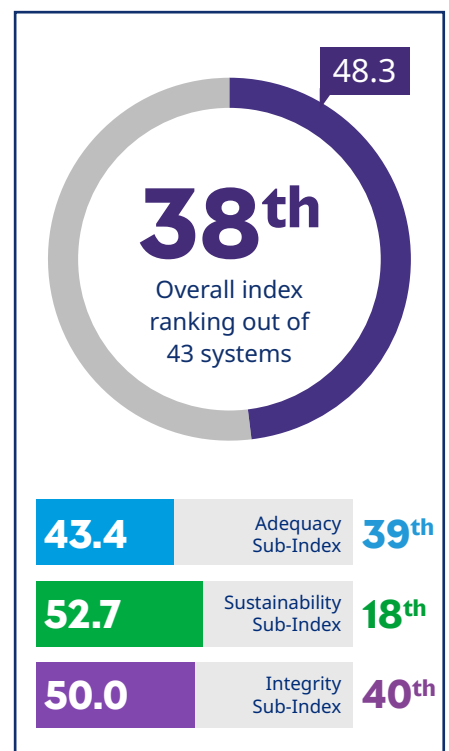
Korea’s retirement income system comprises a public earnings-related pension scheme with a progressive formula, based on both individual earnings and the average earnings of the insured as a whole, and statutory private pension plans.

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 the governance and communication requirements for the private pension system

The Korean index value decreased from 50.5 in 2020 to 48.3 in 2021 primarily due to a fall in the net replacement rates as discussed in Chapter 3.





# Malaysia

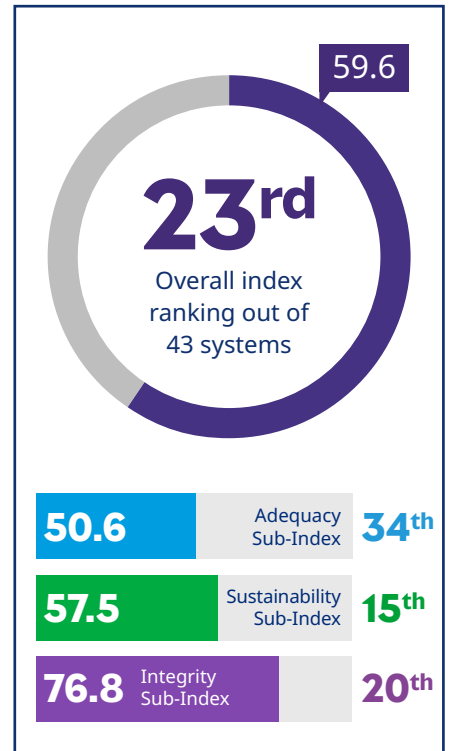
Malaysia’s retirement income system is based on the Employee Provident Fund (EPF) which covers all private sector employees and non-pensionable public sector employees. Under the EPF, some benefits are available to be withdrawn at any time (under pre-defined circumstances including education, home loans, 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 and the labour force participation rate at older ages as life expectancy continues to rise

The Malaysian index value decreased from 60.1 in 2020 to 59.6 in 2021 primarily due to a fall in the real economic growth rate.



# 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.

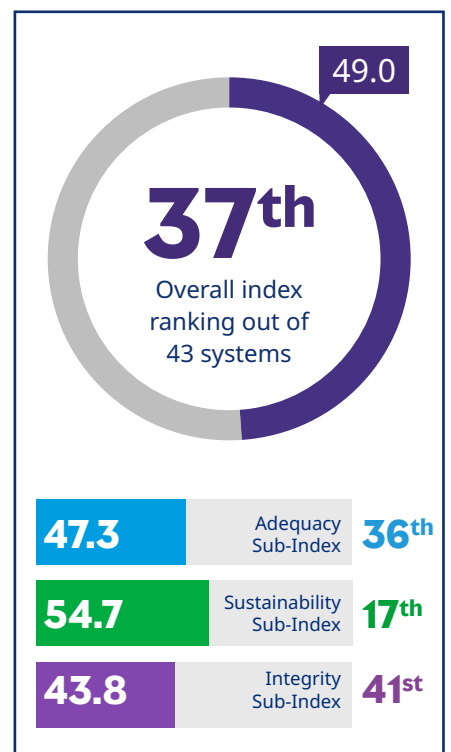
A universal retirement pension is paid to all Mexicans from age 68.

The mandatory Social Security (private sector) at retirement law was amended in 2021 with the aim to increase the retirement benefits eligible to workers, and to increase the total contribution amounts from 6.5 per cent to 15 per cent.

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
- increasing the labour force participation rate at older ages
- 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 increased from 44.7 in 2020 to 49.0 in 2021 primarily due to an increase in the net replacement rate as discussed in Chapter 3.



# Netherlands

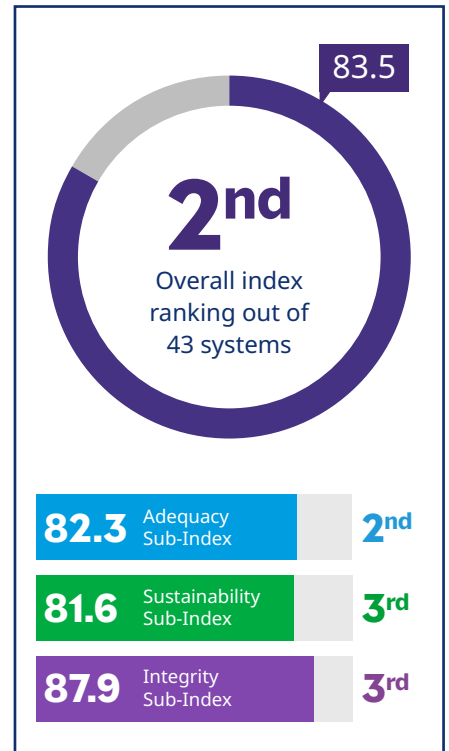
The Netherlands' retirement income system comprises a flat-rate public pension and a quasi-mandatory earnings-related occupational pension linked to industrial agreements. Most employees belong to these occupational schemes which are industry-wide defined benefit plans with the earnings measure based 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
- extending the carer's pension credit for those caring for young children

The Dutch index value increased from 82.6 in 2020 to 83.5 in 2021 due to several small increases in the adequacy and sustainability sub-indices.



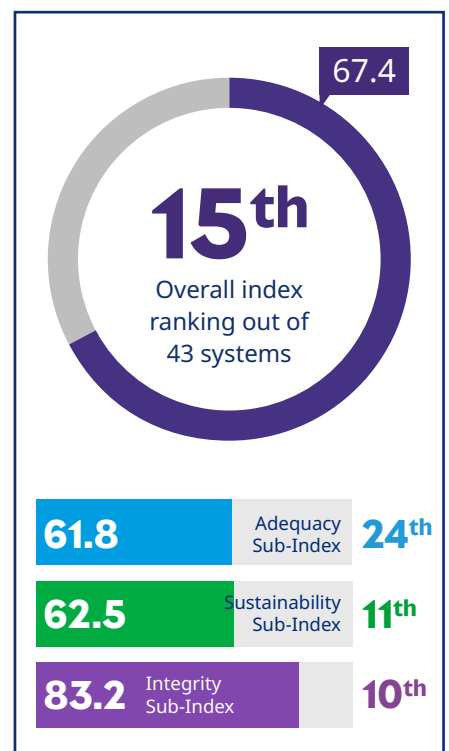
# New Zealand

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 thereby increasing the level of assets set aside for the future
- raising the level of household savings and reducing the level of household debt
- introducing some form of tax incentive for voluntary contributions
- increasing the focus on the provision of retirement income from KiwiSaver products

The New Zealand index value decreased from 68.3 in 2020 to 67.4 in 2021 primarily due to reductions in the net replacement rates as discussed in Chapter 3.



# Norway

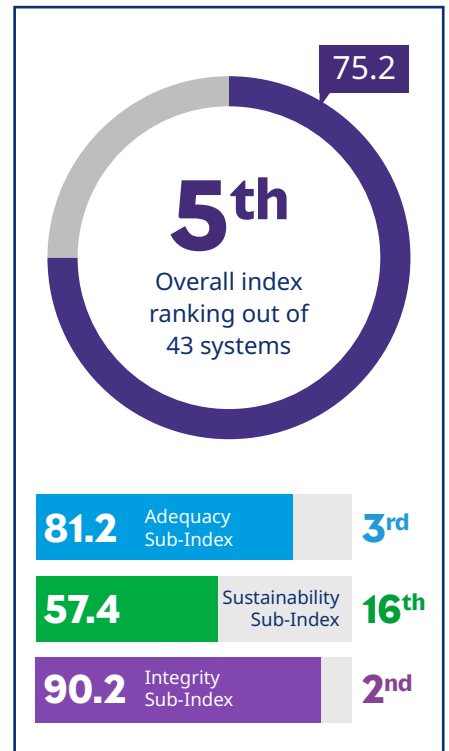
Norway's retirement income system comprises an earnings-related social security pension with a minimum pension level and mandatory occupational pension plans. There are also many voluntary arrangements to provide additional benefits.

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 increased from 71.2 in 2020 to 75.2 in 2021 primarily due to increases in the net replacement rates reported by the OECD.



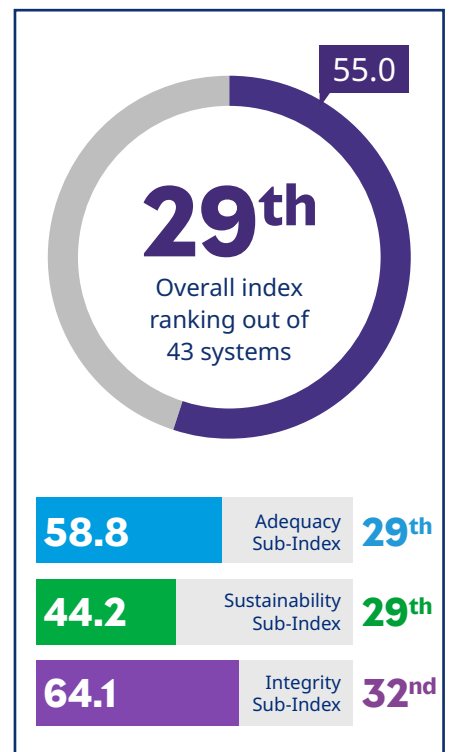
# Peru

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 at the time of enrolment 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
- reducing the access to pension assets before retirement
- 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 57.2 in 2020 to 55.0 in 2021 primarily due to a fall in the labour force participation rates at older ages.



# Philippines

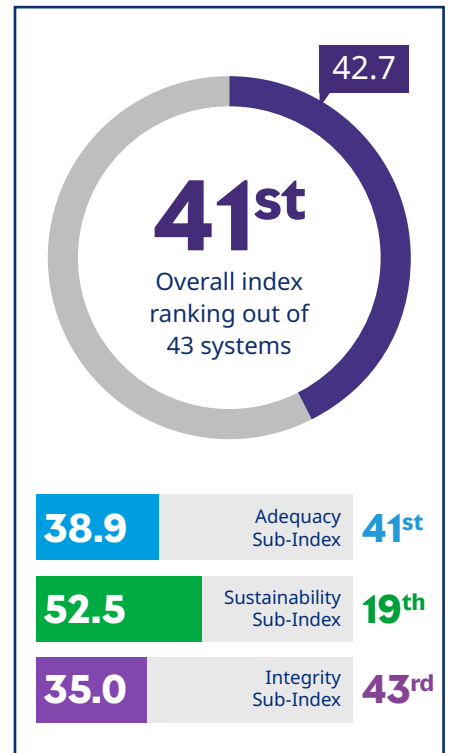
The Philippines retirement income system comprises a small basic pension and an earnings-related Social Security System (SSS). Members can receive a lifetime pension if they have contributed for a minimum of 120 months. If this requirement is not met, the retiree will receive a lump sum upon retirement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

The Philippines index value decreased slightly from 43.0 in 2020 to 42.7 in 2021 primarily due to a fall in the real economic growth rate.



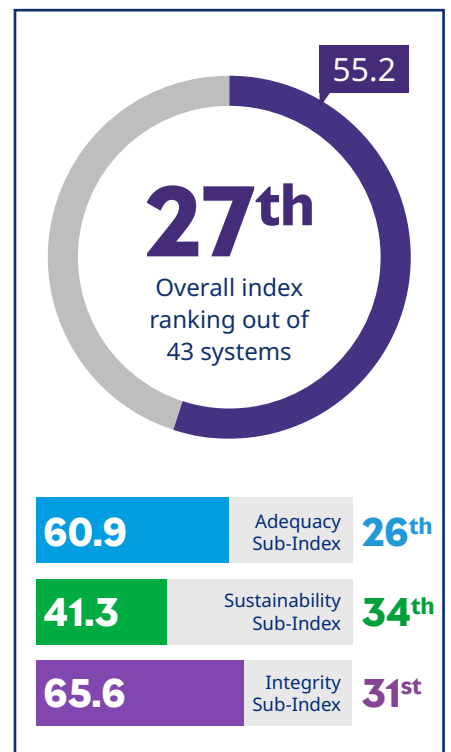
# Poland

Poland's retirement income system was reformed in 1999. 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 but due to limited incentives they are unpopular, even though the new system provides low replacement rates. In 2014 the government introduced laws which aim to limit activity of Pillar 2 pension funds through transferring 51.5 per cent of their assets invested in bonds to fund the Social Security Institution.

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

- introducing auto enrolment into the private pension system thereby increasing the level of contributions and the level of assets over time
- raising the minimum level of support available to the poorest pensioners
- raising the level of household saving
- increasing the labour force participation rate at older ages as life expectancies rise

The Polish index value increased from 54.7 in 2020 to 55.2 in 2021 primarily due to an increase in the household saving rate.



# Saudi Arabia

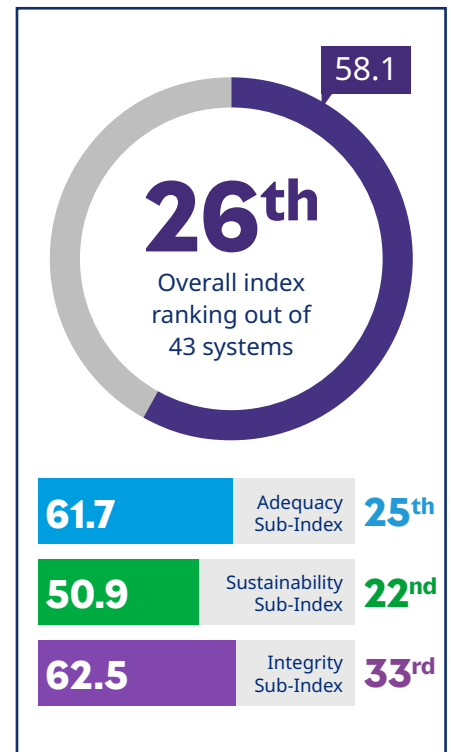
Saudi Arabia’s retirement income system comprises an earnings-related pension or an earnings-related lump sum retirement benefit for individuals who do not fulfil any of the retirement conditions.

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

- increasing the minimum level of support provided to the poorest aged individuals
- further increasing the state pension age over time
- 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 from 57.5 in 2020 to 58.1 in 2021 primarily due to an increase in the net replacement rates.



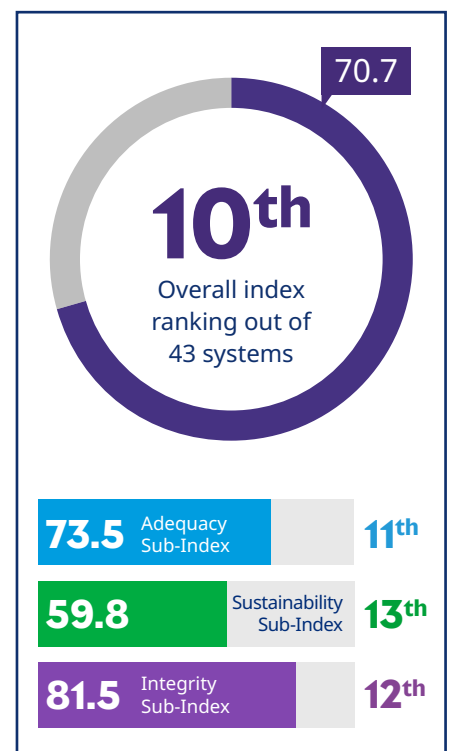
# Singapore

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 their savings that are set aside for retirement, as life expectancies rise
- improving the level of communication provided to CPF members

The Singaporean index value decreased slightly from 71.2 in 2020 to 70.7 in 2021 due to a fall in the minimum level of support received by the poor, when expressed as a percentage of the average wage.





# South Africa

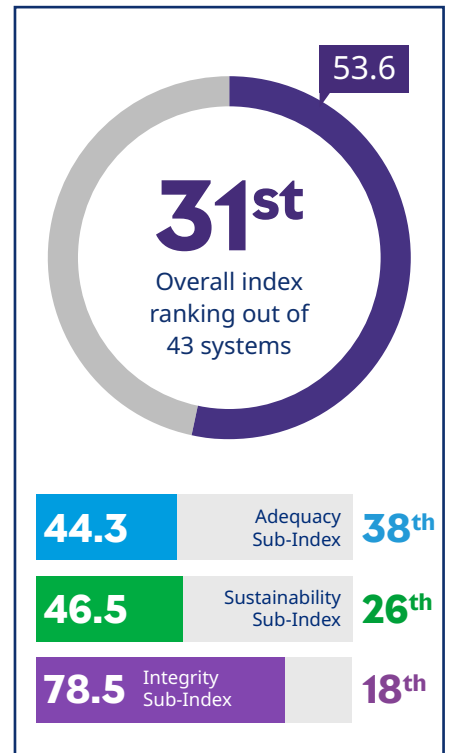
South Africa's retirement income system comprises a means-tested public pension and tax-supported voluntary occupational schemes.

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 pension funds

The South African index value increased slightly from 53.2 in 2020 to 53.6 in 2021 due to a number of small movements in the adequacy and sustainability sub-indices.



# Spain

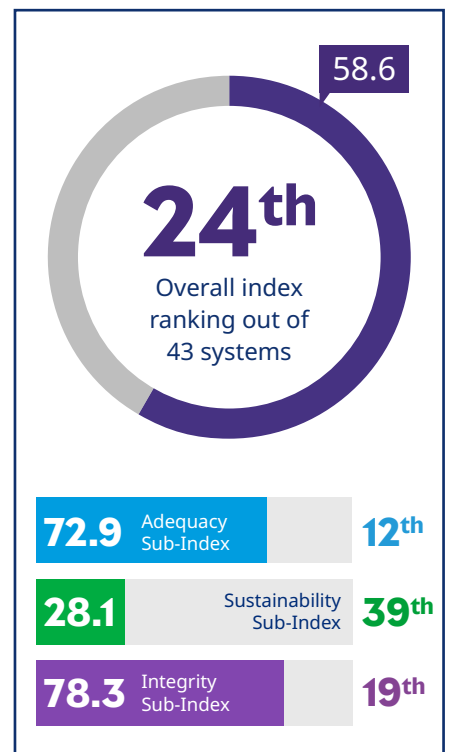
Spain's retirement income system comprises an earnings-related public pension system and a minimum means-tested social assistance benefit. Voluntary personal and occupational pension schemes exist but coverage is low compared to the public pension.

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

- increasing the minimum level of support provided to the poorest aged individuals

- increasing the participation of employees in occupational pension schemes through automatic membership or enrolment, or through more beneficial tax measures that encourage their implementation and the employees participation, thereby increasing the level of contributions and assets
- continuing to increase labour force participation rate at older ages as life expectancies rise

The Spanish index value increased from 57.7 in 2020 to 58.6 in 2021 due to several small improvements in all sub-indices.



# Sweden

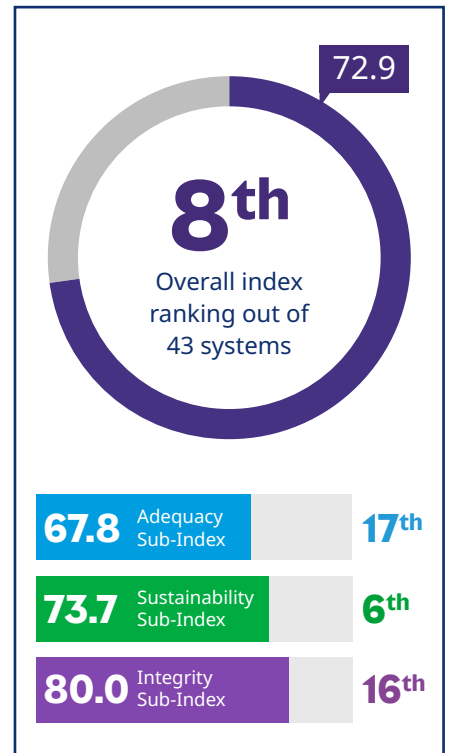
Sweden's national retirement income system was reformed in 1999. The system is an earnings-related system with notional accounts. The overall system is in transition from a pay-as-you-go system to a funded approach. There is also an income-tested top-up benefit which provides a minimum guaranteed pension.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

- reintroducing tax incentives for individual contributions
- introducing arrangements to protect all the pension interests of both parties in a divorce

The Swedish index value increased from 71.2 in 2020 to 72.9 in 2021 primarily due to an increase in the net replacement rates and the level of pension assets.

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



# Switzerland

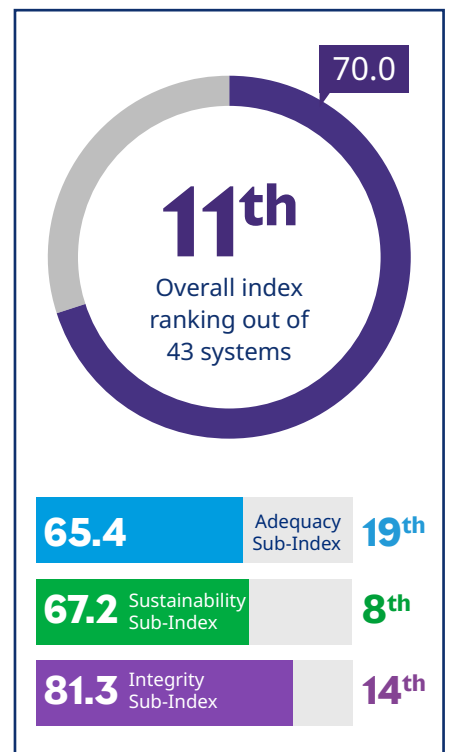
Switzerland's retirement income system comprises an earnings-related public pension with a minimum pension; a mandatory occupational pension system where the contribution rates increase with age; and voluntary pension plans offered by insurance companies and authorised banking foundations.

- increasing the state pension age over time
- reducing the level of household debt
- increasing the rate of home ownership

The Swiss index value increased from 67.0 in 2020 to 70.0 in 2021 primarily due to an increase in the net replacement rates.

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



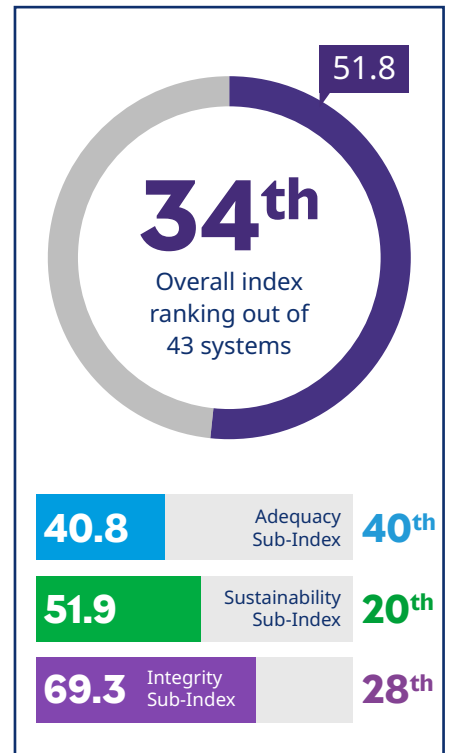
# Taiwan

Taiwan's retirement income system consists of several schemes managed by the Bureau of Labor Insurance. The National Labor Pension scheme plays the biggest part in Taiwan's retirement system. Under this scheme the employer contributes 6 per cent or more of a worker's monthly wage into an individual pension account. Ownership of this pension account belongs to the worker. Upon reaching 60 years of age, a worker may apply to receive the principal and investment earnings that have accumulated over the years.

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

- increasing the minimum level of support for the poorest aged individuals
- introducing a requirement that part of the retirement benefit must be taken as an income stream
- introducing a requirement to ensure that benefits in private pension plans are preserved until age 60
- increasing labour force participation rate at older ages as life expectancies rise

The Taiwanese index value for 2021 is 51.8.



# Thailand

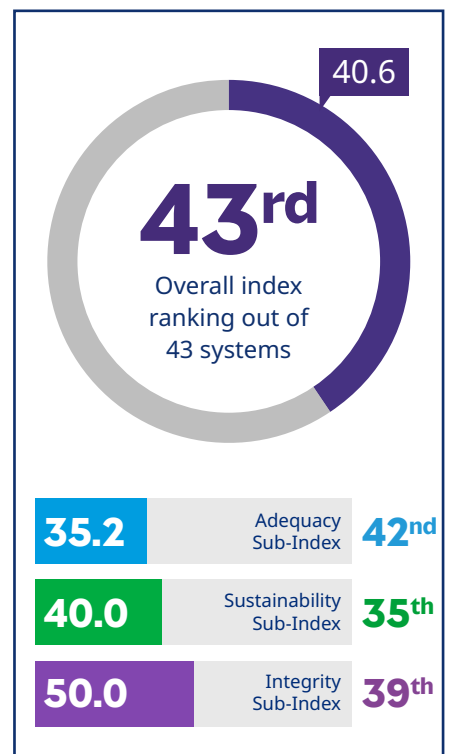
Thailand's retirement income system provides broad coverage across 3 pillars, comprising of 1) an old-age pension, a Social Security Fund for private sector employees in the formal sectors, 2) Provident Fund, a voluntary-basis employer sponsored DC plans, and 3) individual savings product including the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

- 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 decreased slightly from 40.8 in 2020 to 40.6 in 2021 primarily due to a decline in the household saving rate which was offset by an increase in the integrity sub-index.

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



# Turkey

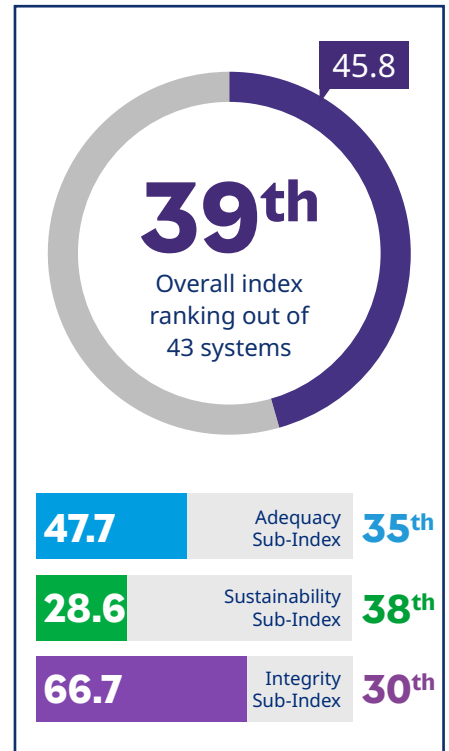
Turkey's retirement income system comprises an income-tested public pension and an earnings-related public scheme. There are voluntary private pension systems which people can join to supplement their income in retirement, but coverage is currently low.

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
- increasing the labour force participation rate at older ages as life expectancies rise

The Turkish index value increased from 42.7 in 2020 to 45.8 in 2021 primarily due to an increase in the level of the minimum pension.



# UAE

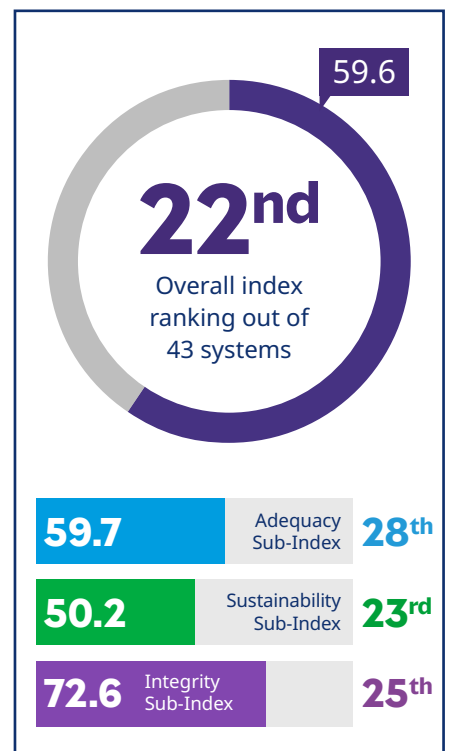
The UAE's retirement income system comprises a minimum state pension and a national employment-based scheme administered by the Abu Dhabi Pension Fund (ADPF) for Abu Dhabi emirate and the General Pensions and Social Security Authority (GPSSA) for most of the other emirates. Employees contribute 5 per cent of salary while employers contribute 12.5-15 per cent of salary with benefits guaranteed by the Government.

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

- introducing a minimum access age so that the benefits from pension plans are preserved for retirement purposes

- increasing the level of assets held in private pension arrangements to reduce the reliance on state pensions
- improving the required level of communication to members from pension arrangements
- increasing the state pension age as life expectancies rise

The UAE index value for 2021 is 59.6.



# United Kingdom

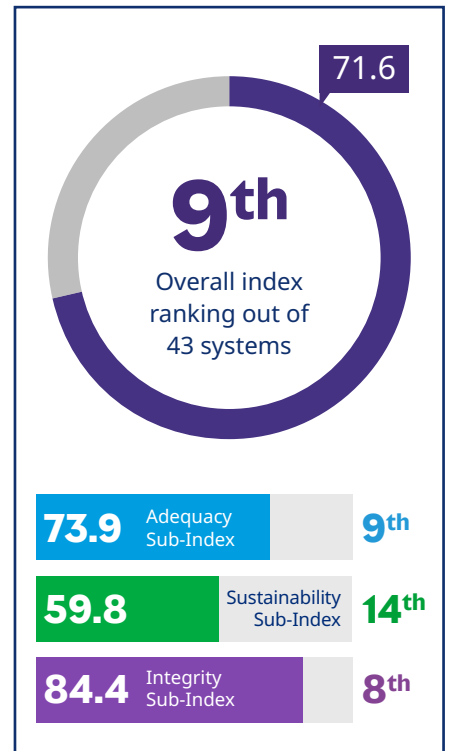
The United Kingdom's retirement income system comprises a single tier state pension supported by an income-tested pension credit, and supplemented by voluntary occupational and personal pensions. Auto enrolment now covers all employers, requiring them to enrol eligible employees (who can then choose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

- further increasing the coverage of employees and the self-employed in pension schemes
- reducing the level of household debt

The British index value increased from 64.9 in 2020 to 71.6 in 2021 primarily due to an increase in the net replacement rates, as discussed in Chapter 3.

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



# Uruguay

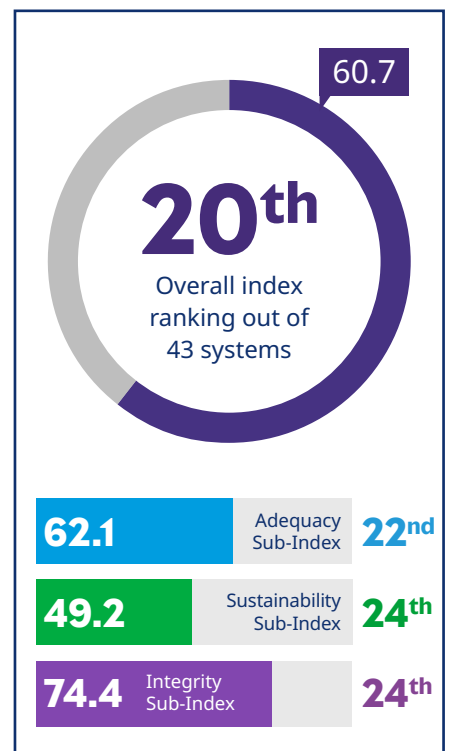
Uruguay's retirement income system comprises a means-tested state pension and mandatory private pension arrangements. Compulsory contributions from employers and employees are paid into both the pay-as-you-go social security system and a private pension fund.

- requiring that part of the retirement benefit be taken as an income stream

The Uruguayan index value for 2021 is 60.7.

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

- increasing the minimum public pension provided to the poorest aged individuals
- improving the governance requirements for the private pension system
- increasing the state pension age as life expectancies rise



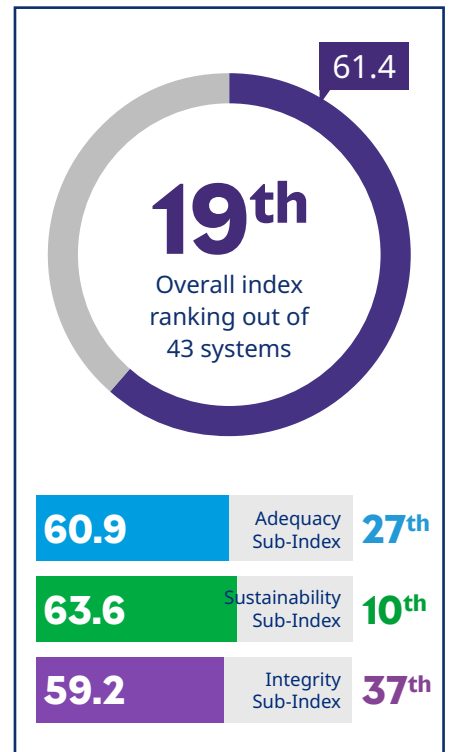


# United States of America

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.

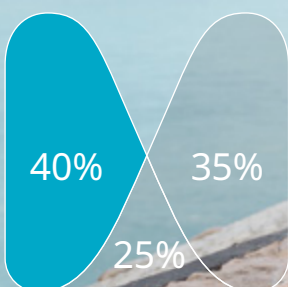
The overall index value for the American system could be increased by:

- 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
- The American index value increased from 60.3 in 2020 to 61.4 in 2021 primarily due to an increase in the net replacement rates, higher household savings and an increase in the value of the assets held in private pension arrangements.
- 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



# 06/ 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 the non-pension savings situation and, as such, important indicators of financial security during retirement.



The systems with the highest value for the adequacy sub-index are Iceland (82.7) and the Netherlands (82.1), with Thailand (35.2) and India (33.5) having the lowest values. While 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

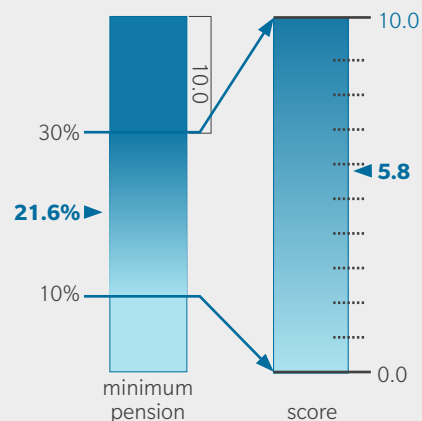
An important objective of any retirement income system is to provide a minimum pension to the aged poor. In terms of the World Bank's recommended multi-pillar system, it represents the non-contributory basic pension or Pillar 0, which provides a minimum level of income for all aged citizens. Eligibility for this minimum pension requires no period in the paid workforce, but will often require a minimum period of residency. As the World Bank notes: "The elderly in the poorest quintile have benefitted most from old-age social pensions, no matter the program design."<sup>15</sup>

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 per cent<sup>16</sup> of average earnings adequately meets the poverty alleviation goal. Hence for the first part of this question a minimum pension below 30 per cent will score less than the maximum value of 10, with a zero score if the pension is 10 per cent 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 per cent 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 per cent of the average wage in China, India, Malaysia, Philippines, Saudi Arabia, Thailand and Uruguay to 35 per cent or more in Brazil, Denmark, Iceland and New Zealand. Indonesia does not provide a minimum pension.

<sup>15</sup> World Bank (2019), Pensions Overview, 28 March.

<sup>16</sup> 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 (2019a) 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 per cent in the adequacy sub-index with 15 per cent for the first part of the question and 2.5 per cent 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 per cent of the net average lifetime wage
- 60 per cent of the gross average lifetime wage
- 53 per cent of the net final year wage
- 42 per cent 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."<sup>17</sup> 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 per cent, 100 per cent and 150 per cent of average earnings. The net replacement rates at these three income levels are given weightings of 30 per cent, 60 per cent and 10 per cent respectively which recognises that there are more individuals who earn less than the average wage than above it. The use of a range of incomes is more comprehensive than a single point, although the weighted answer will be similar to the net replacement rate for a median income earner in many cases.

<sup>17</sup> World Bank (1994), p295.

The OECD expressed a target replacement rate of 70 per cent of final earnings<sup>18</sup> 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 per cent 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 per cent of the working age population. This allowance takes into account the level of coverage above 30 per cent and the increase in the net replacement rate due to the voluntary schemes.<sup>19</sup>

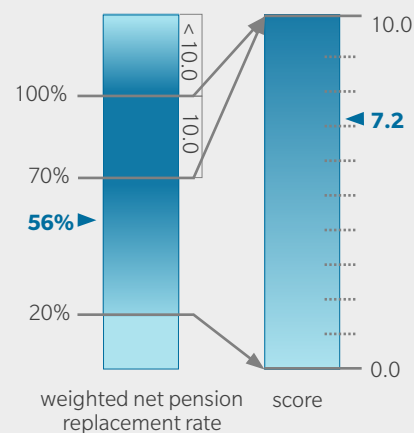
The target benefits should be less than 70 per cent of final earnings to allow for individual circumstances and some flexibility. An objective of between 45 per cent and 65 per cent of final earnings is considered reasonable. Using the ratios between lifetime earnings and final earnings, the target for 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 per cent of average lifetime earnings (revalued with earnings growth).

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

## Calculation

The maximum score for this indicator is obtained for any system with a result between 70 per cent and 100 per cent. Argentina, Austria, Brazil, Denmark, France, Italy, the Netherlands, Philippines, Saudi Arabia, 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 per cent.

## Calculating A2 — Weighted Net Pension Replacement Rate



## Commentary

With the exception of the systems mentioned above that have a result between 70 per cent and 100 per cent, most systems have a result between 20 per cent (South Africa) and 69 per cent (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 reflects the benefits provided to a broad group of retirees, this indicator is given the highest weighting in the adequacy sub-index, namely 25 per cent.

<sup>18</sup> OECD (2012a) p 161.

<sup>19</sup> 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 systems, these savings represent an important factor in determining the financial security for the aged.

#### Calculation

For systems 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 2020 and 2021 measurements.

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

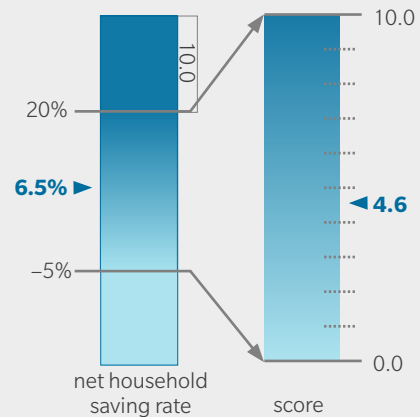
OECD measures were used for Ireland and South Africa due to changes in data sources and estimation methods.

Mercer colleagues provided responses for Iceland, Taiwan and Uruguay.

The calculated household saving rates ranged from minus 6.5 per cent in Belgium to plus 21.8 per cent in Taiwan. A maximum score is obtained for any country with a saving rate of 20 per cent or higher, and a zero score for any country with a saving rate of less than minus 5 per cent.

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.

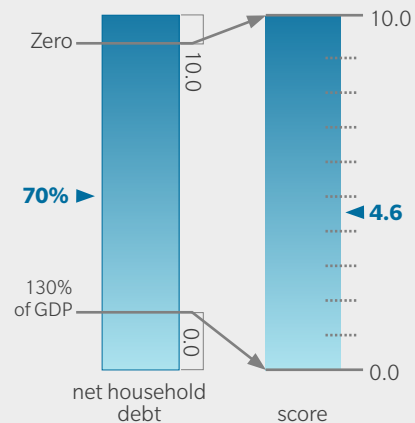
### Calculating A3a — Net Household Saving Rate



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 per cent of GDP in Argentina and 10 per cent in Uruguay to 127 per cent of GDP in Australia and 134 per cent 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 per cent 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 per cent 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 and Turkey. There is no income tax in Saudi Arabia and the UAE. 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 per cent in the adequacy sub-index, split into 2 per cent for the first question and 3 per cent for the second question.

## Question A5

Is there a minimum access age to receive benefits from private pension plans<sup>20</sup> (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 systems 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 per cent 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

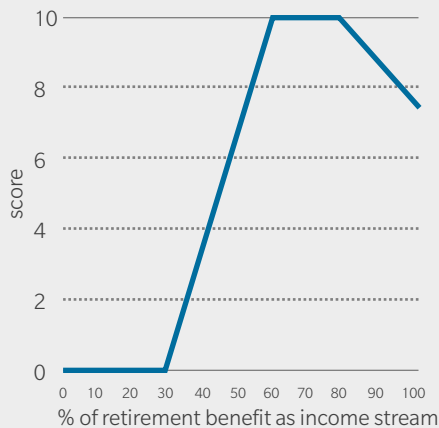
The primary objective of a private pension system should be to provide income during retirement. Of course, this does not imply that a lump-sum payment is not a valuable benefit; it often is. Indeed, both Rocha and Vittas (2010) and the OECD (2012b) suggest that policymakers should target an adequate 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 per cent and 80 per cent of the benefit is required to be converted into an income stream. A percentage above 80 per cent reduces the flexibility that many retirees need while an answer below 60 per cent is not converting a sufficient proportion of the benefit into an income stream. A percentage below 30 per cent 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.

<sup>20</sup> 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 and regions with some requiring all of the benefit to be converted into a lifetime annuity (e.g. Chile, Colombia, Finland, Iceland, Israel, the Netherlands, Norway, Peru, Saudi Arabia, Sweden and the UAE) whereas many have no requirement at all (e.g. Argentina, Australia, Belgium, China, France, Hong Kong SAR, Japan, Korea, Malaysia, Mexico, New Zealand, the Philippines, Spain, Switzerland, Thailand, Turkey, the United Kingdom and the United States). Of these, only Australia and Korea 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 per cent 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 23 of the 43 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 per cent 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 43 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 per cent weighting in the adequacy sub-index.

## Question A9

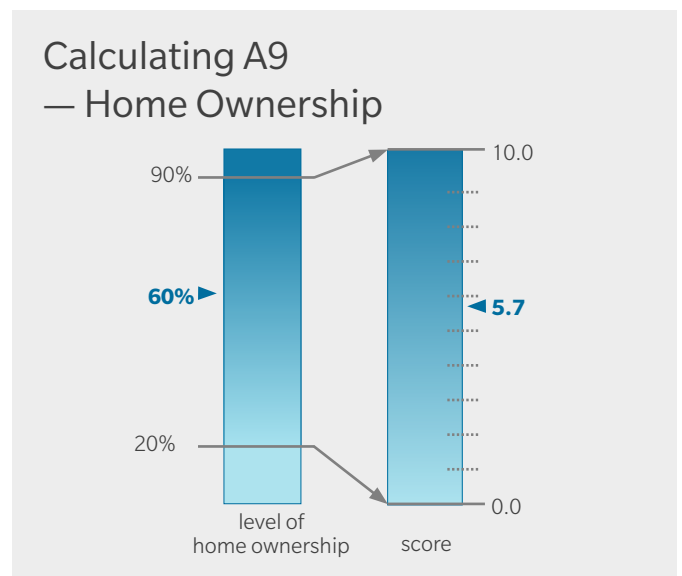
What is the level of home ownership in the country?

### Objective

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

### Calculation

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



### Commentary

The level of home ownership ranged from 36 per cent in Switzerland to more than 85 per cent in China, India and Singapore.

### Weighting

Home ownership represents an important feature of financial security and wellbeing in retirement. Hence, this indicator has been given a 5 per cent 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)<sup>21</sup> 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.

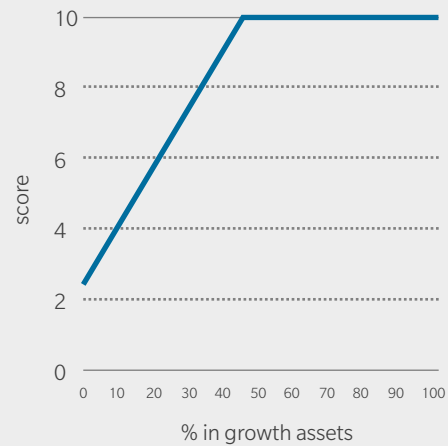
It is also important to recognise that the investment performance of a pension fund needs to focus on the longer term and not on short term returns. With this in mind, we believe that it is appropriate for the investments of pension funds within any system be diversified across a range of asset classes,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

### Calculation

Many systems 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.

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 per cent of all assets.

### Calculating A10 — Percentage of Growth Assets



### Commentary

The level of growth assets ranges from less than ten per cent in India to approximately 80 per cent in the UAE. Nineteen of the 43 systems have a percentage above 45 per cent.

It is recognised that in some private pension systems, restrictions imposed by the government may limit the investment decisions made by the pension plan's trustees or fiduciaries.

### Weighting

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

<sup>21</sup> 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 pension contributions, credits or future pension benefits for parents who are caring for young children while the parent is not in the paid workforce? These benefits could be in respect of the public pension or a private sector pension.

### 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 pension 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 21 of the 43 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.

Twelve 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 per cent weighting in the adequacy sub-index.

## Sources of data for the adequacy sub-index

### Question A1

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

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

OECD (2018a), unpublished data for Colombia.

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 and Uruguay using websites.

Mercer calculations for China, Iceland, Taiwan and the UAE using data sourced from Mercer consultants.

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

### Question A2

OECD (2014) for Uruguay.

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

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

Mercer model for Taiwan and the UAE.

OECD (2021a) unpublished data for all other systems.

### Question A3

Data from the Economist Intelligence Unit was used for the first question for all systems except Iceland, Ireland, South Africa, Taiwan and Uruguay.

OECD (2019b) for Ireland.

OECD (2019c) for South Africa.

Mercer colleagues for Iceland, Taiwan and Uruguay.

The answers for the second question used an average of data taken from Trading Economics (2021) and CEIC (2020).

### Question A9

The answers were sourced from relevant Mercer consultants except China.

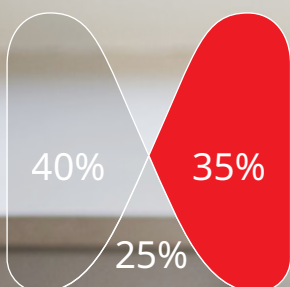
World Bank (2012) for China.

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

The answers were sourced from relevant Mercer consultants.

# 07/ 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 systems with the highest values for the sustainability sub-index are Iceland (84.6) and Denmark (83.5) with the lowest values being for Italy (21.3) and Austria (23.5). While 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 contributions rise and the level of pension assets increase over time. Individuals may participate in an occupational-based pension plan or voluntarily contribute to a pension plan, possibly encouraged by government policies.

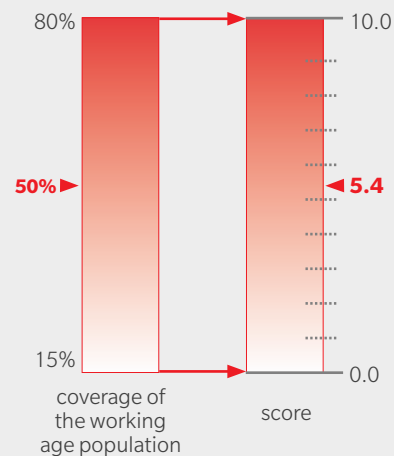
However, it is also important that this pension coverage goes beyond full-time workers and those in standard or traditional employment arrangements. As the OECD notes: "The sustainability and adequacy of pension systems includes making sure that workers in non-standard forms of work have the opportunity to save for retirement."<sup>22</sup> This development has become even more important given the changes to work patterns arising from the impact of the pandemic.

### Calculation

The rates of coverage ranged from nil in Argentina and about six per cent in India to more than 80 per cent of the working age population in Chile, Denmark, Finland, France, Iceland, the Netherlands, New Zealand, Sweden and Taiwan. Each system's score is related to its coverage, with a maximum score for 80 per cent or above and a zero score relating to coverage of 15 per cent 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 per cent of GDP and the arrangements are available to most of the workforce.

## Calculating S1 — Coverage



### Commentary

Only 16 of the 43 systems have coverage rates over 64 per cent 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 and regions.

### 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 per cent in the sustainability sub-index.

<sup>22</sup> OECD (2020a), p9.



## 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.

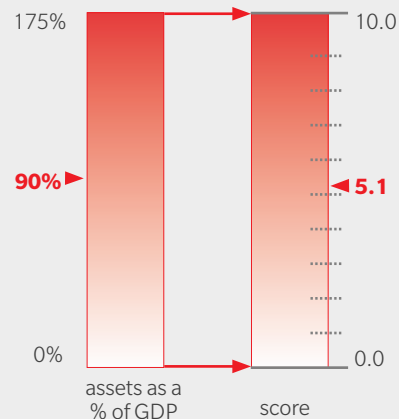
### Calculation

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 per cent of GDP for Austria, China, India, Indonesia, Thailand, Turkey and the UAE to more than 175 per cent for Canada, Denmark, Iceland and the Netherlands. A maximum score was achieved for 175 per cent of GDP and a minimum score for zero per cent.

## 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 systems 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.

It is also noted that benefit payments were higher than expected during 2020 in some systems as individuals took advantage of opportunities to withdraw some of their savings during the COVID-19 pandemic. Inevitably, this reduced the level of pension assets remaining in the system where such action was permitted.

### 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 per cent in the sustainability sub-index.



## Question S3

- What is the current life expectancy at the state pension age?
- What is the projected life expectancy at the expected state pension age in 2050? (This calculation allows for mortality improvement.)
- What is the projected old-age dependency ratio in 2050?
- 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 and prior 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 by increasing this age.

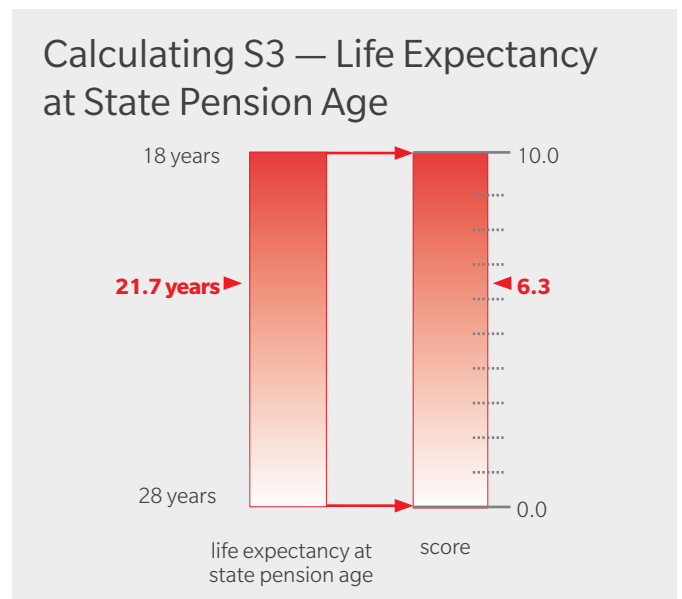
In the second question, we project this life expectancy indicator to 2050 to highlight the fact that many governments have already taken action and increased the state pension age, thereby reducing the forthcoming pension burden. However it is also clear that some governments have not yet tackled this difficult issue. 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

- Life expectancy at the existing state pension age ranges from 16.7 in South Africa to 24.6 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.
- 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.



- 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 per cent in South Africa to 73 per cent in Korea and 74 per cent in Japan. A maximum score is achieved with a projected dependency ratio of 20 per cent or lower and a zero score with a ratio of 70 per cent or higher.
- The TFR ranges from 1.11 in Korea 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 systems have current life expectancies at the state pension age of less than 27 years, although China, France and Taiwan are expected to exceed this figure by 2050.

A TFR of less than 1.5 in Hong Kong SAR, Italy, Japan, Korea, Poland, Singapore, Spain, Taiwan and the UAE raises serious issues for their future age structures. While 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 per cent in the sustainability sub-index with a five per cent weighting for each question.

## Question S4

What is the level of mandatory contributions set aside for future benefits (ie funded) expressed as a percentage of the annual wage for a full time median income earner? These include mandatory employer and/or employee contributions towards funded public benefits (i.e. social security) and/or private retirement benefits.<sup>23</sup>

### 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. Regulations set a minimum contribution rate in systems with mandatory contribution or an auto-enrolment arrangement.

### 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, Iceland, 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, Japan, 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 per cent of the contributions are invested.

For India and Indonesia, we have used 50 per cent 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.

<sup>23</sup> 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 per cent of the mandatory contributions required to fund termination indemnity benefits are invested. For Finland, we have assumed that 20 per cent of the mandatory contributions paid by employers and employees are invested with the remainder used to fund pensions in payment.

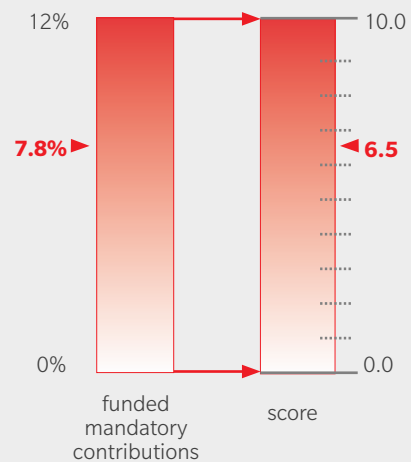
In line with OECD data, we have assumed that 35 per cent of all contributions to Singapore's Central Provident Fund are invested which gives them the maximum score. For Malaysia, we have assumed that 70 per cent of all contributions to the Employee Provident Fund are invested for retirement which also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

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

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. Korea and the USA are examples of this approach. In these cases, we have assumed that 50 per cent and 20 per cent 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 per cent in several systems to 12 per cent or more in Denmark, Iceland, Israel, Malaysia, the Netherlands, the Philippines, Saudi Arabia, Singapore and the UAE. In view of this range and likely developments in some systems, a maximum score is achieved with a contribution level of 12 per cent 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 per cent 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

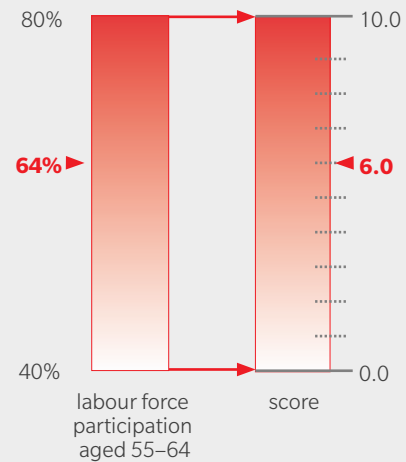
Higher labour force participation at older ages means that individuals are retiring later thereby reducing both the number of years in retirement and the level of retirement benefits needed, as well as accumulating greater savings for retirement during the working years. As noted in an IMF Staff Discussion Note: “Financial sector and labor market policies should be considered as part of a pension reform package. ... Labor market policies should be geared towards encouraging participation by older workers”.<sup>24</sup>

### Calculation

For those aged 55 to 64, the percentages range from 33.5 per cent in Turkey to 82.2 per cent in Iceland and 82.4 per cent in Sweden. A maximum feasible score is considered to be 80 per cent for this age bracket. Hence a participation rate of 80 per cent or more scores maximum results while a participation rate of 40 per cent or less scores zero.

For those aged 65 and over, the percentages range from 2.9 per cent in Spain to 44.3 per cent in Indonesia. A maximum feasible score is considered to be 30 per cent or more. Hence a participation rate of 30 per cent or more scores maximum results while 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 economies 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 per cent in the sustainability sub-index, split into eight per cent for the first question and two per cent for the second question.

<sup>24</sup> Amaglobeli et al (2019), The Future of Saving: The Role of Pension System Design in an Aging World, p5.

## 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<sup>25</sup>), 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

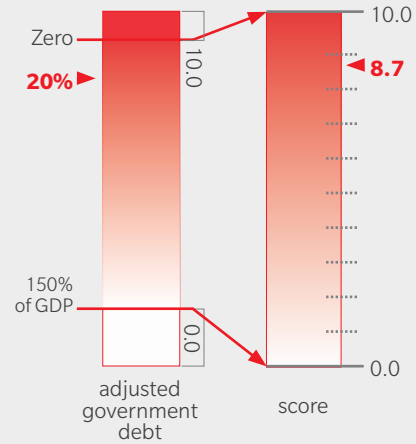
As social security payments represent an important source of income in most retirement income systems, the ability of future governments to pay these pensions and other benefits represents a critical factor in the sustainability of current systems. Due to the fiscal support measures adopted by many governments during the COVID-19 pandemic, the levels of debt have increased significantly during the last 12 months. As the OECD (2020a) noted: “the newly accumulated debt will add pressure on pension finances, already strained by demographic changes.”<sup>26</sup>

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

### Calculation

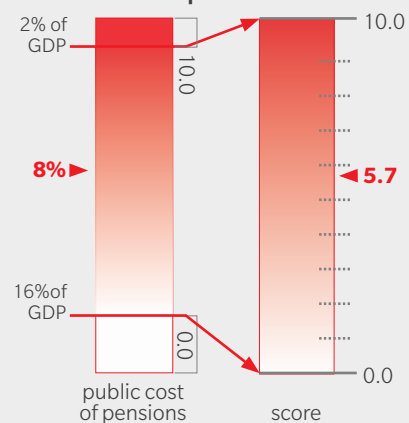
The level of the adjusted government debt ranges from less than zero for Norway and Singapore to 235 per cent of GDP in Japan. A maximum score was achieved for countries and regions with a zero or negative level of adjusted government debt (i.e. a surplus), with a zero score for countries and regions with an adjusted government debt of 150 per cent of GDP or higher.

### Calculating S6a — Adjusted Government Debt



The size of government pension payments varies considerably between different systems. For example, the public expenditure on pensions within the OECD in 2015-16 varied from 1.8 per cent in Mexico to 15.6 per cent in Italy in 2015-16. The projected 2050 figures range from 3.0 per cent in Mexico to 17.3 per cent in Italy.<sup>27</sup> A maximum score was achieved for systems with public pension costs of 2 per cent of GDP or less (recognising that some costs are desirable to alleviate poverty), with a zero score for systems with costs of 16 per cent of GDP or higher.

### Calculating S6b — Public cost of pensions



<sup>25</sup> 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.

<sup>26</sup> OECD (2020a), p11.

<sup>27</sup> OECD (2019a), Table 8.5.



## 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 and regions 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 per cent in the sustainability sub-index with a five per cent 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 while 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 while 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 while also accessing an income stream from their accumulated benefits, continuing to contribute and accruing benefits.

## Weighting

This item has a weighting of five per cent in the sustainability sub-index as it is not considered as critical as the previous indicators. The total weighting was split into four per cent for the first question and one per cent 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 per cent in Argentina to 5.7 per cent in Ireland and 5.9 per cent in China. A maximum feasible score over the long term is considered to be 5 per cent per annum. Therefore, real growth of 5 per cent or more scores the maximum while a rate of minus 1 per cent 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 eight per cent 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?

If not a requirement, is it encouraged by the relevant pension regulator?

### Objective

It is critical that private pension plans provide sustainable investment returns over many decades. Hence, there has been growing awareness in many countries and regions 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" to the first question, 1 if it is to some extent (including encouragement from the regulator) and 0 for "no", which includes no action from the regulator.

### Commentary

In eight of the 43 systems, it is a requirement for trustees or fiduciaries to consider ESG factors when developing their investment strategy.

In a further sixteen systems, there is no requirement but the regulator has encouraged this direction through public announcements or direct communication.

### Weighting

This indicator has been given a 2 per cent 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, Sweden, Taiwan and the UAE.

OECD (2011), p173 for South Africa.

OECD (2014), p69 for Argentina, Peru and Uruguay.

OECD (2018a), p13 for China, Hong Kong SAR, India, Indonesia, Malaysia, the Philippines, Singapore and 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, Singapore, Taiwan and the UAE.

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 per cent of GDP.

OECD (2020b) in relation to all retirement vehicles as per cent of GDP for all systems.

### 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 (2021), for all other systems.

### Question S6

*Government debt as percentage of GDP*

International Monetary Fund (2021).

Sovereign Wealth Fund Institute: [www.swfinstitute.org](http://www.swfinstitute.org)

*Public expenditure on pensions*

Mercer calculations for Taiwan and the UAE.

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

OECD (2019a), p203 for all other systems.

### Question S8

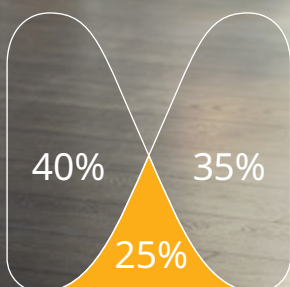
International Monetary Fund (2021).

### Questions S4, S7 and S9

Answers were sourced from relevant Mercer consultants.

# 08/ 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 systems with the highest values for the integrity sub-index are Finland (93.1) and the Netherlands (87.9) with the lowest values being for the Philippines (35.0) and Argentina (43.0). 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.

Thirty two of the 43 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 per cent weighting and the second question was given a 5 per cent weighting, giving a total weighting of 7.5 per cent 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 on a scale of 1 to 5?

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

**Table 7: 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 Table 7. 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 per cent weighting, with the second question being given a 2 per cent weighting, resulting in a total weighting of 10 per cent 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?

### 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.

Finland, Malaysia, Norway, Peru, Saudi Arabia, Singapore, Taiwan and the UAE received the maximum score of 10.0 for these questions while nine 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 per cent weighting, with the third question given a 2.5 per cent weighting and the fourth question given a 2 per cent weighting, resulting in a total of 12.5 per cent 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.

Twenty seven of the 43 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 per cent weighting in the integrity sub-index, resulting in a total of 5 per cent 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 0.31 for Turkey to 13.68 for New Zealand out of a maximum score of 15.

### Weighting

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

## Commentary on the total regulation and governance results

The scores ranged from 16.0 for the Philippines and 16.1 in Mexico to 47.7 in Finland and 47.8 for Norway out of a maximum of 50. Low scores for some systems are indicative of the fact that the relevant regulators have minimal requirements when compared to the more developed pension systems.

## 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, Iceland, Ireland, Israel, Korea, the Netherlands, Norway, Poland, South Africa and Taiwan 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 per cent 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 per cent of the plan's assets. A maximum score was given where in-house assets are restricted to 5 per cent. 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 per cent 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

While these issues are very important where such incidents occur, experience in most systems 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 per cent in the integrity sub-index, resulting in a total of 5 per cent 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 Iceland, India (for some DB plans), the Philippines and Thailand, require information to be provided directly to members when they join the plan.

### Weighting

The weighting for this question is 5 per cent 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 43 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 per cent weighting in the integrity sub-index, with the same weighting given to the two questions relating to assets resulting in a total of 5 per cent.

## 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?

Is this annual statement to individual members required to show any costs or fees charged to the member's account?

### 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, while the second question considers whether this requirement includes any projections about the member's future retirement benefit. The third question relates to any requirement concerning the disclosure of costs.

### Commentary

The majority of systems have a requirement concerning annual personal statements with Austria, Belgium, Chile, Finland, Germany, Iceland, 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.

Full disclosure of fees charged is required to be shown in annual personal statements in Australia, Austria, Brazil, Chile, Germany, Hong Kong SAR, India, Indonesia, Ireland, Israel, Italy, New Zealand, Norway, South Africa, Spain, Sweden, Turkey, the UK and Uruguay.

### Weighting

The first question was given a 4 per cent weighting in the integrity sub-index while the second and third questions were given a 2 per cent and 1.5 per cent weighting respectively. This resulted in a total of 7.5 per cent for these three 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 six 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

While 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 per cent weighting in the integrity sub-index.

### Commentary on the total protection and communication results

The scores ranged from 10.0 for the Philippines to 38.0 for Finland and 38.3 for Belgium 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.”<sup>28</sup>

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 per cent of all assets rising to a maximum score of 5 when these assets represented more than 75 per cent of all assets.

### Weighting

Each question was given a 5 per cent weighting in the integrity sub-index, resulting in a total of 10 per cent 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 Malaysia, Singapore and the UAE. The maximum scores for these three systems is not surprising as each system 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 while 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 (2020).

<sup>28</sup> Hinz R, Rudolph H P, Antolin P and Yermo J (2010), p259.

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## Attachment 1: Score for each system 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	Iceland	India	Indonesia	Ireland	Israel	
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	5.3	3.8	10.0	0.0	0.0	7.5	7.5
A2	What is the net pension replacement rate for a range of income earners?	25.0%	10.0	5.6	10.0	9.8	10.0	6.6	4.0	9.2	7.2	10.0	8.7	10.0	8.1	5.2	7.7	1.0	1.9	7.0	6.0
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?	10.0%	7.1	3.5	5.9	2.3	5.9	3.5	6.1	6.7	5.4	1.8	3.8	6.7	6.3	3.7	6.2	6.9	8.3	7.3	7.3
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%	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	10.0	7.0	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%	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	10.0	0.0	6.7	6.7	6.7
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?	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	2.0	7.5	2.5	6.7	10.0	7.5
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	8.0	10.0	9.0	9.0	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	5.0	0.0	7.5	10.0
A9	What is the level of home ownership in the country?	5.0%	5.8	6.5	5.0	7.3	6.6	6.7	6.9	10.0	3.7	5.5	6.1	5.4	3.9	4.4	7.3	9.5	8.6	6.8	6.6
A10	What is the proportion of total pension assets invested in growth assets?	5.0%	8.2	10.0	8.4	7.5	5.8	10.0	9.3	5.3	8.3	10.0	10.0	5.8	9.5	10.0	10.0	3.6	5.3	10.0	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 pension contributions, credits or future pension benefits for parents who are caring for young children while the parent is not in the paid workforce? These benefits could be in respect of the public pension or a private sector pension.	2.0%	0.0	2.5	10.0	0.0	0.0	10.0	5.0	5.0	5.0	10.0	10.0	3.8	10.0	0.0	5.0	5.0	5.0	5.0	5.0
Adequacy sub-index		40%	52.7	67.4	65.3	74.9	71.2	69.0	57.6	62.6	62.0	81.1	71.4	79.1	79.3	55.1	82.7	33.5	44.7	78.0	73.6

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

Attachment 1: Score for each system for each indicator in the adequacy sub-index - *Continued*

Question	Question weight	Score for each system																			
		Italy	Japan	Korea	Malaysia	Mexico	Netherlands	New Zealand	Norway	Peru	Philippines	Poland	Saudi Arabia	Singapore	South Africa	Spain	Sweden	Switzerland	Taiwan	Thailand	
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%	4.8	4.7	2.0	0.0	1.1	9.6	10.0	9.6	0.1	0.0	3.3	0.0	4.5	3.0	4.6	5.9	5.9	0.0	0.0
A2	What is the net pension replacement rate for a range of income earners?	25.0%	10.0	5.3	3.6	7.4	6.4	10.0	6.0	8.6	7.4	10.0	2.5	10.0	6.8	0.0	10.0	8.2	7.1	0.6	3.7
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?	10.0%	6.0	5.4	3.8	2.9	6.2	3.8	2.9	3.1	7.1	6.0	5.6	9.4	7.4	4.4	5.1	4.4	3.4	6.4	3.1
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%	7.0	10.0	10.0	10.0	7.0	10.0	0.0	8.0	10.0	1.5	10.0	5.0	10.0	10.0	10.0	2.0	10.0	5.5	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	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	10.0	6.7
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?	10.0%	6.7	0.0	2.0	0.0	0.0	7.5	0.0	7.5	7.5	0.0	10.0	7.5	10.0	10.0	0.0	7.5	1.5	0.0	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%	10.0	7.0	8.0	10.0	5.0	10.0	10.0	10.0	9.0	0.0	10.0	4.0	10.0	10.0	10.0	10.0	10.0	10.0	6.0
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	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	10.0	0.0
A9	What is the level of home ownership in the country?	5.0%	7.4	5.9	5.4	7.6	5.6	7.1	4.5	8.1	8.0	6.4	7.0	4.6	9.7	6.4	8.0	6.4	2.3	9.2	7.5
A10	What is the proportion of total pension assets invested in growth assets?	5.0%	8.6	10.0	7.5	10.0	8.0	10.0	10.0	9.3	10.0	7.0	8.3	10.0	7.5	10.0	9.5	9.7	10.0	10.0	7.2
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 pension contributions, credits or future pension benefits for parents who are caring for young children while the parent is not in the paid workforce? These benefits could be in respect of the public pension or a private sector pension.	2.0%	0.0	0.0	5.0	0.0	5.0	1.3	2.5	10.0	0.0	2.5	0.0	0.0	2.5	5.0	10.0	5.0	7.5	0.0	5.0
Adequacy sub-index		40%	68.2	52.9	43.4	50.6	47.3	82.3	61.8	81.2	58.8	38.9	60.9	61.7	73.5	44.3	72.9	67.8	65.4	40.8	35.2

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

Attachment 1: Score for each system for each indicator in the adequacy sub-index - *Continued*

Question	Question weight	Score for each system				
		Turkey	UAE	UK	Uruguay	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%	3.8	7.1	6.4	1.4	3.8
A2 What is the net pension replacement rate for a range of income earners?	25.0%	10.0	6.8	8.8	9.3	8.5
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?	10.0%	6.3	3.8	4.8	8.6	6.6
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%	6.0	6.0	10.0	5.5	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%	0.0	0.0	6.7	10.0	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 exist, or favourable conversion rates, to encourage the taking up of income streams?	10.0%	0.0	7.5	3.5	0.0	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%	2.0	9.0	10.0	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%	0.0	0.0	10.0	0.0	10.0
A9 What is the level of home ownership in the country?	5.0%	5.5	7.1	6.4	5.0	6.5
A10 What is the proportion of total pension assets invested in growth assets?	5.0%	5.0	10.0	10.0	6.3	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 pension contributions, credits or future pension benefits for parents who are caring for young children while the parent is not in the paid workforce? These benefits could be in respect of the public pension or a private sector pension.	2.0%	0.0	2.5	10.0	10.0	0.0
<b>Adequacy sub-index</b>	<b>40%</b>	<b>47.7</b>	<b>59.7</b>	<b>73.9</b>	<b>62.1</b>	<b>60.9</b>

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

## Attachment 2: Score for each system 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	Iceland	India	Indonesia	Ireland	Israel	
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	10.0	0.0	0.0	2.9	9.7
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	8.3	0.3	2.0	1.5	10.0	6.1	0.3	1.5	10.0	5.0	0.7	1.2	2.5	10.0	0.2	0.1	2.2	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 estimated Total Fertility Rate (TFR) for 2015-2020?	20.0%	7.6	6.1	4.3	5.7	6.2	5.0	4.6	3.5	4.6	7.0	5.1	3.6	5.6	2.6	6.4	8.5	8.0	6.5	7.4
S4	What is the level of mandatory contributions set aside for future benefits (ie funded) expressed as a percentage of the annual wage for a full time median income earner?	10.0%	0.0	8.3	0.0	0.0	0.0	6.8	9.6	4.0	9.4	10.0	3.7	0.0	0.0	8.3	10.0	3.5	3.6	0.0	10.0
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%	6.0	6.4	3.7	3.3	2.3	6.1	5.0	5.3	5.6	7.5	7.0	3.6	7.3	4.5	10.0	3.1	8.0	5.7	7.5
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? 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?	10.0%	4.5	7.8	3.3	2.7	3.2	5.6	8.2	6.7	7.7	6.4	4.0	2.3	4.8	9.0	7.2	7.5	9.0	6.6	6.7
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	8.0	4.0	10.0	10.0	9.0	8.0	10.0	10.0	5.0	0.0	6.0	10.0
S8	What is the real economic growth rate averaged over seven years (namely the last four years and projected for the next three years)?	8.0%	1.3	5.1	3.9	3.6	3.8	5.0	4.7	10.0	4.8	4.5	3.9	3.8	3.6	4.1	5.1	10.0	8.6	10.0	6.7
S9	Is it a requirement for the trustees/ fiduciaries to consider Environmental, Social and Governance (ESG) issues in developing their investment policies or strategies? If not a requirement, is it encouraged by the relevant pension regulator? If yes, please explain.	2.0%	0.0	5.0	5.0	10.0	5.0	2.5	5.0	2.5	0.0	10.0	5.0	0.0	5.0	2.5	2.5	0.0	0.0	10.0	10.0
Sustainability sub-index		35.0%	27.7	75.7	23.5	36.3	24.1	65.7	68.8	43.5	46.2	83.5	61.5	41.8	45.4	51.1	84.6	41.8	43.6	47.4	76.1

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

Attachment 2: Score for each system for each indicator in the sustainability sub-index - *Continued*

Question	Question weight	Score for each system																			
		Italy	Japan	Korea	Malaysia	Mexico	Netherlands	New Zealand	Norway	Peru	Philippines	Poland	Saudi Arabia	Singapore	South Africa	Spain	Sweden	Switzerland	Taiwan	Thailand	
S1	What proportion of the working age population are members of private pension plans?	20.0%	0.9	6.0	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	10.0	2.1
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	3.6	3.5	3.5	0.9	10.0	2.5	4.3	1.3	0.6	0.6	1.1	4.1	5.4	0.8	7.4	8.2	1.4	0.4
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 estimated Total Fertility Rate (TFR) for 2015-2020?	20.0%	4.4	2.1	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	6.1	4.2	1.4	3.5
S4	What is the level of mandatory contributions set aside for future benefits (ie funded) expressed as a percentage of the annual wage for a full time median income earner?	10.0%	1.5	0.0	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	8.3	5.0	5.8
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%	3.8	9.4	8.0	3.1	3.8	7.2	9.5	7.6	4.2	6.8	3.0	1.1	7.9	0.8	4.7	9.3	8.0	1.9	7.0
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? 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?	10.0%	0.5	2.2	8.0	7.7	8.1	6.4	7.5	6.7	8.8	8.7	5.2	7.8	10.0	7.7	2.9	6.9	5.7	8.9	7.0
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	4.0	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	10.0	8.0
S8	What is the real economic growth rate averaged over seven years (namely the last four years and projected for the next three years)?	8.0%	2.5	2.8	5.5	8.2	3.1	4.4	5.5	5.1	5.4	8.7	7.4	3.5	5.3	2.1	4.1	4.4	4.2	7.0	5.6
S9	Is it a requirement for the trustees/ fiduciaries to consider Environmental, Social and Governance (ESG) issues in developing their investment policies or strategies? If not a requirement, is it encouraged by the relevant pension regulator? If yes, please explain.	2.0%	10.0	0.0	0.0	5.0	2.5	10.0	0.0	2.5	0.0	2.5	0.0	0.0	0.0	10.0	5.0	0.0	0.0	2.5	0.0
Sustainability sub-index		35.0%	21.3	37.5	52.7	57.5	54.7	81.6	62.5	57.4	44.2	52.5	41.3	50.9	59.8	46.5	28.1	73.7	67.2	51.9	40.0

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



Attachment 2: Score for each system for each indicator in the sustainability sub-index - *Continued*

Question	Question weight	Score for each system				
		Turkey	UAE	UK	Uruguay	USA
S1 What proportion of the working age population are members of private pension plans?	20.0%	0.0	5.8	4.8	8.6	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%	0.2	0.5	6.2	1.6	9.4
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 estimated Total Fertility Rate (TFR) for 2015-2020?	20.0%	7.0	4.6	6.6	5.2	6.8
S4 What is the level of mandatory contributions set aside for future benefits (ie funded) expressed as a percentage of the annual wage for a full time median income earner?	10.0%	0.0	8.4	6.7	6.3	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%	0.7	8.3	6.4	5.2	6.2
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? 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?	10.0%	7.3	9.1	5.0	5.4	5.2
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	0.0	10.0	0.0	6.0
S8 What is the real economic growth rate averaged over seven years (namely the last four years and projected for the next three years)?	8.0%	7.9	3.5	3.3	3.0	5.3
S9 Is it a requirement for the trustees/ fiduciaries to consider Environmental, Social and Governance (ESG) issues in developing their investment policies or strategies? If not a requirement, is it encouraged by the relevant pension regulator? If yes, please explain.	2.0%	0.0	0.0	10.0	0.0	0.0
<b>Sustainability sub-index</b>	<b>35.0%</b>	<b>28.6</b>	<b>50.2</b>	<b>59.8</b>	<b>49.2</b>	<b>63.6</b>

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

**Attachment 3: Score for each system 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	Iceland
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	3.3	10.0	10.0	10.0	6.7	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 discharge its supervisory responsibilities on a scale of 1 to 5?	10.0%	0.8	10.0	4.2	9.2	9.2	8.7	10.0	9.2	9.2	10.0	9.2	8.2	9.0	10.0	10.0
	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?	12.5%	8.4	8.4	9.2	8.4	8.2	8.4	8.4	7.4	9.0	7.4	10.0	5.2	8.4	8.4	8.4
	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	10.0
	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%	1.6	8.3	7.8	6.7	1.3	8.3	5.8	0.5	1.4	8.7	9.0	6.7	7.8	6.6	8.2
	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	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	7.5
Protection and communication for members (P1 - P7)	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
	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	10.0	10.0	10.0	10.0	10.0	10.0	10.0	0.0
	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	8.0	10.0	0.0	9.0	0.0	7.0	9.0	10.0
	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? Is this annual statement to individual members required to show any costs or fees charged to their account?	7.5%	2.7	7.3	10.0	9.0	8.7	5.3	10.0	5.3	5.3	5.3	8.0	2.7	10.0	7.3	8.0
	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	10.0
	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%	8.6	5.9	6.9	6.9	5.6	5.0	5.9	7.1	5.7	8.8	7.4	4.1	5.4	8.5
Integrity sub-index		25.0%	43.0	86.3	74.5	87.4	71.2	76.7	79.3	59.4	69.8	81.4	93.1	56.8	81.2	87.7	86.0

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

Attachment 3: Score for each system for each indicator in the Integrity sub-index

Question		Question weight	Score for each system														
			India	Indonesia	Ireland	Israel	Italy	Japan	Korea	Malaysia	Mexico	Netherlands	New Zealand	Norway	Peru	Philippines	Poland
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	10.0	10.0	10.0	10.0	6.7	8.3	10.0	1.7	10.0	10.0	10.0	8.3	6.7	6.7
	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 on a scale of 1 to 5?	10.0%	8.2	9.2	9.0	10.0	9.2	8.4	3.6	7.2	7.6	9.2	9.2	9.2	3.2	0.8	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? Are the private pension plan's trustees/executives/fiduciaries required to have one or more independent members included in the governing body?	12.5%	3.2	7.4	7.8	8.4	9.2	4.0	0.0	10.0	4.2	9.2	4.8	10.0	10.0	3.2	7.2
	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%	5.0	10.0	8.8	10.0	10.0	7.5	2.5	10.0	2.5	10.0	10.0	10.0	10.0	10.0	7.5
	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%	1.6	1.3	7.4	4.9	4.2	7.3	5.8	3.7	0.5	8.6	9.1	9.1	1.8	0.8	4.6
	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	7.0	10.0	10.0	9.0	9.0	10.0	5.0	6.0	10.0	8.0	10.0	5.0	5.0	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%	8.8	0.0	10.0	10.0	0.0	0.0	10.0	10.0	7.5	10.0	10.0	10.0	8.8	0.0	7.5
Protection and communication for members (P1 - P7)	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	5.0	0.0	5.0	5.0	2.5	0.0	10.0	0.0	2.5	5.0	5.0	5.0	5.0	2.5
	When joining the pension plan, are new members required to receive information about the pension plan?	5.0%	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	0.0	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%	8.0	8.0	10.0	8.0	8.0	8.8	0.0	10.0	0.0	8.0	10.0	5.3	10.0	0.0	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? Is this annual statement to individual members required to show any costs or fees charged to their account?	7.5%	6.0	7.3	10.0	10.0	10.0	2.7	2.7	5.3	5.3	9.0	10.0	10.0	5.3	0.0	6.3
	Do plan members have access to a complaints tribunal which is independent from the pension plan?	2.5%	5.0	10.0	10.0	10.0	5.0	0.0	0.0	0.0	0.0	10.0	10.0	10.0	10.0	10.0	5.0
	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%	9.8	9.7	5.5	7.0	6.1	7.2	8.2	10.0	9.0	7.3	6.3	7.3	6.0	9.0
Integrity sub-index		25.0%	61.0	69.2	82.1	83.9	74.9	61.9	50.0	76.8	43.8	87.9	83.2	90.2	64.1	35.0	65.6

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

**Attachment 3: Score for each system for each indicator in the Integrity sub-index**

Question		Question weight	Score for each system													
			Saudi Arabia	Singapore	South Africa	Spain	Sweden	Switzerland	Taiwan	Thailand	Turkey	UAE	UK	Uruguay	USA	
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	10.0	10.0	10.0	8.3	10.0	10.0	10.0	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 discharge its supervisory responsibilities on a scale of 1 to 5?	10.0%	6.2	8.2	9.2	10.0	9.2	8.4	3.2	8.4	10.0	7.2	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? Are the private pension plan's trustees/executives/fiduciaries required to have one or more independent members included in the governing body?	12.5%	10.0	10.0	9.2	8.4	7.2	6.0	10.0	0.8	6.4	10.0	9.2	8.4	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	7.5	10.0	10.0	7.5	7.5	10.0	10.0	10.0	10.0	7.5	10.0	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%	1.1	8.5	2.7	5.4	8.9	8.9	6.5	1.2	0.2	4.6	7.5	5.6	6.5	
	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%	6.0	5.0	10.0	9.0	8.0	9.0	10.0	5.0	5.0	6.0	9.0	5.0	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	8.8	10.0	10.0	10.0	0.0	0.0	10.0	10.0	10.0	7.5	5.0	
Protection and communication for members (P1 - P7)	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%	5.0	7.5	5.0	0.0	5.0	7.5	5.0	5.0	5.0	10.0	10.0	2.5	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	10.0	2.5	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%	3.3	8.0	8.0	7.0	3.8	8.0	8.0	5.0	8.0	0.0	4.5	9.0	8.0	
	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? Is this annual statement to individual members required to show any costs or fees charged to their account?	7.5%	0.0	5.3	7.3	7.3	10.0	8.0	0.0	5.3	7.3	0.0	7.3	7.3	6.7	
	Do plan members have access to a complaints tribunal which is independent from the pension plan?	2.5%	0.0	5.0	10.0	10.0	0.0	10.0	0.0	10.0	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%	9.5	10.0	7.4	6.7	8.6	5.5	9.9	8.6	6.4	10.0	6.2	5.5	3.5	
<b>Integrity sub-index</b>			<b>25.0%</b>	<b>62.5</b>	<b>81.5</b>	<b>78.5</b>	<b>78.3</b>	<b>80.0</b>	<b>81.3</b>	<b>69.3</b>	<b>50.0</b>	<b>66.7</b>	<b>72.6</b>	<b>84.4</b>	<b>74.4</b>	<b>59.2</b>

Each question is scored for each system 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	2021	2021
Argentina	na	na	na	na	na	na	na	37.7	38.8	39.2	39.5	42.5	41.5
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	75.0
Austria	na	na	na	na	na	52.8	52.2	51.7	53.1	54.0	53.9	52.1	53.0
Belgium	na	na	na	na	na	na	na	na	na	na	na	63.4	64.5
Brazil	na	59.8	58.4	56.7	52.8	52.4	53.2	55.1	54.8	56.5	55.9	54.5	54.7
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	69.8
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	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	55.1
Colombia	na	na	na	na	na	na	na	na	61.7	62.6	58.4	58.5	58.4
Denmark	na	na	na	82.9	80.2	82.4	81.7	80.5	78.9	80.2	80.3	81.4	82.0
Finland	na	na	na	na	na	74.3	73.0	72.9	72.3	74.5	73.6	72.9	73.3
France	na	54.6	54.4	54.7	53.5	57.7	57.4	56.4	59.6	60.7	60.2	60.0	60.5
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	67.9
Hong Kong SAR	na	na	na	na	na	na	na	na	na	56.0	61.9	61.1	61.8
Iceland	na	na	na	na	na	na	na	na	na	na	na	na	84.2
India	na	na	43.4	42.4	43.3	43.5	40.3	43.4	44.9	44.6	45.8	45.7	43.3
Indonesia	na	na	na	na	42.0	45.3	48.2	48.3	49.9	53.1	52.2	51.4	50.4
Ireland	na	na	na	na	na	62.2	63.1	62.0	65.8	66.8	67.3	65.0	68.3
Israel	na	na	na	na	na	na	na	na	na	na	na	74.7	77.1
Italy	na	na	na	na	na	49.6	50.9	49.5	50.8	52.8	52.2	51.9	53.4
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	49.8
Korea	na	na	na	44.7	43.8	43.6	43.8	46.0	47.1	47.3	49.8	50.5	48.3
Malaysia	na	na	na	na	na	na	na	55.7	57.7	58.5	60.6	60.1	59.6
Mexico	na	na	na	na	50.1	49.4	52.1	44.3	45.1	45.3	45.3	44.7	49.0
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	83.5
New Zealand	na	na	na	na	na	na	na	na	67.9	68.5	70.1	68.3	67.4
Norway	na	na	na	na	na	na	na	na	74.7	71.5	71.2	71.2	75.2
Peru	na	na	na	na	na	na	na	na	na	62.4	58.5	57.2	55.0
Philippines	na	na	na	na	na	na	na	na	na	na	43.7	43.0	42.7
Poland	na	na	58.6	58.2	57.9	56.4	56.2	54.4	55.1	54.3	57.4	54.7	55.2
Saudi Arabia	na	na	na	na	na	na	na	na	na	58.9	57.1	57.5	58.1
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	70.7
South Africa	na	na	na	na	na	54.0	53.4	48.6	48.9	52.7	52.6	53.2	53.6
Spain	na	na	na	na	na	na	na	na	na	54.4	54.7	57.7	58.6
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	72.9
Switzerland	na	75.3	72.7	73.3	73.9	73.9	74.2	68.6	67.6	67.6	66.7	67.0	70.0
Taiwan	na	na	na	na	na	na	na	na	na	na	na	na	51.8
Thailand	na	na	na	na	na	na	na	na	na	na	39.4	40.8	40.6
Turkey	na	na	na	na	na	na	na	na	na	na	42.2	42.7	45.8
UAE	na	na	na	na	na	na	na	na	na	na	na	na	59.6
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	71.6
Uruguay	na	na	na	na	na	na	na	na	na	na	na	na	60.7
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	61.4
<b>Number of systems</b>	<b>11</b>	<b>14</b>	<b>16</b>	<b>18</b>	<b>20</b>	<b>25</b>	<b>25</b>	<b>27</b>	<b>30</b>	<b>34</b>	<b>37</b>	<b>39</b>	<b>43</b>

# Mercer CFA Institute Global Pension Index

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