AUSTRALIAN CENTRE FOR FINANCIAL STUDIES

MERCER

MELBOURNE MERCER GLOBAL PENSION INDEX

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MESSAGE FROM THE MINISTER

The Victorian Government is proud to support the Melbourne Mercer Global Pension Index, an outstanding example of government, industry and academia working together on research of global significance.

Now in its fifth year, the Index's global reach highlights to investment professionals and policy makers internationally Melbourne's significant role in pension fund investment. Since its inception in 2009 the Index has increased its research coverage from 11 countries to 20 countries in 2013, growing its role as a relevant and reliable source of information.

Home to the major Industry private pension funds, asset consultants and leading commercial funds, Melbourne is headquarters to eight of Australia's top 15 pension funds, as well as the A$85 billion Future Fund.

Over the past five years, Australia's managed funds sector has grown significantly from A$1.7 trillion to around A$2 trillion. Victoria's financial sector is now the largest contributor to Gross State Product and employs over 110,000 individuals.

This growth is reflected by an increasing number of international financial services firms establishing and expanding their operations in the State including Mercer (US), Amanie Advisors (Malaysia), ICBC (China), Bank of China (China), and Northern Trust (United States). Indeed Mercer's new office in Melbourne's Docklands is its third largest office globally, housing more than 1500 employees.

Victoria plays an important role in the development of leading edge financial services research through institutions such as the Australian Centre for Financial Studies and the recently launched CSIRO-Monash Superannuation Research Cluster.

I commend the Australian Centre for Financial Studies and Mercer on their excellent work in producing the 2013 Melbourne Mercer Global Pension Index.

THE HON LOUISE ASHER MP
Minister for Innovation, Services and Small Business
Minister for Employment and Trade
Minister for Tourism and Major Events

State Government Victoria AUSTRALIA

LETTER FROM ACFS

The Australian Centre for Financial Studies (ACFS) is delighted to partner with Mercer in the research which has resulted in the 2013 Melbourne Mercer Global Pension Index (the Index).

ACFS is a not-for-profit consortium of Monash University, RMIT University and Finsia (Financial Services Institute of Australasia), which was established in 2005 with seed funding from the Victorian Government.

ACFS specialises in leading edge finance and investment research, aiming to boost the global credentials of Australia's finance industry, bridge the gap between research and industry, and support Australia as an international centre for finance practice, research and education. ACFS draws on expertise from academia, industry and government to facilitate industry-relevant and rigorous research and consulting, thought leadership and independent commentary.

This is the fifth edition of the Index and the responses to prior editions have indicated its value to government, industry and academia in contributing to the debate on how we best provide for an ageing population. As part of its role in the project, ACFS has convened an expert reference group to assist in the development of the Index and ensure that it represents an independent and unbiased view. Many thanks to the members of the reference group:

- Syd Bone, Chair, Deputy Chair of Australian Centre for Financial Studies and CEO of CP2;
- Prof. Keith Ambachtsheer, Director, Rotman International Centre for Pension Management, Rotman School of Management, University of Toronto
- Assoc. Prof. Hazel Bateman, Director, Centre for Pensions and Superannuation, University of New South Wales
- Prof. Gordon Clark, Oxford University, and Sir Louis Matheson Visiting Professor, Faculty of Business and Economics, Monash University
- Prof. Kevin Davis, University of Melbourne and Research Director ACFS
- Dr Vince FitzGerald, Director, ACIL Allen Consulting
- Ian Silk, Chief Executive, AustralianSuper
- Prof. Susan Thorp, Faculty of Business, University of Technology, Sydney

Our thanks to author Dr David Knox and his team at Mercer, especially those in-country experts, who have assisted with the collection and interpretation of data. Thanks also to the Department of State Development, Business and Innovation in the Victorian Government for supporting this study.

The launch and dissemination of the Index this year has been assisted both in Australia and overseas by many bodies including the Association of Superannuation Funds of Australia and Conexus Financial. Our thanks go to them also.

Professor Deborah Ralston
Executive Director
Australian Centre for Financial Studies

PREFACE

Pension systems around the world, whether they be social security systems or private sector arrangements, are now under more pressure than ever before. Rising life expectancies, increased government debt in many countries, uncertain economic conditions and a global shift to defined contribution (DC) plans mean that we are moving to a new environment.

With increased community awareness and growing concern about the future of our retirement income systems it is important that we learn together to understand what best practice may look like, both now and in the years to come. This fifth edition of the Melbourne Mercer Global Pension Index presents such research and compares retirement income systems in 20 countries which encompass a diversity of pension policies and practices.

Many of the challenges relating to ageing populations are similar, irrespective of each country's social, political, historical or economic influences. Many of the desirable policy reforms to alleviate these challenges are also similar and relate to pension ages, the level of funding for retirement, encouraging people to work longer and some benefit design issues that can reduce leakage of benefits before retirement. It is pleasing to note that since our work began in 2009, the sustainability of several systems has improved in two key areas:

- Some governments have increased pension ages over the longer term.
- The labour force participation rate of 55-64 year olds in most countries has steadily increased.

Both these trends are important and need to be supported around the world.

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

Continuing our practice in recent editions, we have again included a special chapter on a contemporary topic. This year we consider post retirement solutions in a DC world – a topic that continues to create ongoing dialogue in many countries. We trust that this chapter will prompt further discussion and move us closer to providing the best outcomes for retirees.

The preparation of this international report requires input, hard work and cooperation from many individuals and groups. I would like to thank them all.

First, we are delighted that the Victorian Government continues to fund this project, on the basis that we add two new countries each year. This year, we have added Mexico and Indonesia.

Second, Professor Deborah Ralston and her team at the Australian Centre for Financial Studies have played a pivotal role in this project, particularly in establishing an expert reference group of senior and experienced individuals who provided helpful suggestions and comments throughout the project.

Third, the Mercer consultants around the world have been invaluable in providing information in respect of their countries' retirement income systems, checking our interpretation of the data, and providing insightful comments.

My hope is that you enjoy reading the report and that it provides new insights into the provision of financial security in retirement for our older citizens.

Dr David Knox
Senior Partner
Mercer

CHAPTER 1
EXECUTIVE SUMMARY

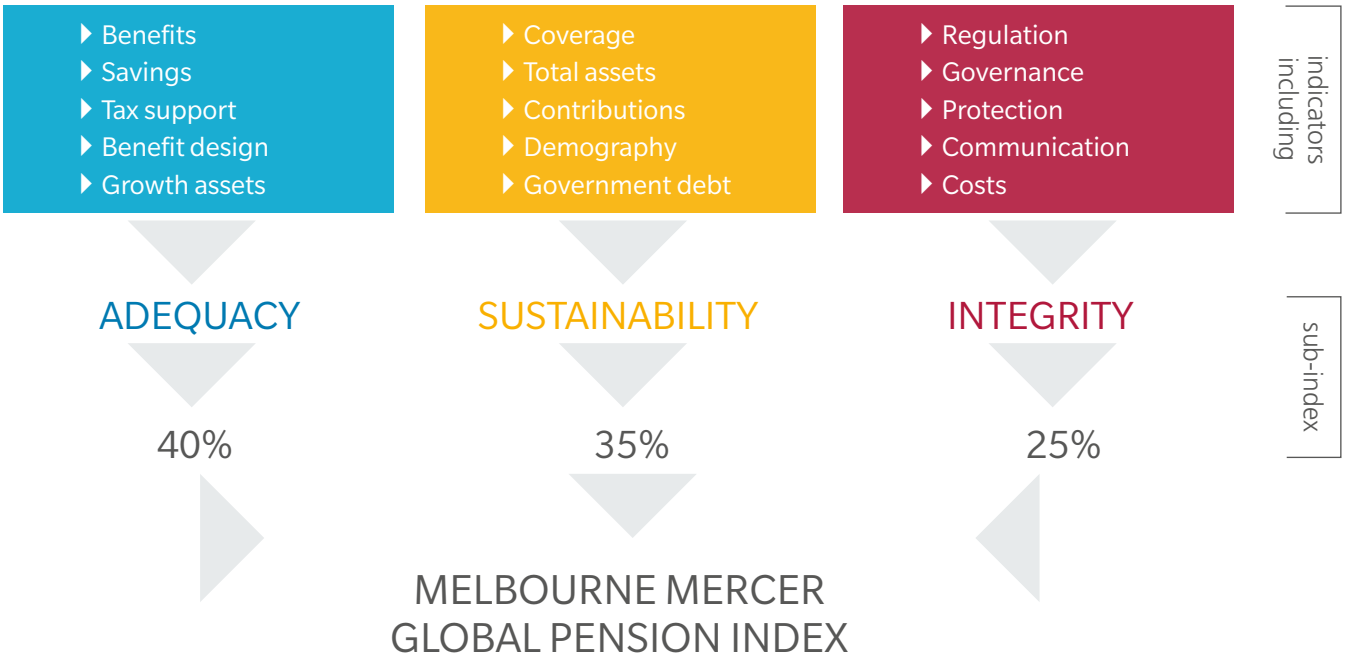
The provision of financial security in retirement is critical for both individuals and societies as most countries are now grappling with the social and economic effects of ageing populations. Yet, a comparison of the diverse retirement income systems around the world is not straightforward. As the OECD (2011) comments: "Retirement-income systems are diverse and often involve a number of different programmes. Classifying pension systems and different retirement-income schemes is consequentially difficult."[1]

1 OECD (2011), p106.

Furthermore, any comparison of systems is likely to be controversial as each system has evolved from that country's particular economic, social, cultural, political and historical circumstances. There is no perfect system that can be applied universally around the world. However there are certain features and characteristics of retirement income systems that are likely to lead to improved benefits for individuals and households, an increased likelihood of future sustainability of the system, and a greater level of confidence and trust within the community.

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

Calculating the Melbourne Mercer Global Pension Index



The overall index value for each country's system represents the weighted average of the three sub-indices. The weightings used are 40 percent for the adequacy sub-index, 35 percent for the sustainability sub-index and 25 percent for the integrity sub-index. The different weightings are used to reflect the primary importance of the adequacy sub-index which represents the benefits that are currently being provided together with some important benefit design features. The sustainability sub-index has a focus on the future and measures various indicators which will influence the likelihood that the current system will be able to provide these benefits into the future. The integrity sub-index considers several items that influence the overall governance and operations of the system which affects the level of confidence that the citizens of each country have in their system.

This study of retirement income systems in 20 countries has confirmed that there is great diversity between the systems around the world with scores ranging from 42.0 for Indonesia to 80.2 for Denmark.

The following table summarises the results.

Grade	Index Value	Countries	Description
A	>80	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	Netherlands 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	Switzerland Sweden Canada Singapore Chile UK	
C+	60–65	Nil	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	Germany USA Poland France Brazil Mexico	
D	35–50	China Japan Korea (South) India Indonesia	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 a non-existent system.

We believe that none of the countries in this study 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 exist major omissions or weaknesses. A D-grade classification may also occur in the relatively early stages of the development of a particular country's retirement income system, such as in China, India, Indonesia and Korea.

The following table shows the overall index value for each country, 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.

Country	Overall Index Grade	Sub-Index Grades		
		Adequacy	Sustainability	Integrity
Australia	77.8	75.6	73.0	88.1
Brazil	52.8	63.3	26.0	73.6
Canada	67.9	72.4	57.9	74.5
Chile	66.4	58.6	65.6	79.9
China	47.1	61.1	28.9	50.0
Denmark	80.2	75.2	86.1	80.0
France	53.5	71.7	31.7	55.1
Germany	58.5	69.7	36.8	71.1
India	43.3	41.2	40.8	50.3
Indonesia	42.0	29.8	37.7	67.3
Japan	44.4	47.9	28.9	60.5
Korea (South)	43.8	43.7	41.0	47.9
Mexico	50.1	51.9	50.8	46.0
Netherlands	78.3	76.6	74.1	87.0
Poland	57.9	64.4	42.6	68.9
Singapore	66.5	59.0	67.5	77.2
Sweden	72.6	65.2	74.5	81.5
Switzerland	73.9	72.6	69.0	82.9
UK	65.4	68.2	48.0	85.4
USA	58.2	56.6	57.8	61.2
Average	**60.0**	**61.2**	**51.9**	**69.4**

As noted earlier, each country's index value takes into account more than 40 indicators, some of which are based on data measurements which can be difficult to compare between countries. For this reason, one should not be too definite that one country's system is better than another when the difference in the overall index value is less than two. On the other hand, when the difference is five or more it can be fairly concluded that the higher value indicates a country with a better retirement income system.

The following table shows the grade for each country's sub-index values as well as the overall grade. This approach highlights the fact that some countries may have a weakness in one area (eg sustainability) whilst being much stronger in the other two areas. Such a weakness highlights the areas for future reforms.

Country	Overall Index	Sub-Index Grades		
		Adequacy	Sustainability	Integrity
Australia	B+	B+	B	A
Brazil	C	C+	E	B
Canada	B	B	C	B
Chile	B	C	B	B+
China	D	C+	E	C
Denmark	A	B+	A	A
France	C	B	E	C
Germany	C	B	D	B
India	D	D	D	C
Indonesia	D	E	D	B
Japan	D	D	E	C+
Korea (South)	D	D	D	D
Mexico	C	C	C	D
Netherlands	B+	B+	B	A
Poland	C	C+	D	B
Singapore	B	C	B	B+
Sweden	B	B	B	A
Switzerland	B	B	B	A
UK	B	B	D	A
USA	C	C	C	C+

Chapter 5 makes several suggestions to improve each country's retirement income system. Although each system reflects a unique history, there are some common themes as many countries face similar problems in the decades ahead. As the OECD (2012a) concludes: "there is room for improvement in all countries' retirement-income provision."[2] The challenges that are common to many countries include the need to:

- increase the state pension age and/or retirement age to reflect increasing life expectancy, both now and into the future, and thereby reduce the level of costs of the publicly financed pension benefits[3]
- promote higher labour force participation at older ages, which will increase the savings available for retirement and also limit the continued increase in the length of retirement
- encourage or require higher levels of private saving, both within and beyond the pension system, to reduce the future dependence on the public pension
- increase the coverage of employees and/or 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
- reduce the leakage from the retirement savings system prior to retirement thereby ensuring that the funds saved, often with associated taxation support, are used for the provision of retirement income
- increase the governance of private pension plans to improve the confidence of plan members

It is interesting to note that Jackson et al (2010) of the Center for Strategic and International Studies concluded from their work on the Global Aging Preparedness Index that whilst there are many strategies available to address the economic and social challenges of an ageing population, two in particular can be win-win solutions. They are "extending work lives and increasing funded retirement savings."[4] These two developments would improve a country's adequacy and sustainability sub-index values through higher retirement ages, increased labour force participation at older ages, greater pension coverage, higher contribution rates, increased savings and a higher level of pension assets.

Karam et al (2011) of the IMF also noted that "The pension reform with the most positive long-term economic effects is one that extends people's working years."[5]

It is noteworthy that the average labour force participation rate for those aged 55-64 in the original 11 countries from the 2009 report has, on average, risen by more than 1% per annum during the last four years, although this result is not uniform across all countries. Nevertheless this is an excellent outcome and should this trend continue, it will improve the sustainability of many pension systems.

2 OECD (2012a), p13.

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

4 Jackson et al (2010), p52.

5 Karam et al (2011), p15.

CHAPTER 2
BACKGROUND TO THE APPROACH USED

The structure and characteristics of pension systems around the world exhibit great diversity with a wide range of features and norms. Comparisons are not straightforward. In addition, the lack of readily available and comparable data in respect of many countries provides additional challenges for such a comparison. This situation is improving and the OECD in particular has made significant progress in recent years. Nevertheless it must be recognised that reliable data in respect of some key indicators remains a significant issue. For this reason, this report uses a wide variety of data sources.

These challenges of data and benchmarking should not, however, prevent the comparison of retirement income systems. This topic, within the context of our ageing populations and other long term financial pressures, is too important to be ignored. Furthermore, there is no doubt that policies and practices adopted in some countries provide valuable lessons, experience or ideas for the development or reform of pension systems in other countries.

This fifth edition of the Index compares the retirement income systems of 20 countries, highlighting both the considerable diversity and the positive features that are 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 country's retirement income system. In that respect it is hoped that this study will act as a stimulus for each of the countries in the study (and indeed, other countries as well) to review their retirement income system and to consider making improvements so that future retirement incomes for their citizens 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, Holzmann and Hinz (2005) of the World Bank have extended this three-pillar system to the following five-pillar approach:

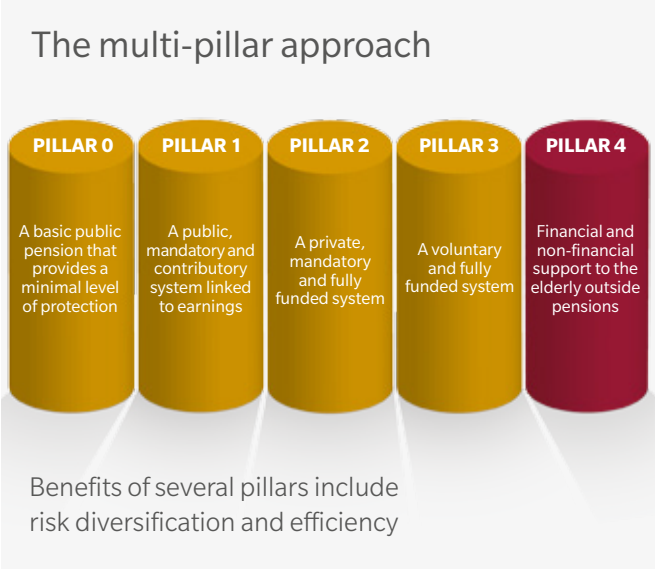
Pillar 0: A basic pension from public finances that may be universal or means-tested

Pillar 1: A mandated public pension plan that is publicly managed with contributions and, in some cases, financial reserves

Pillar 2: Mandated and fully funded occupational or personal pension plans with financial assets

Pillar 3: Voluntary and fully funded occupational or personal pension plans with financial assets

Pillar 4: A voluntary system outside the pension system with access to a range of financial and non-financial assets and support



In effect, they split the original first pillar into the new Pillar 0 and Pillar 1, and also divided the original third pillar by adding a new Pillar 4 which includes personal savings, home ownership and other assets held outside the pension system. The addition of the new Pillar 4 recognises the important role that these assets play in providing financial support to individuals or households during retirement.

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.

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 give us a better understanding of how each country is tackling the provision of retirement income.

The Melbourne Mercer Global Pension Index has grouped these desirable characteristics into adequacy, sustainability and integrity.

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. Thus this sub-index considers the base level of income provided as well as the net replacement rate for a median-income earner. It is recognised that an analysis focusing exclusively on benefits provided to a median-income earner does not represent the full spectrum of different income levels and that a more complete picture could be provided by considering benefits for a range of income levels. However, a more comprehensive approach would add considerable complexity to the comparison and risk a distraction from focusing on adequacy for the majority of workers.

Critical to the delivering of adequate benefits are the design features of the private pension system (or Pillars 2 and 3). Whilst there are many features that could be assessed, we have considered the following five, each of which represents a feature that will improve the likelihood that adequate retirement benefits are provided:

- Are voluntary member contributions 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? The first question assesses whether the government provides any incentives to encourage median-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 members. 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 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 retirement benefits.
- 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 (either by inflation-linked indexation or through market investment returns)? These questions focus on what happens to the individual's accrued benefits when they change employment. Traditionally, many 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 incentives that exist to encourage 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 benefits that may be required and the taxation rules that can provide incentives for income streams.
- Upon a couple's divorce or separation, are the individuals' accrued pension benefits normally taken into account in the overall division of assets? This question recognises that the financial treatment of accrued pension benefits can have a major effect on the future financial security of one or both partners, following a divorce or separation.

In addition to these design issues, we consider savings from outside formal pension programs, highlighting the fact that, as the World Bank notes, Pillar 4 assets can play an important role in providing financial security in retirement. It is also recognised that Pillar 4 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 for the increasing number of members of defined contribution plans. While investment and administrative costs are considered as part of the integrity sub-index, the long term return is likely to be affected by the diversity of assets held by the pension fund. Hence the adequacy sub-index includes an indicator representing an assessment of the percentage of investments held in growth assets (including equities and property).

Sustainability

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

An important feature of sustainability is the level of funding in advance, which is particularly important where the ratio of workers to retirees is declining. Hence, this sub-index considers contribution rates, the level of pension assets and the coverage of the private sector pension system. Finally, given the key role that the provision of a public pension plays in most countries, the level of government debt represents an important factor affecting a system's long-term sustainability.

Integrity

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

This sub-index therefore considers the role of regulation and governance, the protection provided to participants from a range of risks and the level of communication provided to members. In each case, we consider the requirements set out in the relevant legislation.

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

The construction of the index

In the construction of the index, we have endeavoured to be as objective as possible in calculating each country's index value. Where international data are available, we have used that data. In other cases, we have relied on information provided by Mercer consultants in each country. In these instances, we have not asked them to assess the quality of their country's system. Rather we have asked objective questions to which, in many cases, there is a "yes" or "no" answer. In some countries there is more than one system or different regulations in different parts of the country. Where this occurs, we have concentrated on the most common system or taken an average position.

The answers to some of these objective questions may be neither "yes" nor "no", but "to some extent". In these cases, we have compared responses from other countries and ranked each country accordingly, after receiving additional detail.

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

Although each sub-index is not weighted equally, the robustness of the overall results is worth noting. For example, re-weighting of each sub-index equally does not provide any significant changes to the results.[6]

It is acknowledged that living standards in retirement are also affected by a number of other factors including the provision and costs of health services (through both the public and private sectors) and the provision of aged care. However some of these factors can be difficult to measure within different systems and, in particular, difficult to compare between countries. It was therefore decided to concentrate on indicators that directly affect the provision of financial security in retirement, both now and in the future. Therefore 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.

6 The attachments provide the results for the indicators in each sub-index so that readers may calculate the effects of changing the weights used between the sub-indices or, indeed, within each sub-index.

CHAPTER 3
CHANGES FROM 2012 TO 2013

The index has been expanded in 2013 to include two additional countries; namely Indonesia and Mexico. These additions continue the theme of considering a variety of retirement income systems from countries with different economic and political backgrounds. This highlights an important characteristic of the index; that is, to enable comparisons of retirement income systems around the world with a wide range of design features and norms.

We have also added one new question and improved five questions this year.

The new question within the integrity sub-index relates to whether the trustees (or executives or fiduciaries) of a private pension plan are required to prepare a conflicts of interest policy (question R3c). It is recognised that these individuals 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. These individuals may also have a personal interest as a member of the pension plan. In each of these cases it is important that any conflicts of interest are both identified and understood by all concerned. Good governance practice would mean that the pension plan should have a clear policy to handle such situations.

In previous years, the adequacy sub-index included a question as to whether taxation incentives exist to encourage voluntary contributions from median income earners (question A4). This question has been supplemented this year to ask whether the plan's investment earnings are taxed during the pre-retirement and/or post-retirement periods. The investment earnings (and the related compounded effect over decades) are critical in respect of adequacy as most of an individual's ultimate benefit is due to investment earnings and not contributions.

The second question that was improved was also in the adequacy sub-index, relating to the form in which retirement benefits are required to be taken (question A6). Previously we simply asked for the proportion of the retirement benefit from the private pension arrangements that is required to be taken as an income stream. This year we also recognised that some countries encourage such behaviour through their taxation system and, although not a requirement, the outcome may be similar in that income streams may be strongly encouraged.

The third question that was expanded relates to phased retirement (or transition to retirement) (question S7). Previously the question only asked whether older employees could access their retirement benefit whilst continuing to work, perhaps on a part-time basis. This question is maintained but now recognises that it is also important that such individuals can continue to contribute or accrue benefits whilst working.

The other two questions that have been improved are in the integrity sub-index and relate to the funding requirements in respect of all types of plans (question P1) and the protection offered to plan members in the case of mismanagement within the pension plan or employer insolvency (question P3).

The introduction of the new question and the modification of previous questions are all designed to ensure that the overall index (as well as each sub-index) represents a more comprehensive analysis of each country's retirement income system.

It should also be noted that one question has been dropped (question R1c). This question asked whether the pension plan was required to have separate assets from the employer. Although this is a really important feature, it was considered to be redundant as there is also a question as to whether the pension plan is required to be a separate legal entity from the employer.

There has been one other factor that has affected the index value for most countries from 2012 to 2013 due to a revision by the OECD of their calculated net replacement rates for each country which forms part of the adequacy sub-index (question A2). The countries that have been most affected are:

- Brazil, a decrease where the OECD corrected its previous assumption in respect of the valorization (indexation) of previous earnings from wages to prices.
- Chile, a decrease where the OECD adjusted the level of net wages to better reflect the effect of social security contributions.
- Singapore, an increase where the OECD revised its approach in respect of the three accounts within the Central Provident Fund as well as adjusting the coverage rate and reviewing the retirement age used.

A comparison from 2012 to 2013

The following table compares the results for the 18 countries which were covered in both 2012 and 2013. Comments in respect of each country are made in Chapter 5.

Country	Total		Adequacy		Sustainability		Integrity	
	2012	2013	2012	2013	2012	2013	2012	2013
Australia	75.7	77.8	73.5	75.6	73.0	73.0	83.2	88.1
Brazil	56.7	52.8	71.5	63.3	26.9	26.0	74.8	73.6
Canada	69.2	67.9	74.2	72.4	56.3	57.9	79.3	74.5
Chile	63.3	66.4	50.1	58.6	67.7	65.6	78.4	79.9
China	45.4	47.1	55.7	61.1	30.5	28.9	49.7	50.0
Denmark	82.9	80.2	78.1	75.2	86.0	86.1	86.4	80.0
France	54.7	53.5	74.3	71.7	32.0	31.7	55.2	55.1
Germany	55.3	58.5	65.2	69.7	35.9	36.8	66.7	71.1
India	42.4	43.3	37.4	41.2	40.7	40.8	52.8	50.3
Japan	44.4	44.4	46.1	47.9	28.9	28.9	63.3	60.5
Korea (South)	44.7	43.8	45.1	43.7	42.3	41.0	47.5	47.9
Netherlands	78.9	78.3	77.0	76.6	73.0	74.1	90.3	87.0
Poland	58.2	57.9	63.6	64.4	43.4	42.6	70.1	68.9
Singapore	54.8	66.5	42.0	59.0	54.2	67.5	76.2	77.2
Sweden	73.4	72.6	68.0	65.2	73.3	74.5	82.5	81.5
Switzerland	73.3	73.9	71.3	72.6	67.9	69.0	84.1	82.9
UK	64.8	65.4	68.1	68.2	46.5	48.0	85.0	85.4
USA	59.0	58.2	58.3	56.6	58.4	57.8	61.1	61.2
Average	**61.0**	**61.6**	**62.2**	**63.5**	**52.1**	**52.8**	**71.5**	**70.8**

These results show that the overall index value has changed by more than two points for several countries for a variety of reasons as outlined below:

- The improved Australian score was primarily caused by the introduction of the Stronger Super reforms leading to improved governance and stronger regulation as well as an increase in the net replacement rate.
- The lower Brazilian score was primarily caused by the reduction in the net replacement rate (see above) and the revised tax question which now recognises the negative impact of taxing investment earnings.
- The improved Chilean score was primarily caused by our revision of the scores within the adequacy sub-index arising from a better understanding of their retirement income system.
- The improved Chinese score was primarily caused by the revised tax question which now recognises the positive impact of tax exemption for investment earnings.
- The lower Danish score was primarily caused by the revised tax question and the new question in respect of the requirement to prepare a conflicts of interest policy.
- The improved German score was caused by several relatively minor adjustments relating to income streams and a few questions in the integrity sub-index.
- The improved Singapore score was primarily caused by the revised OECD approach outlined above which improved both the adequacy and sustainability sub-index scores.

CHAPTER 4

POST RETIREMENT SOLUTIONS IN A DC WORLD

Occupational pension funds have existed in many countries for more than 100 years but there are now new challenges as pension systems around the world continue to evolve. One of the most fundamental changes has been the ongoing shift from employer sponsored defined benefit (DB) schemes to defined contribution (DC) arrangements. The reasons for this global trend are many, including the desire by employers to reduce their risks, changing workforce patterns, the impact of accounting standards and increasing regulation. Whatever the actual reasons in each country, the outcome is the same. That is, the risks associated with the provision of pensions have been passed from the sponsoring employer to the individual member.

The traditional defined benefit pension scheme promised the employee a retirement pension (usually linked to their salary and length of service), sometimes indexed to maintain its real value or purchasing power. If an individual had worked for the same employer for three or four decades, it was likely that the pension would not only be adequate to maintain their pre-retirement living standard but that it would also be secure, assuming the ongoing financial support of the employer. However, with increasing life expectancies, tightening accounting standards, volatile investment markets and ongoing economic uncertainty, it is understandable that many employers are no longer willing or able to make such long-term promises.

The defined contribution world has already become well established in many countries and other countries are clearly heading in this direction too. It represents a significant paradigm shift in the design, development and operation of pension systems. This fundamental change has several consequences.

First, members often perceive the DC account as their own money, which is very different from benefits paid out of the pooled DB plan. In many countries, DC members are also able to select their own investment policy from a menu offered by the pension plan. This individual 'ownership' means that members are less likely to perceive it as part of a larger pool of funds, through which risks may be shared. Further, in some countries this attitude means that the members are able to use the forthcoming benefit for a range of uses unrelated to retirement income.

Second, clear and regular communication to members becomes more important for monitoring progress as there is no longer an employer providing financial support to the plan, should investment returns, economic conditions or the plan's experience be worse than expected. Such events directly affect the members' retirement benefits, which is not the usual arrangement in a DB scheme. Simply put, members now bear all the risks so adequate disclosure is critical.

Third, the design of the best retirement pension (or income stream) is unclear. A DC arrangement will normally provide members with a capital sum at retirement (arising from contributions and investment returns) but this is very different from, say, a lifetime pension that may arise from a DB scheme. The challenge is to convert this capital sum into a retirement income that is both adequate and sustainable, whilst also recognising that any pooling of risk is carried out in a manner that is acceptable to members who perceive the funds to be their own asset.

The risks faced by retirees

Before considering the best approaches to convert a capital sum from a DC plan into an income stream, it is appropriate to reflect briefly on the risks faced by these retirees.

The most obvious risk is that they might run out of money, due to several possible reasons, including excessive consumption, poor investment returns, high inflation, a longer life than expected or a major expense. This risk suggests that any product (or portfolio of products) must have a level of drawdown that is consistent with both the initial capital sum and the feasible life expectancy. There are several risks that relate to this possible outcome of out-living their money including:

- Investment risk – Members in most DC plans have been subject to market risk throughout their accumulation period. However, during their working years they have the possibility of working a little longer or increasing their contributions to offset any investment loss or adverse market movements. These options do not exist after ceasing work.
- Sequencing risk – Poor investment returns immediately before or after retirement can have a significant effect on the funds available to provide retirement income. Although the average long-term return may remain, the order of investment returns can have an adverse effect on the ability of retirees to be able to sustain their living standards over many years. This highlights the importance of the returns when the member's balance is near its maximum.
- Longevity risk – Life expectancies are continuing to rise as mortality rates fall, particularly at older ages. Many retirees underestimate their life expectancy, because publicly quoted figures are often based on life expectancy at birth or ignore likely future improvements in life expectancy. It must also be recognised that the actual age of death has a very wide distribution and no one can plan for it exactly. A pooling arrangement provides one mechanism to share this risk (as is the practice with DB plans) but such an approach may run counter to the individual approach implicit within DC plans.

- Inflation risk – High inflation increases the cost of living thereby causing retirees to spend a greater proportion of their capital sum than expected. Although inflation rates are generally low at the moment, many retirees continue to be concerned about this risk given their life experience (for example, high inflation during the 1970s in many countries). It is also easy for retirees to underestimate the compounding effect of even low inflation over the long term.
- Expenditure risk – Expenditure requirements in retirement are not constant. Whilst the underlying needs may be fairly steady, there will be one-off needs for capital that may be unpredictable. These may be for medical costs, the need for home refurbishment due to a medical condition, or a capital sum to replace equipment such as a car or household appliances. The ability to borrow for such expenditure is also likely to be limited.
- Timing (or interest rate) risk – The purchase price of an annuity is significantly determined by the rate of interest at the date of purchase. In periods of low interest rates, annuities are therefore unlikely to be an attractive option. Hence compulsory annuitisation, requiring individuals to annuitise within a short time period after retirement, can have a material effect on the level of future retirement income.

An opposite risk to running out of money is that retirees do not withdraw their money quickly enough. They may be worried about their future longevity or the possibility of higher inflation. Such risk averse behaviour is understandable but it means that their retirement living standard is not at the level which could be afforded.

Similarly, retirees may be reluctant to withdraw an adequate income due the bequest motive. Some retirees may want to leave a significant portion of their accumulated benefit (or wealth) to family members. This motive is stronger amongst DC members as they often perceive there exists a 'right' to their money. In some societies, this may limit the level of annuitisation that is politically feasible.

"The conversion of DC benefits into adequate and sustainable retirement incomes remains a largely unresolved problem in many countries."

However these are not all the risks or pressures faced by retirees in developing their retirement income. Other risks relating to specific products include:

- Counterparty risk – Whilst this risk is present in respect of all financial products, at least to some extent, it is particularly relevant for long term products which include guarantees, such as annuities. Whilst strong prudential regulation can reduce this risk, it cannot remove it.
- Liquidity risk – Retirees will, from time to time, require a capital sum to make a significant expenditure. At such times, they will want to make sure that their funds are marketable (or liquid) and therefore available. It is noted that the liquidity of some financial products was restricted during the global financial crisis.

A final risk is legislative risk, including but not limited to changes in the taxation rules. An individual's retirement is likely to last several decades during which it is almost certain that there will be some changes in the relevant legislation, particularly as the pressures associated with an ageing population continue to increase. Of course, the consequences of these changes cannot be predicted years in advance.

It is apparent that most retirees receiving benefits from DC plans confront several risks they have not faced before as individuals, including some that previous generations of retirees did not have to address. The importance of personalised financial advice for retirees from these plans is now greater than ever before. Yet, the conversion of DC benefits into adequate and sustainable retirement incomes remains a largely unresolved problem in many countries.

Practice around the world

Before considering possible products and/or solutions, it is instructive to consider the level of annuitisation that is required around the world. The following table shows the current requirements in respect of DC arrangements in some countries.

Country	What are the requirements, if any, where a retirement benefit from a DC plan is to be taken as an income stream?
Australia	There is no requirement to take an annuity but for those who convert their benefit into a tax-advantaged drawdown product, there is a minimum drawdown each year based on the member's age.
Canada	In most circumstances, the benefit from a registered DC Plan must be transferred to a locked-in retirement account, a Life Income Fund (LIF) or an annuity. There are minimum and maximum withdrawal amounts from the LIF, which take into consideration the member's balance and age. There is no requirement for Registered Retirement Savings Plans but for those who convert their benefit into a tax-advantaged Registered Retirement Income Fund, there is a minimum withdrawal percentage based on age.
Chile	All benefits must be converted into a life annuity or a programmed withdrawal product, except for any portion of the benefit that is above the specified maximum.
Denmark	The tax rules provide no limit on the contributions paid into a DC plan if the benefit is taken as an annuity. However there is a limit on the contributions if the benefit is paid out as instalments for a period of between 10 and 25 years. Contributions for other forms of benefits cannot be claimed as a tax deduction.
Netherlands	All retirement benefits must be converted into an annuity. Annuity payments are fixed but may be increased if profit sharing results allow for it. Several annuity options are available at retirement.
Singapore	The retirement benefit is converted into a life annuity, if it is above a prescribed minimum. Amounts above the prescribed maximum do not need to be converted.
Sweden	All retirement benefits from a DC plan must be converted into an annuity which could be a life annuity or a fixed term annuity, depending on the options available from the insurance company. However the individual bears some risks as the insurance company can vary its assumptions and payments, even after the payments have commenced. Some policies guarantee a return of premiums.
UK	In most circumstances, 75% of the accumulated retirement benefit must be converted into an annuity or an income drawdown product, where a maximum drawdown is permitted each year. A more flexible drawdown is available for those with income streams above a prescribed level.
USA	There are no requirements for DC plans (such as 401(k) plans) to provide annuities or income stream products.

The diversity in practice is interesting. For example, Denmark imposes the annuity (or income) requirements at the point of contribution through the taxation system whereas in Chile and Sweden the benefit must be converted into an annuity or programmed withdrawal product. There has also been growing recognition of the advantages provided by drawdown products compared to annuities. However, even here, there is diversity with some countries imposing a minimum drawdown (eg Australia) while others have a maximum drawdown (eg the UK). On the other hand, Canada's Life Income Funds require payments between specified minimum and maximum percentages of the retiree's account balance.

The effect of social security benefits

It is also important to recognise the role played by the public pension (or social security) in each country's system. That is, the relative importance of the DC arrangements will depend on the size and future sustainability of the public pension. For example, if the public pension provides a replacement rate of more than 50% at most income levels, together with appropriate indexation and longevity protection, the structure of the DC benefits is less significant as most risks are borne by the public pension. Of course, whether these generous benefit levels can continue within the context of an ageing population is another question, but that is beyond the scope of this chapter.

On the other hand, if the public pension is fully means tested or provides an average replacement rate of less than say 30% of pre-retirement income, the income streams arising from the DC plans become much more important. In these circumstances, it is necessary to consider the income products that may be available to deliver the best outcome.

Feasible arrangements

As noted earlier, the traditional DB pension plan provided retirees with lifetime pensions. This gave them a secure retirement income, assuming that the sponsoring employer was able to continue to finance these promised benefits. However there have been occasions when employers have faced financial difficulties, and this assumption has not been borne out to the detriment of both current employees and pensioners.

For DC members, the closest product to DB pensions is a lifetime annuity provided by a life insurance company. These can provide the same type of benefits as a DB pension but there are some important differences.

The first and most obvious difference is that it is provided by a life insurance company which is required to hold regulatory capital to support the promises represented by the annuities whereas many DB pension plans do not have a similar requirement. This capital provides security to the investors but shareholders also expect a return which is reflected in pricing. The second difference is that whilst most DB pension plans maintained the same benefit design over many years, the life insurance company's annuity promise varies according to economic conditions. In particular, at times of low interest rates, the annuity offering can look unattractive for the long term.

This situation may lead retirees (where permitted by regulation) to consider purchasing annuities for a fixed term (say five or 10 years) which removes the need to lock in low interest rates for decades whilst also providing retirees with some certainty in the shorter term and some flexibility when the term annuity ceases. However, such an annuity provides no longevity protection.

An alternative approach to annuities that has developed in some systems is a drawdown product, which is the reverse of the accumulation account that occurs in the DC plans prior to retirement. In these cases, the system may impose minimum and/or maximum levels of drawdown each year to ensure that the benefit is spread over many years or is not primarily retained for bequest motives.

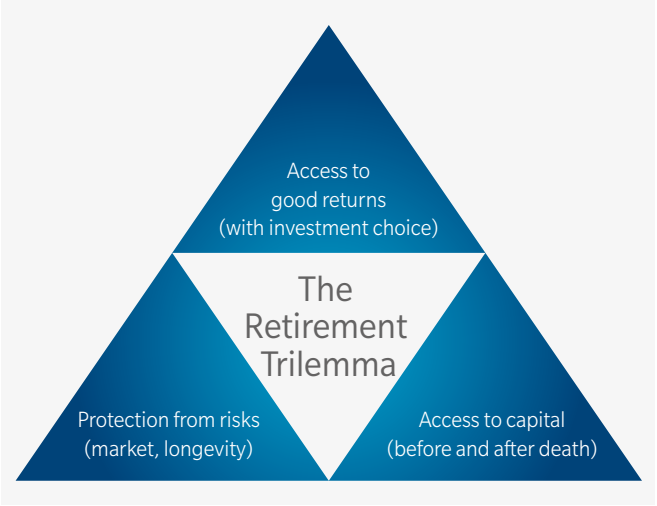
However, a drawdown product exposes the individual retiree to many of the risks outlined earlier. One compromise is the use of a drawdown product in the early years of retirement supported by a deferred lifetime annuity. A second approach combining the annuity and drawdown product is a variable annuity which, whilst linked to the market (as occurs with drawdown products), also includes some specific guarantees in respect of capital values or for particular payments. These guarantees can lead to complex designs and, like annuities, may appear expensive from an individual's perspective.

So, is there an ideal product for retirees who receive retirement benefits from DC plans?

The retirement trilemma

The following diagram identifies the trilemma faced by retirees who seek:

- good investment returns (net of costs) and some investment choice, which has been their experience during the accumulation years
- protection from the many risks outlined earlier, including longevity, market and inflation risks
- access to some capital during their retirement to cover unexpected expenses and/or the ability to pass their unused benefit on to family members



This combination of different needs faced by retirees over their retirement years leads to the conclusion that a single product is unlikely to be the ideal solution. As Rocha and Vittas (2010) commented in their comprehensive World Bank Working Paper:

> "policy makers need to bear in mind the two main points that have emerged from the discussion of pensioner risks and the shortcomings of different annuity products. The first is that while there is a need to ensure that retiring workers opt for an adequate level of annuitization, care must be taken to avoid forcing an excessive level of annuitization. The second is that because of the serious shortcomings of all types of retirement products, a combination of payout options should ideally be favored, covering different products as well as different payout options over time."[7]

We agree – a single product is normally not the best solution. Even an indexed lifetime annuity does not respond to the varying financial needs faced by many retirees as they live through different stages of retirement. A portfolio of products is preferable.

> "A single product is normally not the best solution."

It is also worth bearing in mind some of the findings that have arisen from behavioural finance research in recent years as discussed in Allianz (2010). These include:

- Individuals have a greater sensitivity to losses than gains. This loss aversion characteristic is particularly important for retirees. This suggests products that reduce market exposure and/or provide some guarantees to reduce possible losses may be more attractive.
- Individuals do not like losing control, which is particularly relevant for those who have built up their benefit in DC plans. Hence lifetime annuities may not be popular, especially when other investment or drawdown options are available within the system.
- Framing, or the presentation, is a really important factor when retirement products are designed. For example, is a DC plan an investment product to generate wealth or an income product for consumption in retirement? Many DC plans have a focus on increasing the member's account balance, which gives a focus on wealth and personal savings. It can be difficult to switch from this framing to one focused on regular retirement income.
- Retirees may be willing to participate in a pooled arrangement if they believe it is fair. However, if they perceive that their early death will lead to extra profit for a life insurance company they may be reluctant to join.

7 Rocha R and Vittas D (2013), p29.

A possible design

The above discussion suggests that a portfolio of products is likely to provide the best solution for most retirees, recalling that retirees are in a wide range of financial and health circumstances. This portfolio should include the following features:

- limited access to a lump sum benefit at retirement to enable the retiree to prepare for their post-work lifestyle
- some access to capital during retirement to enable retirees to respond to unexpected expenses and have some spending flexibility
- an income product in the first period of retirement that could be an annuity or drawdown product with some constraints and/or guarantees, which provide adequacy and security
- a pooled insurance-type product to provide longevity protection for the later years that could be a deferred annuity or pooled product provided by the pension plan or insurer
- a structure which allows for phased retirement where individuals are continuing to work (say, in a part time capacity) whilst also drawing on their retirement savings

This overall design would enable members, if desired, to:

- seek good investment returns, particularly in the earlier years of retirement and thereby not be overly conservative, when their realistic life expectancy may be more than 20 years in retirement
- have access to some capital, both at retirement and during the subsequent years
- have some protection from risks, including longevity, market and inflation. The actual products available to provide this protection are likely to vary between markets. However, the desired outcome should be same

It is also important that such a range of products must operate within a robust framework that contains several levers to ensure that the overall system is able to respond to changing social, economic or longevity conditions. These levers could include any or all of the following:

- softer 'guarantees' in respect of pension benefits, for example less than full indexation of income streams
- sharing some of the mortality profit amongst survivors
- smoothing investment returns to reduce volatility
- varying regulatory capital requirements as economic conditions change
- adjustments to the minimum and maximum amounts in respect of drawdown products
- gradually raising the future entitlement age to the retirement pension and/or social security, should life expectancy continue to increase

> "It is expected that the sharing of risks between plan members will lead to improved outcomes."

These levers would provide some flexibility over time and enable some pooling (or averaging) to occur amongst retirees within a generation and, to some extent, between generations. The provision of hard guarantees to retirees for many years, indeed decades, is very costly and cannot occur without a government guarantee or very significant capital. Such an approach is likely to lead to sub-optimal outcomes.

It is expected that the sharing of risks between plan members will lead to improved outcomes, on average, as well as providing some benefits to those who have been most affected by the adverse effects of any unexpected changes or experience. The actual form of pooling will vary between systems and over time but the important conclusion is that a pooling arrangement with levers will lead to a better outcome than one focused solely on the individual retiree.

How do we get there?

The previous section outlined some features that should be present in a system, where DC plans provide retirement benefits. However many countries that have, or are moving towards, a DC based system have not developed a framework or regulations that facilitate adequate and sustainable income for retirees. Here are some suggestions for policymakers to adopt so there is a better outcome for all.

- The government should clearly set out the main objectives of the overall retirement income system in terms of total income (or replacement rates), including the role of the public pension.
- The system should include several default settings within a DC plan including lifecycle investment policies for the years before and after retirement and a semi-automatic transition at retirement from the accumulation period to retirement income products.
- Taxation rules and/or government regulations should limit leakage of benefits before retirement and require, say, at least two-thirds of the accumulated retirement benefit (except for small amounts) to be converted into income products, which should be broadly defined.
- If a compulsory system is not achievable for at least part of the benefit, taxation incentives should be used to strongly encourage the desired outcomes.
- Education and member communication should be regularly provided to all members with a focus on the provision of retirement income and not wealth accumulation.
- The institutional framework must recognise the informational asymmetry that exists between retirees and providers, thereby providing some protection to the retirees.
- Any transition from current rules should be gradual and provide sufficient warning for those approaching retirement.
- Constraints within the current system, such as the lack of suitable assets to support income products, strong capital requirements or anachronistic regulations, need to be reviewed to encourage stronger competition, a broader range of products and more flexible provision of retirement income products from a range of providers, including DC plans.
- Some protection from litigation for employers and providers who wish to develop retirement income products from DC plans.

These developments should improve the adequacy of retirement incomes, ensure their sustainability over the longer term and, importantly, increase the trust that individuals have in their country's retirement income system.

"There is an urgent need to find a better balance between the individual orientation of a DC plan and a collective (or pooled) approach."

Conclusions

The global pension world is changing dramatically in many countries as we move from a DB pension system to one where DC plans are increasing. However this trend has three major shortcomings. First, all the risks associated with private pension plans are borne by individuals. Second, there is an inevitable focus on wealth accumulation (as the member's account balance increases) rather than on the provision of retirement income. Third, the design of the best portfolio of retirement income products for DC retirees remains elusive.

There needs to be fundamental change. We must focus on the provision of retirement income – after all, that is the purpose of pensions. This income must be delivered from an efficient and fair framework that is sufficiently robust to cope with the changing conditions that lie ahead.

There is an urgent need to find a better balance between the individual orientation of a DC plan and a collective (or pooled) approach where there is some sharing of risks within and between generations. Such developments should not just focus on adequate incomes but also ensure that the system is sustainable and has integrity over many years.

CHAPTER 5
A BRIEF REVIEW OF EACH COUNTRY

This chapter provides a brief summary of the retirement income system of each country in this study, together with some suggestions that would — if adopted — raise the overall index value for that country. Of course, whether such developments are appropriate in the short term depend on the country's current social, political and economic situation. Where relevant, a brief comment is also made about the change in the country's overall index value from 2012 to 2013.

Global Grades

Grade	Index Value	Countries	Description
A	>80		A first class and robust retirement income system that delivers good benefits, is sustainable and has a high level of integrity.
B+	75–80		A system that has a sound structure, with many good features, but has some areas for improvement that differentiates it from an A-grade system.
B	65–75		
C+	60–65		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		
D	35–50		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 a non-existent system.

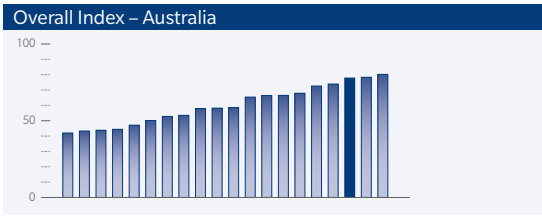
Australia

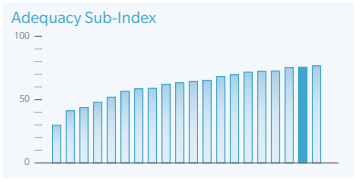
Australia's retirement income system comprises a means-tested age pension (paid from general government revenue); mandatory employer contributions paid into private sector arrangements (mainly DC plans); and additional voluntary contributions from employers or employees paid into these private sector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

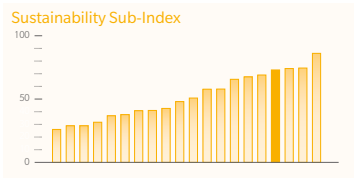
The overall index value for the Australian system could be increased by:

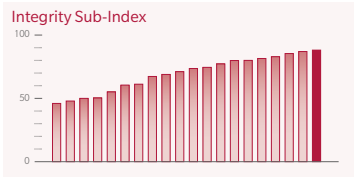
- introducing a requirement that part of the retirement benefit must be taken as an income stream
- increasing the labour force participation rate amongst older workers
- introducing a mechanism to increase the pension age as life expectancy continues to increase
- increasing the minimum access age to receive benefits from private pension plans so that retirement benefits are not available more than five years before the age pension eligibility
- removing legislative barriers to encourage more effective retirement income products

The Australian index value increased from 75.7 in 2012 to 77.8 in 2013 primarily due to the introduction of stronger regulatory requirements and an increase in the net replacement rate.









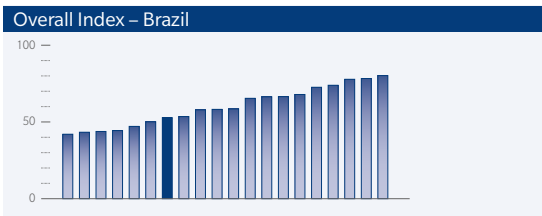
Brazil

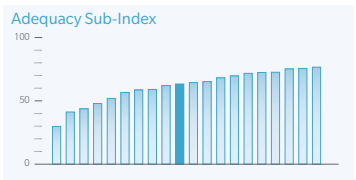
Brazil's retirement income system comprises a pay-as-you-go social security system with higher replacement rates for lower income earners; and voluntary occupational corporate and individual pension plans which may be offered through insurance companies or pension trusts.

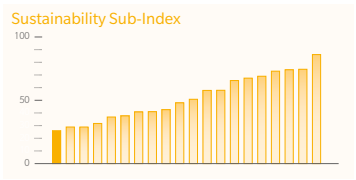
The overall index value for the Brazilian system could be increased by:

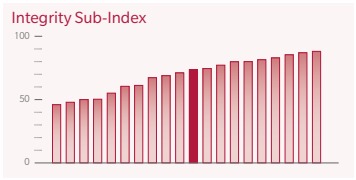
- introducing a minimum access age so that the benefits are preserved for retirement purposes
- increasing coverage of employees in occupational pension schemes thereby increasing the level of contributions and assets
- increasing participation of employees in occupational pension schemes through automatic membership or enrolment
- introducing a minimum level of mandatory contributions into a retirement savings fund
- increasing the state pension age over time
- introducing arrangements to protect the pension interests of both parties in a divorce
- enabling individuals to retire gradually whilst receiving a part pension

The Brazilian index value fell from 56.7 in 2012 to 52.8 in 2013 primarily due to a reduction in the net replacement rate and the revised tax question.









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
- strengthening the governance requirements for private pension plans

The Canadian index value fell from 69.2 in 2012 to 67.9 in 2013 primarily due to lower household savings and the strengthening of questions in the integrity sub-index.

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) for employee contributions.

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

- raising the level of mandatory contributions to increase the net replacement rate
- introducing mandatory contribution from employers
- increasing retirement ages for both men and women
- continuing to review the minimum pension for the poorest pensioners

The Chilean index value increased from 63.3 in 2012 to 66.4 in 2013 primarily due to our revisions to the scores for two questions in the adequacy sub-index.

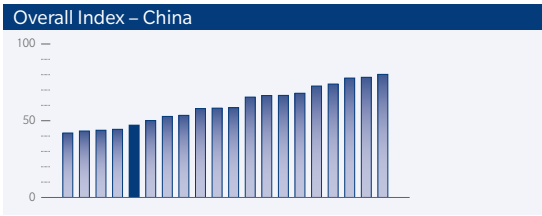
China

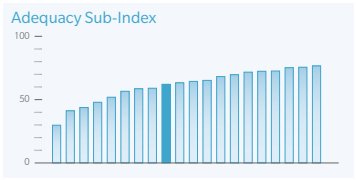
China's retirement income system comprises several systems including an urban system for employees, a smaller system for non-employed urban residents and a relatively new rural system. The major urban system provides a basic pension consisting of a pooled account from employer contributions and individual accounts from employee contributions. Supplementary plans, known as enterprise annuities, are also provided by some employers.

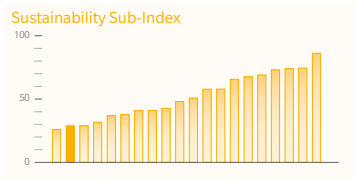
The overall index value for the Chinese system could be increased by:

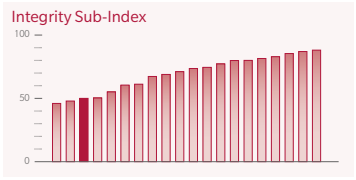
- introducing taxation incentives for employee contributions to the supplementary plans
- introducing a requirement that part of the supplementary retirement benefit must be taken as an income stream
- increasing the state pension age over time
- enabling individuals to retire gradually whilst receiving a part pension
- improving the level of communication required from pension plans to members

The Chinese index value increased from 45.4 in 2012 to 47.1 in 2013 primarily due to the impact of the revised tax question and the recognition that investment income in pension plans is tax exempt.









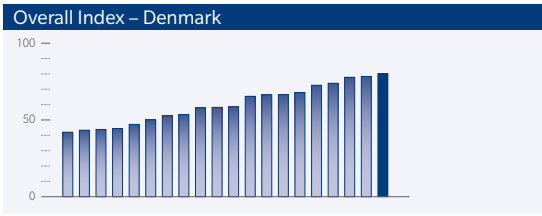
Denmark

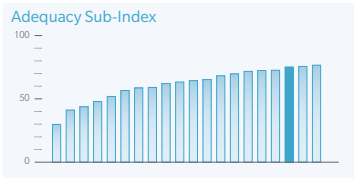
Denmark's retirement income system comprises a public basic pension scheme, a means-tested supplementary pension benefit, a fully funded defined contribution scheme, and mandatory occupational schemes.

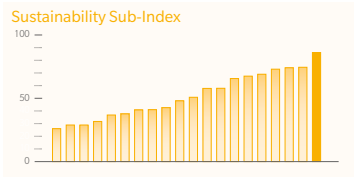
The overall index value for the Danish system could be increased by:

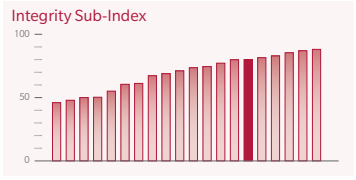
- raising the level of household saving
- introducing arrangements to protect the interests of both parties in a divorce
- increasing the labour force participation rate amongst older workers
- providing greater protection of members' accrued benefits in the case of fraud, mismanagement or provider insolvency

The Danish index value fell from 82.9 in 2012 to 80.2 in 2013 primarily due to the revised tax question which recognised that investment income in a pension plan is taxed and a revised score to a question in the integrity sub-index.









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 respectively; 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 over time
- increasing the labour force participation rate amongst older workers
- improving the regulatory requirements for the private pension system

The French index value fell from 54.7 in 2012 to 53.5 in 2013 primarily due to the revised tax question which recognised that investment income in pension plans is taxed.

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 either adopt 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:

- raising the minimum pension for low-income pensioners
- increasing the requirement that part of the retirement benefit must be taken as an income stream
- continuing to increase the labour force participation rate amongst older workers
- improving the level of communication from pension arrangements to members

The German index value improved from 55.3 in 2012 to 58.5 in 2013 due to minor adjustments to several scores within the adequacy and integrity sub-indices.

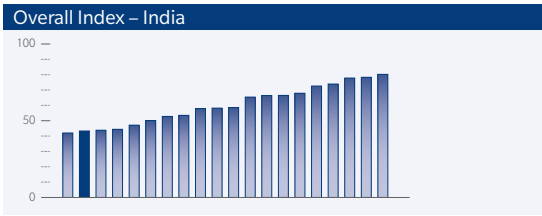
India

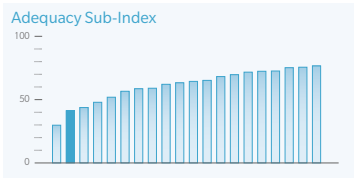
India's retirement income system comprises an earnings-related employee pension scheme, a defined contribution employee provident fund and voluntary employer managed funds.

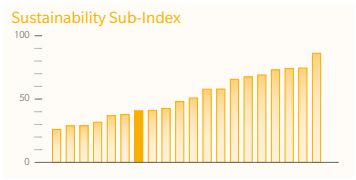
The overall index value for the Indian system could be increased by:

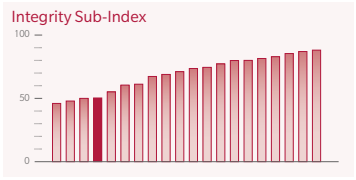
- introducing a minimum level of support for the poorest aged members of society
- increasing coverage of pension arrangements for the unorganised working class
- introducing a minimum access age so that it is clear that benefits are preserved for retirement purposes
- improving the regulatory requirements for the private pension system
- continuing to improve the required level of communication to members from pension arrangements
- increasing the pension age as life expectancy continues to increase
- increasing the level of contributions in statutory pension schemes

The Indian index value increased from 42.4 in 2012 to 43.3 in 2013 primarily due to a revised score in respect of the question relating to maintaining the value of benefits after resignation.









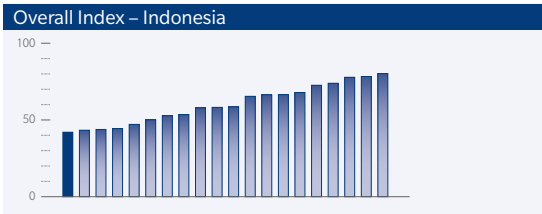
Indonesia

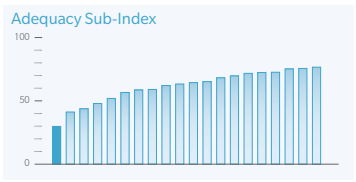
Indonesia's retirement income system comprises earnings-related civil service pensions, mandatory defined benefit plans for private sector workers and voluntary defined benefit or defined contribution plans for other workers. A National Social Security System is currently being implemented.

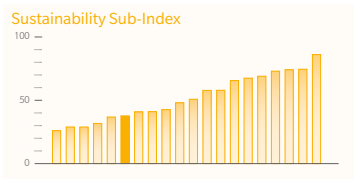
The overall index value for the Indonesian system could be increased by:

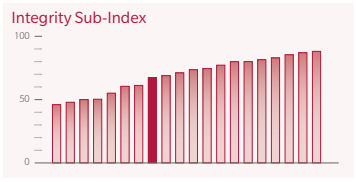
- introducing a minimum level of support for the poorest aged individuals
- increasing the level of pension provision and hence the expected net replacement rate for all income earners
- introducing a minimum access age so that it is clear that benefits are preserved for retirement purposes
- improving the regulatory requirements for the private pension system
- improving the required level of communication to members from pension arrangements
- increasing the pension age as life expectancy continues to increase

The Indonesian index value in 2013 was 42.0.









Japan

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

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

- raising the minimum pension for low-income pensioners
- increasing the level of pension provision and hence the expected net replacement rate for all income earners
- 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

The Japanese index value remained constant at 44.4 from 2012 to 2013.

Korea (South)

Korea's retirement income system comprises a modest basic pension and 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.

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

- 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 pension assets over time
- increasing the state pension age over time
- improving the governance requirements for the private pension system, including the need for an audit
- improving the level of communication required to members from pension plans

The Korean index value fell from 44.7 in 2012 to 43.8 in 2013 primarily due a correction in one answer and a significant increase in life expectancy, as measured by the United Nations.

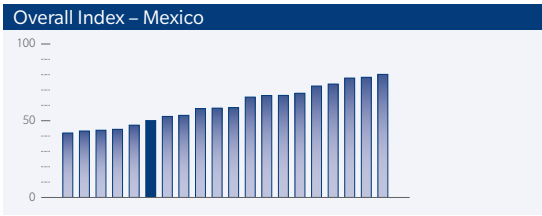
Mexico

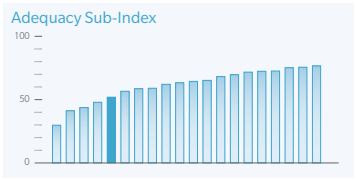
Mexico's retirement income system comprises a social security scheme which includes a minimum pension and mandatory private sector plans.

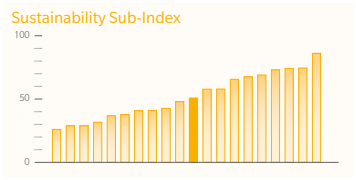
The overall index value for the Mexican system could be increased by:

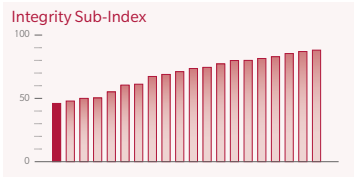
- raising the minimum level of support available to the poorest aged members of society
- raising the level of household saving
- introducing a requirement that part of the retirement benefit from private pension arrangements must be taken as an income stream
- increasing the level of funded contributions thereby increasing the level of pension assets over time
- improving the regulatory requirements for the private pension system

The Mexican index value in 2013 was 50.1.









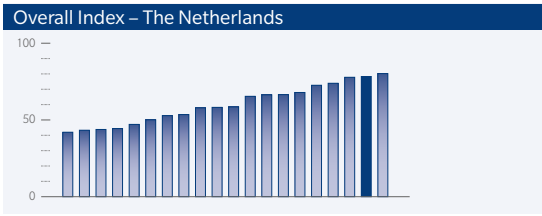
The Netherlands

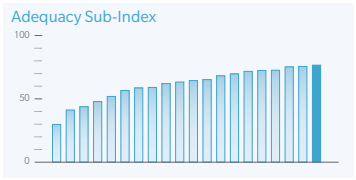
The Netherlands' retirement income system comprises a flat-rate public pension and a quasi-mandatory earnings-related occupational pension linked to industrial agreements. Most employees belong to these occupational schemes which are industry-wide defined benefit plans with the earnings measure based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

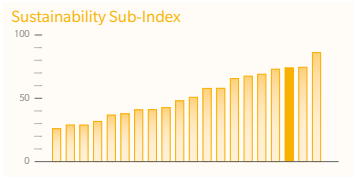
The overall index value for the Dutch system could be increased by:

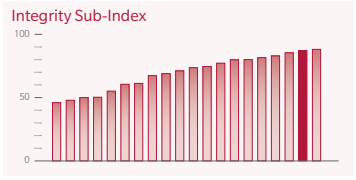
- introducing a minimum access age so that it is clear that benefits are preserved for retirement purposes
- raising the level of household saving
- increasing the labour force participation rate amongst older workers
- providing greater protection of members' accrued benefits in the case of fraud, mismanagement or employer insolvency
- allowing self-employed people to accrue pension benefits consistent with employed people

The Dutch index value fell from 78.9 in 2012 to 78.3 in 2013 primarily due to the introduction of the question relating to conflicts of interest policy.









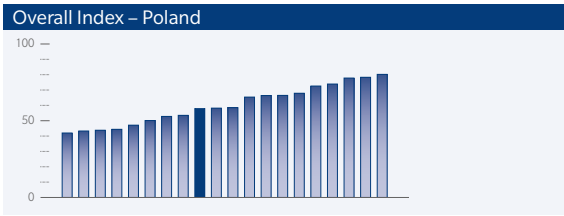
Poland

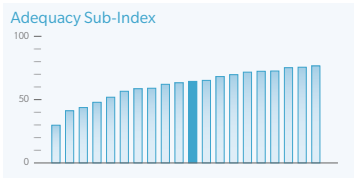
Poland's retirement income system was reformed in 1999. The new system, which applies to people born after 1968, comprises a minimum pension and an earnings-related system with notional accounts. The overall system is in transition from a pay-as-you-go system to a funded approach. There are also voluntary employer sponsored pension plans and individual pension accounts.

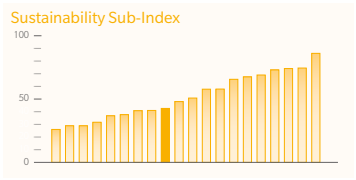
The overall index value for the Polish system could be increased by:

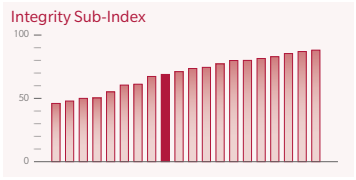
- raising the minimum level of support available to the poorest pensioners
- introducing a requirement that part of the retirement benefit from private pension arrangements must be taken as an income stream
- raising the level of household saving
- increasing the level of funded contributions thereby increasing the level of pension assets over time
- increasing the labour force participation rate amongst older workers
- introducing tax incentives to occupational pension plans

The Polish index value fell slightly from 58.2 in 2012 to 57.9 in 2013 due to a number of small changes.









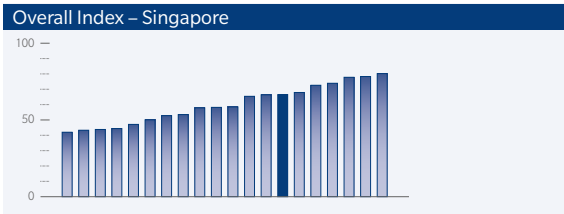
Singapore

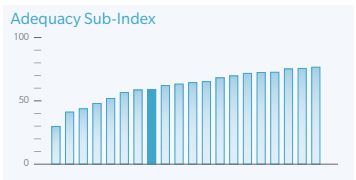
Singapore's retirement income system is based on the Central Provident Fund which covers all residents. Some benefits are available to be withdrawn at any time for specified housing and medical expenses with other benefits preserved for retirement. A prescribed minimum amount is required to be taken at retirement age to buy a lifetime income stream.

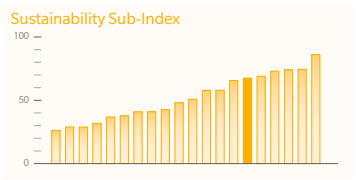
The overall index value for the Singaporean system could be increased by:

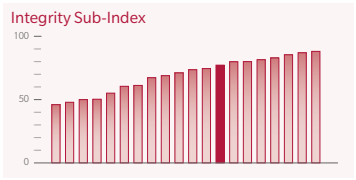
- raising the minimum level of support available to the poorest aged members of society
- reducing the barriers to establishing tax-approved group corporate retirement plans, to encourage non-residents (who comprise more than one-third of the labour force) to save for their retirement
- increasing the labour force participation rate amongst older workers

The Singaporean index value increased significantly from 54.8 in 2012 to 66.5 in 2013 primarily due to a revision by the OECD in its approach to allow for the three separate accounts within the Central Provident Fund and updated OECD data on private pension coverage.









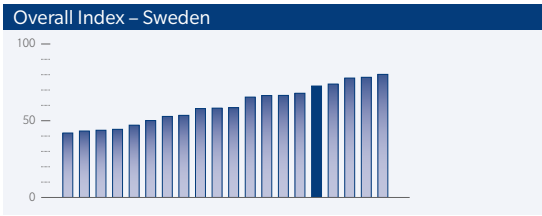
Sweden

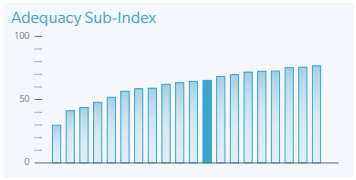
Sweden's retirement income system was reformed in 1999. The new system is an earnings-related system with notional accounts. The overall system is in transition from a pay-as-you-go system to a funded approach. There is also an income-tested top-up benefit which provides a minimum guaranteed pension.

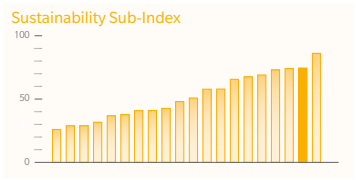
The overall index value for the Swedish system could be increased by:

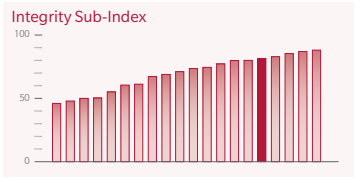
- increasing the state pension age to reflect increasing life expectancy
- allowing and encouraging employee contributions into employer sponsored plans, as well as private savings
- improving tax incentives for employee contributions
- requiring annual information about the pension plan as a whole to be provided to plan members, as well as the individual statements
- introducing arrangements to protect all the pension interests of both parties in a divorce

The Swedish index value fell from 73.4 in 2012 to 72.6 in 2013 primarily due to a reduction in the net replacement rate and the revised tax question which recognised that investment income in a pension plan is taxed.









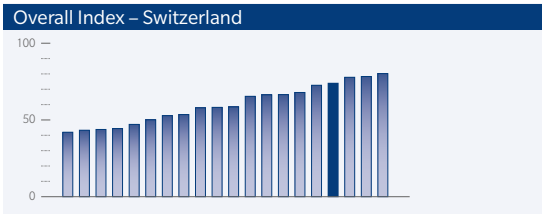
Switzerland

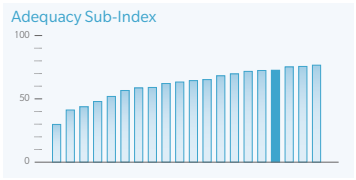
Switzerland's retirement income system comprises an earnings-related public pension with a minimum pension; a mandatory occupational pension system where the contribution rates increase with age; and voluntary pension plans which are offered by insurance companies and authorised banking foundations.

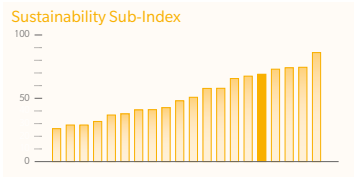
The overall index value for the Swiss system could be increased by:

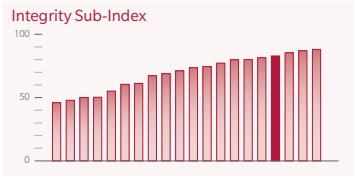
- introducing a requirement that part of the retirement benefit must be taken as an income stream
- reverse the preferential tax treatment of lump sum payments in comparison to pension payments
- increasing the state pension age over time
- introducing a requirement for the plan trustees to develop a comprehensive risk management policy

The Swiss index value increased from 73.3 in 2012 to 73.9 in 2013 primarily due to an increase in the net household saving rate.









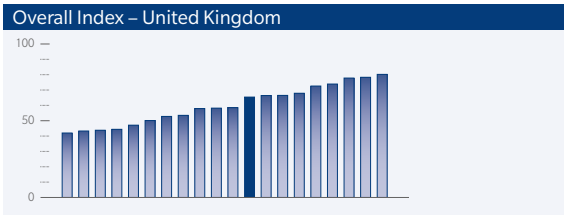
The United Kingdom

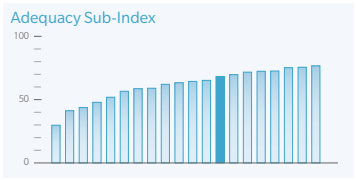
The United Kingdom's retirement income system comprises a flat-rate basic pension supported by an income-tested pension credit; an earnings-related pension based on revalued average lifetime salary; and voluntary private pensions, which may be occupational or personal. Auto enrolment is currently being phased in, requiring employers to enrol employees in pension schemes with minimum contributions (increasing to 8% in 2018), with the facility for employees to opt out.

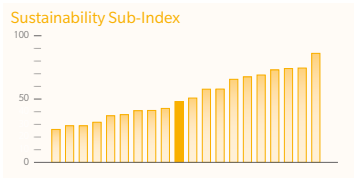
The overall index value for the British system could be increased by:

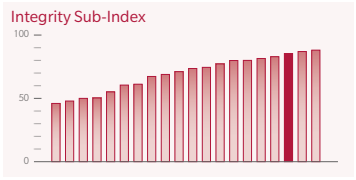
- raising the minimum pension for low-income pensioners
- increasing the coverage of employees in occupational pension schemes
- raising the level of household saving
- increasing the labour force participation rate at older ages

The British index value increased from 64.8 in 2012 to 65.4 in 2013 due to a number of small changes.









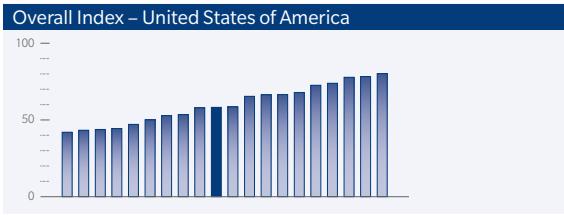
United States of America

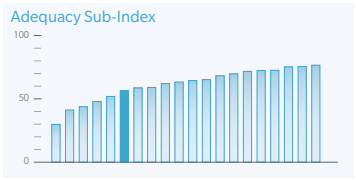
The United States' retirement income system comprises a social security system with a progressive benefit formula based on lifetime earnings, adjusted to a current dollar basis, together with a means-tested top-up benefit; and voluntary private pensions, which may be occupational or personal.

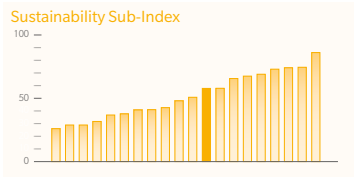
The overall index value for the American system could be increased by:

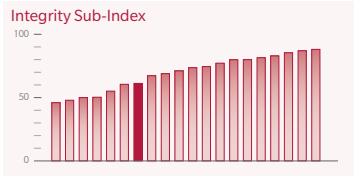
- raising the minimum pension for low-income pensioners
- adjusting the level of mandatory contributions to increase the net replacement rate for median-income earners
- improving the vesting of benefits for all plan members and maintaining the real value of retained benefits through to retirement
- reducing pre-retirement leakage by further limiting the access to funds before retirement
- introducing a requirement that part of the retirement benefit must be taken as an income stream

The American index value fell from 59.0 in 2012 to 58.2 in 2013 primarily due to a reduction in the net replacement rate.



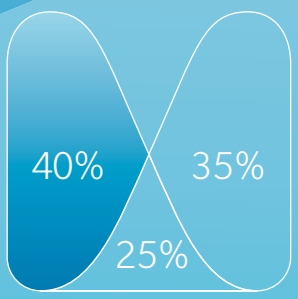






CHAPTER 6
THE ADEQUACY SUB-INDEX

The adequacy sub-index considers the benefits provided to both the poor and the median-income earner as well as several design features and characteristics which enhance the efficacy of the overall retirement income system. The net household saving rate and home ownership rate are also included as non-pension savings can represent an important source of financial security during retirement.



The countries with the highest value for the adequacy sub-index are the Netherlands (76.6) and Australia (75.6), with Indonesia (29.8) and India (41.2) having the lowest values. Whilst several indicators influence these scores, the level of the minimum pension (expressed as a percentage of the average wage) and the net replacement rate provided for a median-income earner 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?

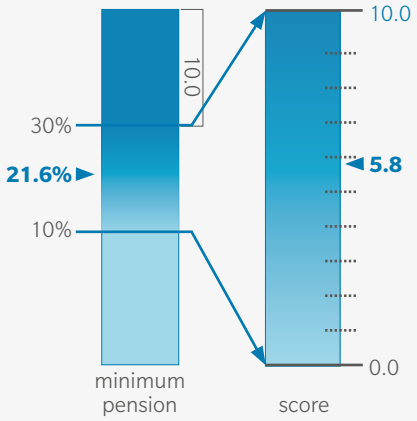
Objective

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.

Calculation

There is no correct answer as to what the minimum pension should be, as it depends on a range of socio-economic factors. However, it is suggested that a minimum pension of about 30 percent[8] of national average earnings adequately meets the poverty alleviation goal. Hence a minimum pension below 30 percent will score less than the maximum value, with a zero score if the pension is 10 percent or less of average earnings, as such a pension offers very limited income provision. Minimum pensions of 30 percent or higher of average earnings receive the maximum score of 10.

Calculating A1
— Minimum Pension



Commentary

The minimum pension for most countries is between 15 percent in Chile and 34 percent in Denmark. India and Indonesia do not provide a minimum pension whilst Korea and Singapore provide very modest public assistance. The Chinese results have been modified as the minimum pension is not available throughout the country.

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 income provided for the poorest in the community), together with the next measure (which calculates the income for a median-income earner), represent the two most important components within the adequacy sub-index. This indicator is therefore given a weighting of 17.5 percent in the adequacy sub-index.

8 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 (2009a), p157–160.

Question A2

What is the net replacement rate for a median-income earner?

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 percent of the net average lifetime wage
- 60 percent of the gross average lifetime wage
- 53 percent of the net final year wage
- 42 percent 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."[9] That is, these targets could be met through a combination of mandatory and voluntary provisions.

The OECD calculates the net replacement rate for an individual earning the median income (revalued with earnings growth) throughout his/her working life. Median income is used as it is a better representation than average earnings, which are skewed upwards by the highest income earners.

These calculations assume no promotion of the individual throughout their career; that is, the individual earns the median income throughout. Therefore replacement rates based on lifetime median income will be higher than when expressed in terms of final salary for most individuals.

The OECD expresses a target replacement rate of 70 percent of final earnings[10] 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 percent of the working population.

This indicator for the adequacy sub-index should only include mandatory components of a retirement income system for private sector workers, as voluntary plans that may include only 30 percent of the working population do not represent a good indicator of the total system.

The target benefits from a mandatory system should be less than 70 percent of final earnings to allow for individual circumstances and some flexibility. An objective of between 45 percent and 65 percent 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 from a mandatory system should be within the range of 70–100 percent of median lifetime earnings (revalued with earnings growth).

A net replacement rate below 70 percent of lifetime earnings suggests a significant reliance on voluntary savings whereas a figure above 100 percent does not provide the flexibility for individual circumstances and may suggest overprovision. The OECD average for a median-income earner is 69 percent of lifetime earnings.[11]

Calculation

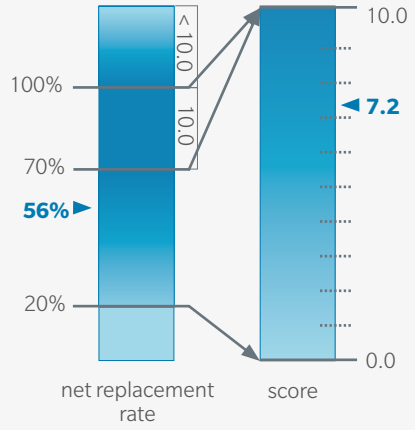
The maximum score for this indicator is obtained for any country with a result between 70 percent and 100 percent. Only Denmark is within this range, with only the Netherlands lying above it at 104 percent. Any score outside this range scores less than the maximum with a zero score being obtained for a result less than 20 percent or more than 150 percent.

9 The World Bank (1994), p295.

10 OECD (2009b), p121.

11 OECD (2013).

Calculating A2 — Net Replacement Rate for Median Income Earner



Commentary

With the exception of Denmark, the Netherlands and Indonesia, all countries have a result between 39 percent (India) and 67 percent (Switzerland). The Netherlands' result may be considered to produce a pension that is slightly too high for a median-income earner, whilst also not providing the appropriate individual flexibility throughout their lifetime. The Chinese figure has been adjusted to reflect the varying levels of replacement rates that exist in practice, as shown in Park (2012). The Indian figure has been adjusted to reflect the low coverage of mandatory pension schemes.

Weighting

These results represent a major outcome in the assessment of any retirement income system. As this indicator is likely to reflect the benefits provided to a broader group of retirees than the previous question, this indicator is given the highest weighting in the adequacy sub-index, namely 25 percent.

Question A3

What is the net household saving rate in the country?

Objective

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

Calculation

We have used data from the Economist Intelligence Unit and calculated the saving rate in the following way:

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

PDIN = Personal disposable income

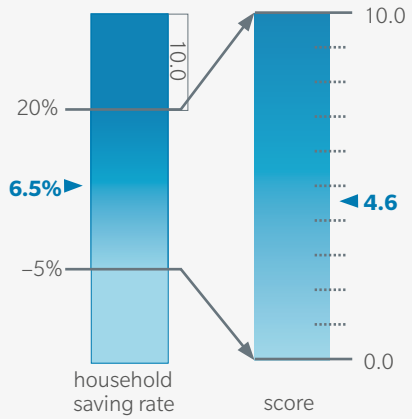
PCRD = Private consumption

To remove some volatility that may occur in annual figures, we have averaged the 2011 and 2012 measurements.

The calculated household saving rates ranged from minus 9.6 percent in Denmark to 15.6 percent in China and 20.3 percent in India. We have provided a maximum score for any country with a saving rate of 20 percent or higher, and a zero score for any country with a saving rate of less than minus 5 percent.

It is noted that the EIU's calculation excludes contributions to pension plans. 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 A3 — Household Saving Rate



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 for other purposes.

Weighting

The weighting for this measure has been set at 10 percent in the adequacy sub-index. This indicates the importance of household savings, although it is noted that some of this saving will be used for other purposes. It is also recognised that most voluntary household savings will be carried out by higher income households so that this measure is unlikely to assist those at lower and middle income levels.

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.

This question has been supplemented this year to ask whether the plan's investment earnings are taxed during the pre-retirement and/or post-retirement periods. The investment earnings (and the related compounding effect over decades) are critical in respect of adequacy as most of an individual's ultimate benefit is 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.

All questions were scored with a score of 2 for "yes" and 0 for "no". There were two 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, except for China, offer some taxation incentive for voluntary contributions. In Japan and Sweden, additional employee contributions are encouraged in certain circumstances. With the exceptions of Australia, Brazil, Denmark, France, Mexico and Sweden, all countries 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 five percent in the adequacy sub-index, split into 2% for the first question and 3% for the second question. The total weighting represents the same weighting as some other desirable design features discussed below.

Question A5

Is there a minimum access age to receive benefits from private pension plans[12] (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 scored 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 0 for age 55 to a score of 1 for age 60. Australia, China and Japan scored 0.5 as age 55 applies to some members. A maximum score is achieved if a minimum access age exists and this age is at least age 60.

Commentary

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

Weighting

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

12 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.

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 to encourage the taking up of income streams?

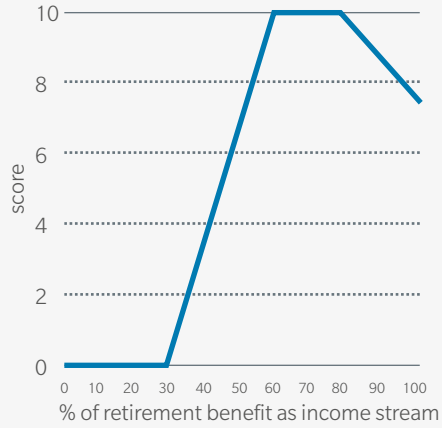
Objective

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 (2012c) 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 percent and 80 percent of the benefit is required to be converted into an income stream. A percentage above 80 percent reduces the flexibility that many retirees need whilst an answer below 60 percent is not converting a sufficient proportion of the benefit into an income stream. A percentage below 30 percent 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 the take up of income streams.

Calculating A6
— Conversion to Income Streams



Commentary

There is considerable variety between countries with some countries requiring most or all of the benefit to be converted into a lifetime annuity (e.g. Chile, Netherlands, Sweden and the UK) whereas many countries have no requirement at all (e.g. Australia, China, Japan, Korea, Mexico, Poland, Switzerland and the United States). Of these countries, only Australia and Korea have tax incentives to encourage the take up of 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) and 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 percent 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 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.

Calculation

Each of these three questions were scored 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 10 of the 20 countries is full vesting present, the real value of the benefits maintained after resignation, and the accrued benefit can be transferred, where appropriate.

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 percent 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 to both individuals, rather than just the main income earner.

Calculation

The question was scored 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 12 of the 20 countries, 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, 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 five percent weighting in the adequacy sub-index.

Question A9

What is the level of home ownership in the country?

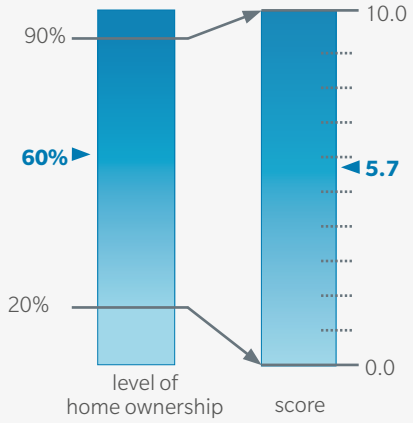
Objective

In addition to regular income, home ownership represents an important factor in affecting financial security during retirement. Indeed in some countries, such as Singapore, a portion of the member's savings can be used to help purchase a home. In other countries, taxation support encourages home ownership.

Calculation

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

Calculating A9 — Home Ownership



Commentary

The level of home ownership ranged from 44 percent in Switzerland to around 90 percent in China, India and Singapore.

Weighting

Home ownership represents an important feature of financial security in retirement. Hence, this indicator has been given a five percent 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)[13] have noted correctly, 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 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 is likely to 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 be focused on short term returns. With this in mind, we believe that it is appropriate for the investments of pension funds within any country to be diversified across a range of asset classes, thereby providing the opportunity for higher returns with reduced volatility.

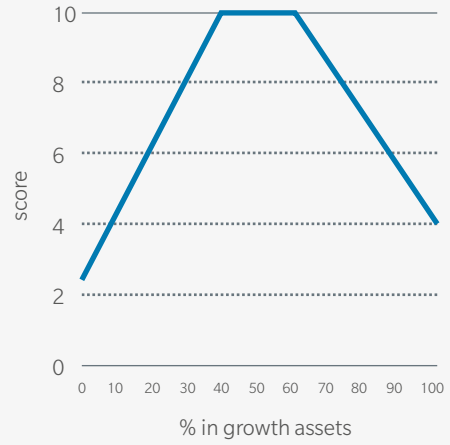
Calculation

Many countries have pension fund assets invested in a range of assets ranging from cash and short term securities through bonds and equities to alternative assets such as property, venture capital 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. Therefore a zero percentage scores 2.5 out of a maximum score of 10. This score increases to the maximum score of 10 as the proportion in growth assets increase to 40 percent of all assets. If the proportion is beyond 60 percent the score is reduced to reflect the higher level of risk and volatility.

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

Calculating A10 — Percentage of Growth Assets



Commentary

The level of growth assets ranges from virtually zero in Singapore to approximately 70 percent in Australia. Six of the 20 countries have a percentage between 40 percent and 60 percent, which indicates a reasonable level of exposure to growth assets. In comparison, India, Korea and Singapore have very low exposures to growth assets.

Weighting

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

Sources of data for the adequacy sub-index

Question A1

OECD (2011), p109 for OECD countries.

OECD (2012b), p28 for China and India.

Mercer calculations for Brazil and Singapore using government websites.

Question A2

OECD (2013).

Question A3

Data from the Economist Intelligence Unit was provided for all countries.

Question A9

The answers were sourced from a variety of sources including:

Australian Bureau of Statistics (2010), 1370.0 Measure of Australia's Progress.

Department of Statistics Singapore (2013), Home Ownership Rate of Resident Households.

Eurostat (2011), Distribution of Population by Tenure Status, Type of Household and Income Group.

Statistics Canada (2006), Homeownership Rates for Households, Canada, Provinces and Territories, 2001 and 2006.

Statistics Indonesia (2011), Housing Indicators 1993 – 2011.

United States Census Bureau (2012), Housing Vacancies and Homeownership.

The World Bank (2012a).

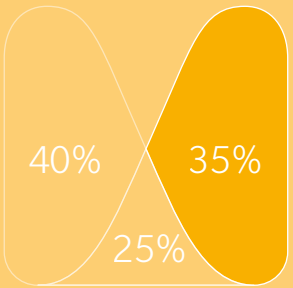
Questions A4, A5, A6, A7, A8 and A10

The answers were sourced from Mercer consultants in each country.

CHAPTER 7

THE SUSTAINABILITY SUB-INDEX

The sustainability sub-index considers a number of indicators which influence the long-term sustainability of current systems. These include factors such as measuring 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 older workers and the current level of government debt.



The country with the highest value for the sustainability sub-index is Denmark (86.1) with the lowest values being for Brazil (26.0) and Japan (28.9). Whilst several indicators influence these scores, the level of coverage of private pension plans, the level of pension assets as a proportion of GDP and the projected demographic factors 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?

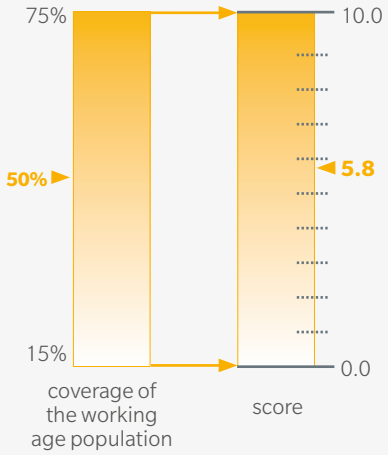
Objective

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 is sustainable as it will reduce pressure on government expenditure in the future.

Calculation

The rates of coverage ranged from less than six percent in India and about 10 percent in Brazil to more than 75 percent of the working age population in Denmark, the Netherlands and Sweden. Each country's score was related to its coverage, with a maximum score obtained for 75 percent coverage and a zero score relating to coverage of 15 percent or less, as such coverage represents a minimal contribution to the future provision of retirement income.

Calculating S1 —Coverage



Commentary

Only seven countries have coverage rates over 60 percent 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.

For Singapore there was a significant increase in the score for 2013 due to a revision of the OECD data.

Weighting

The private pension pillar plays 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 percent in the sustainability sub-index.

Question S2

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

Objective

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

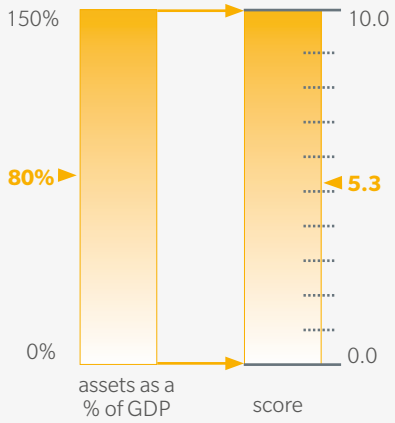
Calculation

We have included assets from private pension funds, public pension reserve funds, protected book reserves and pension insurance contracts to calculate the total level of assets held within each country to pay future pensions, irrespective of whether the pensions are paid through public pension provision or from private pension plans. After all, in most countries an individual's retirement income can include both a public pension and a private pension. The types of funds that have been included are:

- assets held in 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 ten percent of GDP for China, India and Indonesia to more than 150 percent for Denmark. A maximum score was achieved for 150 percent of GDP and a minimum score for zero percent.

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 importance of both social security reserve funds as well as the second and third pillars in each country's system. In addition, many countries are part-way through a reform process which is expected to increase the level of assets over many decades. In these cases, we would expect the score for this indicator to gradually increase in future years.

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

Weighting

This indicator shows the level of assets set aside to fund retirement incomes and represents a key indicator in the ability of each country's system to pay future benefits. Hence, this indicator was given a weighting of 20 percent in the sustainability sub-index.

Question S3

a. What is the current gap between life expectancy at birth and the state pension age?

b. What is the projected gap between life expectancy at birth and the state pension age in 2035? (This calculation allows for mortality improvement.)

c. What is the projected old-age dependency ratio in 2035?

d. What is the Total Fertility Rate (TFR) averaged over the last seven years?

Objective

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

In the second question, we project more than two decades ahead to highlight the fact that many governments have already taken action in respect of the state pension age, thereby reducing the forthcoming pension burden.

The projected old age dependency ratio question highlights the impact of the ageing population between now and 2035 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 the decades ahead.

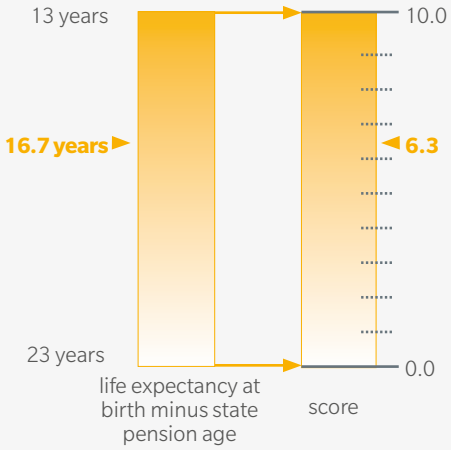
Calculations

a. We have calculated the difference between the life expectancy at birth and the existing state pension age, as used in Park (2009). The answers provide an indicator of the average period of pension payment and range from 7.3 in India and 12.4 in Mexico to 19.7 in France and 21.4 in Korea. A maximum score is achieved with a difference of 13 years or less and a zero score with a score of 23 years.

b. For 2035, the results range from 11.4 in India and 13.4 in Poland to 22.7 years in France. The formula used remains unchanged with a maximum score for 13 years or less and a zero score for 23 years.

The calculations for these two questions are averaged for males and females.

Calculating S3 — Life Expectancy and State Pension Age



c. The old-age dependency ratio is the population aged 65 and over divided by the population aged between 15 and 64. The projected dependency ratios for 2035 range from 13 percent in India and 16 percent in Indonesia to 55 percent in Germany and 58 percent in Japan. A maximum score is achieved with a dependency ratio of 20 percent or less and a zero score with a ratio of 60 percent or higher.

d. The TFR ranges from 1.2 in Singapore to 2.4 in Indonesia and 2.6 in India. In view of these scores and the likely range in the future, a minimum score of zero is achieved for a TFR of 1.0 or less with a maximum score for a TFR of 2.5 or higher.

Commentary

All countries have a difference between life expectancy and state pension age of less than 20 years, with the exception of Korea. France and Japan had differences in excess of 20 years in 2012, but their differences are now below 20 years due to increases to their state pension ages. State pension ages have also increased during the last twelve months in Australia, Chile and Germany.

The projected results for 2035 differ from the current results with Chile, China, France, Japan, Korea, Singapore and Switzerland having a difference in excess of 20 years.

A TFR of less than 1.5 in Germany, Japan, Korea, Poland, Singapore and Switzerland raises serious issues for the future age structure of these countries. Whilst immigration can assist in the short term it is unlikely to provide sound long term solutions.

Weighting

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

Question S4

What is the level of mandatory contributions that are set aside for retirement benefits (i.e. funded), expressed as a percentage of wages? This includes mandatory contributions into public or private sector funds.[14]

Objective

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

Calculation

There is considerable variety in the extent to which the contributions paid are actually invested into a fully funded investment vehicle. This calculation multiplies the level of mandatory contributions by the percentage of these funds that are invested to provide for future retirement benefits. For example, in Australia, Chile and Denmark the mandatory contributions are fully invested for the individuals concerned. On the other hand, Brazil, France, and Germany 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 percent of the contributions are invested.

In China, only the employee contributions are required to be funded but, currently, many of the individual accounts are notional. Hence 50% percent of employee contributions have been used. We have also used 50 percent in Sweden as they are transitioning from a pay-as-you-go approach to a fully funded one.

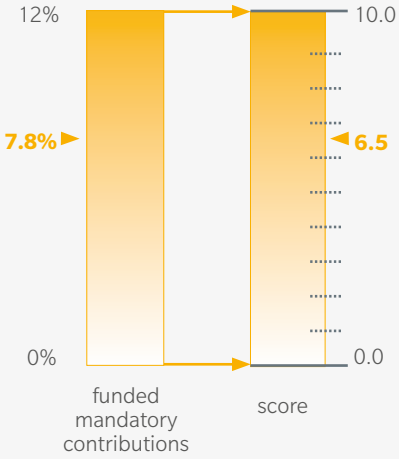
14 This question does not include contributions arising from statutory minimum levels of funding for defined benefit plans as these plans do not represent mandatory arrangements.

For India, we have used the level of contributions paid into the Employees Pension Scheme but excluded contributions paid to the Employees Provident Fund Scheme as these benefits can be used for a range of purposes. For Singapore, consistent with the revised OECD approach to net replacement rates, a higher level of mandatory contributions was used this year (further detail can be found in Chapter 3).

In other countries, social security reserve funds are funded by the difference between contributions and current benefit payments or through top-up contributions from the government. Japan, Korea and the USA are examples of this approach. In these cases, we have assumed that 15 percent, 50 percent and 33 percent of the contributions are funded respectively. On the other hand, in Mexico the government makes a contribution into all individual retirement accounts.

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 percent in several countries to 12 percent or more in Denmark and Singapore. In view of this range and likely developments in some countries, a maximum score is achieved with a level of 12 percent with a zero score being obtained where there are no funded mandatory contributions.

Calculating S4 — Funded Mandatory Contributions



Commentary

The level of mandatory contributions 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.

Increased scores for Australia and Switzerland reflect recent increases in mandatory contributions.

Weighting

This item represents one of several key indicators representing desirable features of a sustainable retirement income system. A weighting of 15 percent in the sustainability sub-index is used for this indicator.

Question S5

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

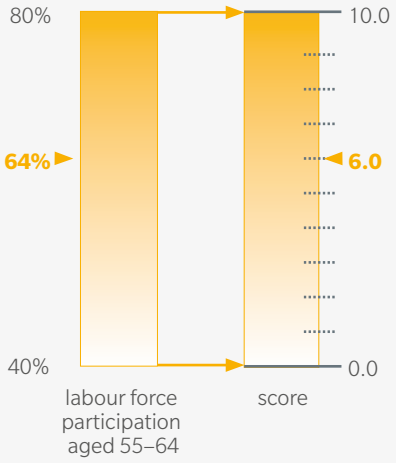
Objective

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 income needed, as well as accumulating greater savings for retirement during the working years.

Calculation

The percentages ranged from 40.2 percent in Poland and 45.0 percent in France to 71.8 percent in Switzerland and 76.2 percent in Sweden. A maximum feasible score is considered to be 80 percent for this age bracket. Hence a participation rate of 80 percent or more scores maximum results whilst a participation rate of 40 percent or less scores zero.

Calculating S5 — Labour Force Participation Rate



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 rates at older ages.
It is pleasing to note that many countries are now experiencing increases in their labour force participation rates at these older ages. This trend should continue to be encouraged.

Weighting

This item has a weighting of 10 percent in the sustainability sub-index.

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[15]), expressed as a percentage of GDP?

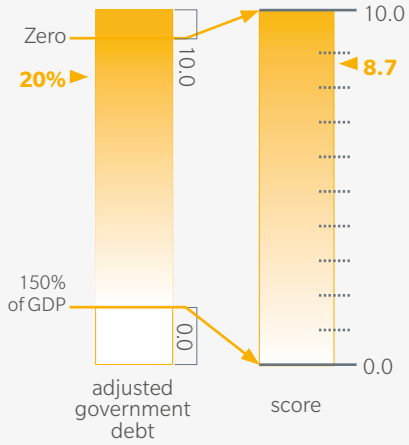
Objective

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/or other benefits (such as health) represents an important factor in the sustainability of current systems. Clearly, higher government debt increases the likelihood that there will need to be reductions in the level or coverage of future benefits.

Calculation

The level of the adjusted government debt ranges from less than zero for Singapore to 238 percent in Japan. A maximum score was achieved for countries with a negative level of adjusted government debt (i.e. a surplus), with a zero score for countries with an adjusted government debt of 150 percent of GDP or higher.

Calculating S6
— Adjusted Government Debt



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 payments into the future. The level of debt increased in many countries following the Global Financial Crisis. There are also other longer term adverse economic effects of higher government debt which can affect the investment returns received by pension plan members.

Weighting

This item has a weighting of 10 percent in the sustainability sub-index.

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

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 where there is an ageing population, is to permit individuals to phase into retirement by gradually reducing their reliance on earned income whilst at the same time enabling them to access their accrued retirement benefit through an income stream. It is also important that such individuals can continue to contribute or accrue benefits whilst working.

Calculation

The first question was given a score of 2 for "yes" and 0 for "no". However, in many countries it may depend on the particular fund 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 countries employees are able, at least to some extent, to continue working at older ages whilst also accessing an income stream from their accumulated benefits, continuing to contribute and accruing benefits.

Weighting

This item has a weighting of five percent in the sustainability sub-index as it is not considered as critical as the previous indicators. The total weighting was split into 4% for the first question and 1% for the second question.

Sources of data for the sustainability sub-index

Question S1

Mercer calculations for Brazil, Japan and France.

OECD (2012a), p105 for all other countries although adjustments were needed when data was not available or comprehensive.

OECD (2012b), p43 for China, India, Indonesia.

OECD calculation for Singapore.

Question S2

Mercer calculations for China and Singapore.

OECD (2011), p179 in relation to private pension plans for Japan, and in relation to pension insurance contracts for Germany.

OECD (2012a), p229 in relation to public pension reserve funds for all countries where relevant.

OECD StatExtracts Database, Funded Pensions Indicators 2013, in relation to pension funds (autonomous), book reserve (non-autonomous) and pension insurance contracts for all countries (except where specified above).

Question S3

The life expectancy aged dependency (2010-2015), and total fertility rate (2005-2010) data were from United Nations (2013).

The total fertility rate 2011 and 2012 data were from CIA, The World Factbook.

State pension ages were sourced from Mercer consultants in each country.

Question S5

International Labour Organization (2011).

Question S6

International Monetary Fund (2013).

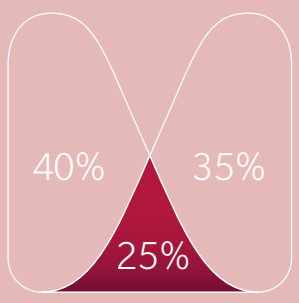
Sovereign Wealth Fund Institute: www.swfinstitute.org

Questions S4 and S7

Answers were sourced from Mercer consultants in each country.

CHAPTER 8
THE INTEGRITY SUB-INDEX

The integrity sub-index considers three broad areas of the pension system, namely regulation and governance; protection and communication for members; and costs. This sub-index also asks a range of questions about the requirements that apply to the private sector pension plans in each country. After all, 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 integrity sub-index

The country with the highest value for the integrity sub-index is Australia (88.1), with the lowest value being for Mexico (46.0). The better scores were achieved by countries 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 are designed to assess the extent to which a private sector pension plan is required to be a separate entity from the sponsoring employer (which usually entails holding assets that are separate from the employer) and is subject to some level of regulatory oversight.

Thirteen of the 20 countries obtained the maximum score indicating the presence of the basic groundwork needed for a sound governance framework.

Calculation

Each question in this section was scored 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

Both questions were given a five percent weighting, giving a total weighting of 10 percent 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 (or protector) discharge its supervisory responsibilities? Please rank on a scale of 1 to 5.

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

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 with the industry.

Calculation

The first two questions in this section were scored 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 scored on a five-point scale as shown in the above table. It is important to note that this question did not assess the quality of the supervision; rather it considered the activity of the regulator.

The results highlight that the role of the pension regulator varies greatly around the world. Generally speaking, the pension regulator plays a stronger role where the pension industry has developed over many decades.

Weighting

The first and third questions were each given a five percent weighting, with the second question being given a 2.5 percent weighting, resulting in a total weighting of 12.5 percent 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?

Objective

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

The third question has been introduced this year to recognise that fiduciaries 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 would mean that the pension plan should have a clear policy to handle such situations. Only three countries currently require a conflicts of interest policy.

Calculation

Each question in this section was scored 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 and second questions were each given a 5 percent weighting, with the third question given a 2.5 percent weighting, resulting in a total of 12.5 percent for these three 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. Only eight out of the 20 countries received the maximum score indicating that several countries could improve their requirements, particularly in respect of the first question.

Calculation

Each question in this section was scored 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

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

Question R5

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?

Objective

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

Calculation

The World Bank publishes results from the Worldwide Governance Indicators (WGI) project for 213 economies for six dimensions of governance. The following four indicators were considered most relevant to the governance and integrity of retirement income systems:

- Government Effectiveness
- Regulatory Quality
- Rule of Law
- Control of Corruption

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 four scores were summed and then increased by 1.5 to avoid any negative scores. The scores ranged from zero for Indonesia to 9.9 for Denmark.

Weighting

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

Commentary on the regulation and governance results

For 2013, the weighting for R1 was reduced by 2.5 percent due to the removal of a question, this was offset by an increase of 2.5 percent in the weighting for R3 to incorporate the new question in relation to conflicts of interest policy. Hence the weighting for the regulation and governance questions was maintained at 50 percent of the integrity sub-index.

The scores ranged from 18.1 for Korea to 48.0 for Australia. The low score for Korea is indicative of the fact that the regulator has minimal requirements when compared to the more developed pension industries.

Protection and communication for members

Calculation

With the exception of question P1 dealing with funding, each question in this section is scored 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?

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

Objective

These questions were 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 countries 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 countries whereas in other countries any deficit requires rectification within a specified period. Australia, Chile, Korea, and the Netherlands 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 percent 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 state of the member's employer.

Commentary

Most countries have a restriction on the level of in-house assets held by a pension plan. These restrictions are often set at five to ten percent of the plan's assets. A maximum score was given where in-house assets are restricted to five percent. There are no restrictions in Indonesia or Japan.

Weighting

This requirement represents a key method of protecting the member's accrued benefits and is given a five percent 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 considered 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 by country. In some cases, there are some restricted arrangements in place to support the member whereas in the UK a fraud compensation scheme exists.

Weighting

Whilst these issues are very important where such incidents occur, experience in most countries suggests that it is not a common event or that its financial effect is relatively minor. Hence each question is given the weighting of 2.5 percent in the integrity sub-index, resulting in a total of five percent 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 countries, except China, Denmark and India, require information to be provided when members join the plan. Although not a requirement, most members in Denmark receive individual information about their benefits.

Weighting

The weighting for this question is five percent in the integrity sub-index.

Question P5

Are plan members required to receive an annual report about 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 also becomes important for members to receive some information about the investments in which their accumulated benefits are invested.

Commentary

There is considerable variety in the responses, with seven out of the 20 countries 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 investments representing more than 1% of plan assets are required to be disclosed. More than half of the countries have no requirements relating to the plan's major investments.

Weighting

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

Questions P6

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

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

Objective

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

Commentary

The majority of countries have a requirement concerning annual personal statements with Chile, the Netherlands, Sweden, Switzerland and the United Kingdom requiring some form of projection. As account balances increase and individuals take on greater responsibility for their retirement benefits, the provision of this type of information will become increasingly important to members.

Weighting

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

Question P7

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

Objective

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

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

Commentary

Six countries (Australia, Denmark, Indonesia, the Netherlands, Switzerland and the UK) have a complaints system that is independent from both the provider and the regulator. However Canada, Chile, Germany, India, Poland and the USA have a range of processes that can be used for this purpose.

Weighting

Whilst this indicator is not as important as funding or communication to members, it represents a desirable feature of the better pension systems as it provides all members with access to an independent body, should an unfortunate event occur. It is given a 2.5 percent weighting in the integrity sub-index.

Commentary on the protection and communication results

The scores ranged from 14.4 in India and 16.3 in France to 34.5 in Australia and 36.8 in Switzerland. The low scores in France and India are caused by very limited requirements in these countries to provide information to members.

Costs Questions

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."[16]

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

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 proportion of each country's pension industry that is employer-sponsored plans, not-for-profit plans and 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 centralized fund. These scores were then weighted by the actual characteristics of the pension industry in each country.

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

Weighting

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

Commentary on the costs results

The scores for these two indicators ranged from 3.7 for the USA and 4.1 in France to 9.9 for India and 10.0 for Singapore. The high scores for these two countries are not surprising as each country has a central fund which should provide administrative savings with the potential to add value through investment opportunities.

Sources of data for integrity sub-index

As the integrity sub-index is primarily based on the operations of the private sector pension industry in each country, answers to all but one of the questions were sourced from Mercer consultants in the relevant countries. The exception was Question R5 which used Worldwide Governance Indicators from The World Bank (2012b).

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

REFERENCES AND ATTACHMENTS

REFERENCES

- Allianz (2010), *Behavioral Finance and the Post-Retirement Crisis*, Allianz.
- CIA, The World Factbook: cia.gov/library/publications/the-world-factbook.
- Economist Intelligence Unit, Market Indicators and Forecasts: eiu.com.
- Eurostat Database: epp.eurostat.ec.europa.eu.
- Hinz R, Rudolph H P, Antolin P and Yermo J (2010), *Evaluating the Financial Performance of Pension Funds*, The World Bank, Washington DC.
- Holzmann R and Hinz R (2005), *Old Age Income Support in the 21st Century*, The World Bank, Washington DC.
- International Labour Organization (2011), *Key Indicators of the Labour Market*, 7th Edition, ILO.
- International Monetary Fund (2013), World Economic Outlook Database, April 2013: imf.org.
- Jackson R, Howe N and Nakashima K (2010), *The Global Aging Preparedness Index*, Center for Strategic and International Studies, Washington DC.
- Karam P, Muir D, Pereira J and Tuladhar A (2011), *Beyond Retirees, Finance and Development*, June.
- OECD (2009a), *Pensions at a Glance 2009: Retirement Income Systems in OECD Countries*, OECD.
- OECD (2009b), *OECD Private Pensions Outlook 2008*, OECD.
- OECD (2011), *Pensions at a Glance 2011: Retirement Income Systems in OECD and G20 Countries*, as amended by corrigenda 17 October 2011, OECD Publishing.
- OECD (2012a), *Pensions Outlook 2012*, OECD Publishing.
- OECD (2012b), *Pensions at a Glance Asia Pacific 2011*, OECD Publishing.
- OECD (2012c), *The OECD Roadmap for the Good Design of Defined Contribution Pension Plans*, OECD Working Party on Private Pensions, June.
- OECD (2013), *Net Pension Replacement Rates*, unpublished.
- OECD StatExtracts Database: stats.oecd.org.
- Park D (2009), *Ageing Asia's Looming Pension Crisis*, ADB Economics Working Paper Series No. 165, Asian Development Bank, Manila.
- Park D (2012), *Pension Systems in East and Southeast Asia: Promoting Fairness and Sustainability*, Asian Development Bank, Manila.
- Rocha R and Vittas D (2010), *Designing the Payout Phase of Pensions Systems*, Policy Research Working Paper 5289, The World Bank, Washington DC.
- Sovereign Wealth Fund Institute: www.swfinstitute.org.
- United Nations (2013), *World Population Prospects: The 2012 Revision*: esa.un.org/unpd/wpp.
- The World Bank (1994), *Averting the Old Age Crisis*, Oxford University Press.
- The World Bank (2012a), *2012 World Bank Development Indicators*, The World Bank, Washington DC.
- The World Bank (2012b), Worldwide Governance Indicators: info.worldbank.org/governance/wgi/index.asp.

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

	Question	Question weight	Score for each country																			
			Australia	Brazil	Canada	Chile	China	Denmark	France	Germany	India	Indonesia	Japan	Korea	Mexico	Netherlands	Poland	Singapore	Sweden	Switzerland	UK	USA
A1	What is the minimum pension, as a percentage of the average wage, that a single aged person will receive?	17.5%	6.9	10.0	10.0	2.7	6.0	10.0	6.6	5.2	0.0	0.0	4.7	0.0	9.4	9.6	3.5	0.2	7.4	7.2	4.6	4.5
A2	What is the net replacement rate for a median-income earner?	25%	9.3	8.3	8.4	6.2	4.8	10.0	8.5	7.8	3.9	0.0	4.5	6.4	5.4	9.2	8.0	5.5	6.8	9.4	5.6	6.2
A3	What is the net household saving rate in the country?	10%	6.3	3.0	2.6	0.1	8.2	0.0	6.6	5.5	10.0	4.0	2.0	3.4	0.0	1.7	1.7	7.0	3.6	7.0	3.4	4.8
A4	Are voluntary member contributions 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%	7.0	4.0	10.0	10.0	6.0	4.0	4.0	10.0	10.0	10.0	8.0	10.0	7.0	10.0	10.0	10.0	2.0	10.0	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%	8.3	0.0	3.3	5.0	8.3	10.0	10.0	10.0	0.0	0.0	5.0	6.7	6.7	3.3	10.0	6.7	6.7	5.3	6.7	6.3
A6	What proportion, if any, of the retirement benefit from the private pension arrangements is required to be taken as an income stream? Are there any tax incentives that exist to encourage taking up of income streams?	10%	2.0	5.5	5.0	7.5	0.0	6.7	5.0	4.5	2.5	6.7	0.0	2.0	0.0	7.5	0.0	7.5	7.5	0.0	10.0	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 (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	9.0	6.0	10.0	8.0	10.0	8.0	5.0	10.0	9.0	6.0	8.0	4.0	10.0	10.0	10.0	10.0	10.0	10.0	5.0
A8	Upon a couple's divorce or separation, are the individuals' accrued pension benefits normally taken into account in the overall division of assets?	5%	10.0	0.0	10.0	10.0	10.0	0.0	5.0	10.0	0.0	0.0	10.0	0.0	5.0	10.0	10.0	10.0	2.5	10.0	10.0	10.0
A9	What is the level of home ownership in the country?	5%	6.9	7.7	6.9	6.6	9.7	6.7	6.2	4.8	9.6	8.4	5.9	5.8	7.2	6.7	8.9	10.0	7.1	3.4	6.8	6.5
A10	What is the proportion of total pension assets invested in growth assets?	5%	8.8	8.1	10.0	10.0	6.3	6.3	6.3	10.0	3.4	6.3	9.8	3.6	5.8	7.0	9.1	2.5	8.1	10.0	10.0	10.0
	Adequacy sub-index	40%	75.6	63.3	72.4	58.6	61.1	75.2	71.7	69.7	41.2	29.8	47.9	43.7	51.9	76.6	64.4	59.0	65.2	72.6	68.2	56.6

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

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

	Question	Question weight	Score for each country																			
			Australia	Brazil	Canada	Chile	China	Denmark	France	Germany	India	Indonesia	Japan	Korea	Mexico	Netherlands	Poland	Singapore	Sweden	Switzerland	UK	USA
S1	What proportion of the working age population are members of private pension plans?	20%	8.9	0.0	5.8	9.8	0.4	10.0	6.6	5.4	0.0	0.0	3.0	3.0	7.1	10.0	6.6	8.2	10.0	9.2	4.7	5.4
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?	20%	6.6	0.9	5.9	4.0	0.5	10.0	0.9	1.3	0.4	0.0	3.4	2.9	0.0	9.0	1.1	4.5	5.9	7.4	6.4	7.0
S3	What is the current gap between life expectancy at birth and the state pension age? What is the projected gap in 2035? What is the projected old-age dependency ratio in 2035? What is the total fertility rate averaged over the last seven years?	20%	5.7	7.3	5.5	5.2	4.2	6.8	3.7	4.4	10.0	7.6	2.0	2.3	8.8	5.5	6.7	3.3	5.2	4.0	5.7	7.9
S4	What is the level of mandatory contributions that are set aside for retirement benefits (ie funded), expressed as a percentage of wages? This includes mandatory contributions into public or private sector funds.	15%	7.7	0.0	6.2	8.3	3.3	10.0	0.0	0.0	6.9	4.8	2.1	3.8	5.2	6.7	1.9	10.0	7.2	7.5	0.8	3.4
S5	What is the labour force participation rate for those aged 55-64?	10%	5.9	4.2	5.9	5.8	4.2	5.8	1.3	6.1	4.1	7.0	7.2	6.0	4.0	4.8	0.1	5.6	9.0	8.0	5.1	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?	10%	8.2	5.5	4.3	9.4	9.4	6.7	4.0	4.5	5.5	8.4	0.0	8.1	7.1	5.2	6.3	10.0	7.5	6.7	4.0	2.9
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%	10.0	0.0	8.0	0.0	0.0	10.0	8.0	8.0	0.0	0.0	4.0	10.0	0.0	10.0	9.0	10.0	10.0	4.0	8.0	6.0
	Sustainability sub-index	35%	73.0	26.0	57.9	65.6	28.9	86.1	31.7	36.8	40.8	37.7	28.9	41.0	50.8	74.1	42.6	67.5	74.5	69.0	48.0	57.8

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

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

	Question	Question weight	Score for each country																		
			Australia	Brazil	Canada	Chile	China	Denmark	France	Germany	India	Indonesia	Japan	Korea	Mexico	Netherlands	Poland	Singapore	Sweden	Switzerland	UK	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?	10%	10.0	10.0	10.0	10.0	10.0	10.0	5.0	8.8	10.0	10.0	7.5	7.5	2.5	10.0	7.5	10.0	8.8	10.0	10.0	10.0
	Are private sector pension plans required to submit a written report in a prescribed format to a regulator each year? Does the regulator make industry data available from the submitted forms on a regular basis? How actively does the regulator (or protector) discharge its supervisory responsibilities?	12.5%	9.2	9.2	8.7	9.2	4.4	10.0	8.2	7.4	6.4	9.2	7.6	4.4	7.6	9.2	7.6	5.6	9.2	8.4	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?	12.5%	10.0	10.0	7.0	8.0	4.0	8.0	6.0	8.0	4.0	8.0	4.0	0.0	0.0	8.0	8.0	10.0	8.0	6.0	9.0	0.0
	Do the private pension plan's trustees/ executives/fiduciaries have to satisfy any personal requirements set by the regulator? Are the financial accounts of private pension plans (or equivalent) required to be audited annually by a recognised professional?	5%	10.0	10.0	7.5	7.5	10.0	10.0	10.0	7.5	5.0	10.0	7.5	0.0	10.0	10.0	7.5	7.5	7.5	7.5	7.5	5.0
	What is the capacity of the government to effectively formulate and implement sound policies? What respect do citizens and the state have for the institutions that govern economic and social interactions among them?	10%	9.0	1.8	8.8	7.2	0.4	9.9	7.0	7.8	0.5	0.0	6.5	5.1	1.3	9.1	4.4	9.3	9.5	8.8	7.9	7.2

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

Continues next page

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

	Question	Question weight	Score for each country																			
			Australia	Brazil	Canada	Chile	China	Denmark	France	Germany	India	Indonesia	Japan	Korea	Mexico	Netherlands	Poland	Singapore	Sweden	Switzerland	UK	USA
Protection and communication for members (P1–P7)	For defined benefit schemes, are there minimum funding requirements? What is the period over which any deficit or shortfall is normally funded? For defined contribution schemes, are the assets required to fully meet the members' accounts?	10.0%	10.0	8.0	9.0	10.0	7.5	10.0	5.0	8.0	5.0	5.0	9.0	9.0	6.0	10.0	10.0	5.0	8.0	9.0	9.0	8.0
	Are there any limits on the level of in-house assets held by a private sector pension plan? If yes, what are they?	5%	10.0	7.5	8.8	10.0	7.5	10.0	5.0	8.8	8.8	0.0	0.0	10.0	7.5	10.0	7.5	6.3	10.0	10.0	10.0	5.0
	Are the members' accrued benefits provided with any protection or reimbursement from an act of fraud or mismanagement within the fund? In the case of employer insolvency (or bankruptcy), do any unpaid employer contributions receive priority over payments to other creditors, and/or are members' accrued benefits protected against claims of creditors?	5%	5.0	0.0	2.5	2.5	2.5	2.5	2.5	7.5	2.5	10.0	2.5	0.0	0.0	0.0	2.5	5.0	5.0	7.5	10.0	5.0
	When joining the pension plan, are new members required to receive information about the pension plan?	5%	10.0	10.0	10.0	10.0	0.0	0.0	10.0	10.0	0.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
	Are plan members required to receive 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%	9.0	10.0	2.5	3.0	0.0	0.0	0.0	2.5	0.0	0.0	3.8	0.0	0.0	8.0	0.0	8.0	3.8	8.0	4.5	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?	7.5%	6.7	6.7	6.7	10.0	6.7	6.7	3.3	3.3	3.3	6.7	3.3	3.3	6.7	10.0	6.7	6.7	10.0	10.0	6.7	6.7
	Do plan members have access to a complaints tribunal which is independent from the pension plan?	2.5%	10.0	0.0	7.5	7.0	0.0	10.0	0.0	5.0	5.0	10.0	0.0	0.0	0.0	10.0	5.0	0.0	0.0	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%	5.7	6.0	4.6	5.5	6.7	8.8	4.1	5.4	9.9	8.3	8.6	8.2	8.0	7.4	7.5	10.0	8.2	5.6	6.2	3.7
		25%	88.1	73.6	74.5	79.9	50.0	80.0	55.1	71.1	50.3	67.3	60.5	47.9	46.0	87.0	68.9	77.2	81.5	82.9	85.4	61.2

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