



FINANCE

FINANCE

EQUITABLE GROWTH, FINANCE & INSTITUTIONS INSIGHT

# Asian Provident Funds Meeting Tomorrow's Challenges

Authors:  
Richard Jackson and Evan Inglis



Some rights reserved.

This work is a product of the staff of The World Bank with external contributions. The findings, interpretations, and conclusions expressed in this work do not necessarily reflect the views of The World Bank, its Board of Executive Directors, or the governments they represent. The World Bank does not guarantee the accuracy of the data included in this work. The boundaries, colors, denominations, and other information shown on any map in this work do not imply any judgment on the part of The World Bank concerning the legal status of any territory or the endorsement or acceptance of such boundaries.

Nothing herein shall constitute or be considered to be a limitation upon or waiver of the privileges and immunities of The World Bank, all of which are specifically reserved.

#### Rights and Permissions



This work is available under the Creative Commons Attribution 3.0 IGO license (CC BY 3.0 IGO), <http://creativecommons.org/licenses/by/3.0/igo>. Under the Creative Commons Attribution license, you are free to copy, distribute, transmit, and adapt this work, including for commercial purposes, under the following conditions:

**Attribution**—Please cite the work as follows: 2021. Richard Jackson and Evan Inglis. *Asian Provident Funds: Meeting Tomorrow's Challenges*. EFI Insight-Finance. Washington, DC: World Bank.

**Translations**—If you create a translation of this work, please add the following disclaimer along with the attribution: *This translation was not created by The World Bank and should not be considered an official World Bank translation. The World Bank shall not be liable for any content or error in this translation.*

**Adaptations**—If you create an adaptation of this work, please add the following disclaimer along with the attribution: *This is an adaptation of an original work by The World Bank. Views and opinions expressed in the adaptation are the sole responsibility of the author or authors of the adaptation and are not endorsed by The World Bank.*

**Third-party content**—The World Bank does not necessarily own each component of the content contained within the work. The World Bank therefore does not warrant that the use of any third-party-owned individual component or part contained in the work will not infringe on the rights of those third parties. The risk of claims resulting from such infringement rests solely with you. If you wish to reuse a component of the work, it is your responsibility to determine whether permission is needed for that reuse and to obtain permission from the copyright owner. Examples of components can include, but are not limited to, tables, figures, or images.

All queries on rights and licenses should be addressed to World Bank Publications, The World Bank Group, 1818 H Street NW, Washington, DC 20433, USA; e-mail: [pubrights@worldbank.org](mailto:pubrights@worldbank.org).

Cover design and layout: Diego Catto / [www.diegocatto.com](http://www.diegocatto.com)



# Table of Contents

<b>Acknowledgments</b>	<b>iii</b>
<b>Abbreviations</b>	<b>v</b>
<b>Report Overview</b>	<b>vii</b>
<b>Chapter 1: Asia’s Provident Funds at a Crossroads</b>	<b>1</b>
The Provident Fund Model	2
The Crossroads	5
<b>Chapter 2: Investment and Governance</b>	<b>13</b>
The Stages of Provident Fund Evolution	13
Assessing Investment Performance	18
Three Provident Funds in Focus	21
India’s EPF	23
Indonesia’s JHT	26
Malaysia’s EPF	29
<b>Chapter 3: Benefit Design and Adequacy</b>	<b>33</b>
Adequacy Today	34
Adequacy Tomorrow	36
<b>Chapter 4: Directions for Reform</b>	<b>41</b>
Investment and Governance	42
Benefit Design and Adequacy	44
<b>Technical Appendix</b>	<b>49</b>
<b>About the Authors</b>	<b>55</b>
<b>About the Global Aging Institute</b>	





## Acknowledgments

This report was produced by Richard Jackson and Evan Inglis from the Global Aging Institute, in collaboration with Fiona Stewart from the World Bank. The report contributes to the knowledge and research outputs produced under the Joint Capital Markets Program (J-Cap) of the IFC and World Bank, which is kindly supported by the Government of the Grand Duchy of Luxembourg.

The authors would like to thank the representatives from the provident funds included in the report for their kind assistance with data provision. Particular thanks goes to the team from the Employees Provident Fund of Malaysia for their feedback and very helpful discussions while the report was being drafted.

Thanks also go to Mark Dorfman, Ketut Kusuma, and Katya Gratcheva for their insightful peer review comments. The authors also appreciate the insights and assistance from other World Bank and IFC colleagues, including from the offices in Jakarta, India, Singapore, and Kuala Lumpur.



乐和乐  
Locajoy

罗运伟  
配送员  
经营管理部



## Abbreviations

AFPs	Administradoras de Fondos de Pensiones <i>[Chilean pension fund management companies]</i>	(Chile)
BPJS	Badan Penyelenggara Jaminan Sosial <i>[Indonesian social security agency]</i>	(Indonesia)
BRS	Basic Retirement Sum	(Singapore)
CalPERS	California Public Employees' Retirement System	(United States)
CPF	Central Provident Fund	(Singapore)
CPP	Canada Pension Plan	(Canada)
CPPIB	Canada Pension Plan Investment Board	(Canada)
EPF	Employees Provident Fund	(Malaysia)
EPF	Employees' Provident Fund	(India)
EPFO	Employees' Provident Fund Organization	(India)
EPS	Employees' Pension Scheme	(India)
ETF	Exchange Traded Fund	
FRS	Full Retirement Sum	(Singapore)
GAI	Global Aging Institute	
GDP	Gross Domestic Product	
GIC	GIC Private Limited	(Singapore)
GPF Global	Government Pension Fund Global	(Norway)
GPIF	Government Pension Investment Fund	(Japan)
ILO	International Labour Organization	
IMF	International Monetary Fund	
JHT	Jaminan Hari Tua <i>[Indonesian provident fund]</i>	(Indonesia)
JP	Jaminan Pensiun <i>[Indonesian pension program]</i>	(Indonesia)
MA	MediSave Account	(Singapore)
MIS	Members Investment Scheme	(Malaysia)
NPS	National Pension Service	(South Korea)
OA	Ordinary Account	(Singapore)
OECD	Organisation for Economic Co-operation and Development	
RA	Retirement Account	(Singapore)
SA	Special Account	(Singapore)
SSGS	Special Singapore Government Securities	(Singapore)
UN	United Nations	







# Report Overview

Across the emerging world, policymakers are grappling with how to build retirement systems that meet the needs of their rapidly developing and rapidly aging societies. Nowhere is the challenge more urgent than in Asia, which is both developing and aging more rapidly than anywhere else on earth.

Provident funds, which are fully funded, government-managed, defined contribution systems, have long been the dominant form of retirement provision in much of Asia. The purpose of this report is to assess the strengths and weaknesses of the provident fund model, evaluate the performance of three of Asia's four largest provident funds, and identify steps that they and other provident funds can take to improve retirement security. The funds covered in the report are India's Employees' Provident Fund (EPF), Indonesia's Jaminan Hari Tua (JHT), and Malaysia's Employees Provident Fund (EPF). Singapore's Central Provident Fund (CPF), Asia's other large provident fund, is not covered because it does not invest in financial markets, and so differs fundamentally from the others.

The report identifies two key features of the provident fund model that may make it an attractive choice for both governments and workers in emerging markets. The first is that governments can harness provident fund savings to advance national development objectives, which can be a great advantage in countries that may lack the tax capacity to fund development directly through government budgets. The second is that provident funds can serve a wide range of workers' savings needs beyond the need to save for retirement, from financing home purchases or college educations to providing funds in the event of a medical emergency or the loss of employment. This too can be a great advantage in countries where insurance and credit mechanisms may be underdeveloped and most workers lack precautionary savings.

Yet the report cautions that the same features that make the model attractive may also make it difficult for provident funds to ensure retirement security. Investment policies that are intended to advance national development objectives, even when they are well designed and effective, may not be the policies most likely to maximize returns for participants. The fact that provident funds are all-purpose savings programs may mean that retirement savings takes second place to participants' other savings priorities, which are typically more immediate and pressing. To be successful as retirement systems, provident funds must strike the right balance between their competing goals. What the right balance is, moreover, will necessarily shift over time as countries develop and their populations age.

Asia's provident funds stand at a crossroads. The traditional system of family-based retirement security is under mounting stress from the forces of modernization, and will soon come under intense new demographic pressure from declining family size. Yet adequate government and market substitutes for family support networks are not yet fully developed. Many workers, and in some countries the vast majority of workers, are earning no contributory retirement benefit of any kind. India's EPF and Indonesia's JHT only cover about one-tenth of the workforce. And

though the coverage rate is considerably higher in Malaysia's EPF, it is still far from universal. Moreover, as the report documents, many of those workers lucky enough to participate in provident funds receive benefits that are too small to support them in old age. Meanwhile, only a tiny sliver of the workforce, just 1 to 3 percent in India, Indonesia, and Malaysia, participates in a private retirement savings program. Although all three countries have some kind of noncontributory income support program for the indigent elderly, only a small fraction of the population in need actually receives benefits. The result is growing retirement insecurity.

There are many reasons why provident fund participants often end up with insufficient retirement savings, including withdrawals for nonretirement purposes, low contribution density, early retirement ages, and the lack of provision for lifetime income. Historically, the real investment returns earned by most provident funds have also been lower than those earned by most large pension funds and sovereign wealth funds. At the same time, rapid real wage growth has compounded the problem of low returns, making it difficult for savings to keep pace with incomes. It is possible that shifts in some of these variables will help to boost benefits in the future. Contribution density may rise along with development, while real wage growth may slow. Today's workers, who may not be able to rely on their extended families when they grow old to the same extent that today's retirees do, could also decide to preserve more of their savings for retirement. Still, without significant reforms, retirement insecurity is likely to remain widespread.

Projections prepared for the report suggest that gross replacement rates for average earners entering the workforce today could, under realistic assumptions, be as low as 26 percent in Malaysia, 31 percent in Indonesia, and 51 percent in India. In Indonesia and India, moreover, these projections include benefits from government defined benefit pension programs in which provident fund members also participate. Excluding those benefits, the replacement rates for Indonesia and India would be just 11 percent and 19 percent, respectively.

If Asia's provident funds are to meet tomorrow's challenges, they will need to evolve into something closer to dedicated retirement systems whose primary objective is to maximize the retirement income of participants. Advancing broad national development objectives may remain an important function of some provident funds, especially in the region's less developed economies. Provident funds may also continue to serve multiple savings purposes. The balance between priorities, however, will need to shift toward ensuring retirement security. Successfully bringing about this shift will require changes in both investment policies and benefit design.

The report recognizes that the reforms that may be appropriate for one country may not yet be appropriate for another. Some Asian countries, after all, are considerably more developed than others, and some have populations that are also aging more rapidly. Nonetheless, the report identifies several broad directions for reform that together could greatly improve benefit adequacy in most provident funds.

One critical goal should be to improve investment performance. The indispensable first step is to develop explicit guidelines for balancing economic development and retirement security objectives. Managing the tension between these objectives is a fundamental challenge for provident funds, and effective investment policy and governance must be built on guidelines that spell out the relative weight to be given to each. The balance between the objectives should be made clear to all stakeholders; there should be regular evaluation of whether policies and outcomes are consistent with the guidelines; and the balance between the objectives should be reexamined and updated over time as the country's economy develops and the provident fund grows. All of this will require developing "social impact" indicators that allow provident funds to track the benefits of their investment policies to society as a whole and compare them with financial returns to members. As an interim measure while more robust indicators are being developed, provident funds could increase investments in sustainable, green, and other types of "labeled bonds," which have the explicit objective of furthering social and development goals while also delivering reasonable returns.

Improving investment performance will also require diversifying investment portfolios, at first domestically and then globally. Malaysia's EPF has already moved decisively in this direction over the past ten to fifteen years. However, many provident funds, including India's EPF and Indonesia's JHT, remain heavily invested in fixed-income securities, especially government debt, and prohibit foreign investment. While these investment policies may make sense in the early stages of provident fund development, when the focus is on domestic development, diversification becomes increasingly important as the focus shifts to ensuring retirement security. In the end, requiring investment portfolios to remain locked up in government debt risks turning provident funds into "captive investors" that finance government activities by imposing below-market returns on members.

There are other investment strategies that provident funds could pursue to increase returns on member savings. As most provident funds now operate, asset values are not marked to market and unrealized gains and losses are held in a reserve account. Member accounts are credited with administratively

determined returns that may bear only a loose relationship to market returns. All member contributions, moreover, are pooled in the same identical investment portfolio, regardless of the member's age, and all members are credited with the same rate of return. While this approach has the advantage of allowing provident funds to smooth returns and may help to promote social solidarity, it precludes individual customization of the asset portfolio, which has the potential to significantly improve investment outcomes for members. Some provident funds may want to consider moving toward a more market-based approach to accounting for and crediting investment returns that allows for customization of the asset portfolio along lifecycle lines, perhaps using a multifund model. Evolving in this direction would also allow the adoption of liability-driven investment strategies, where asset allocation, including the duration of fixed-income securities, is aligned with the objective of providing income in retirement.

As for benefit design, the place to start is for provident funds to preserve more of members' total savings for retirement. In defined contribution systems, a reasonable rule of thumb is that workers need to save 10 to 15 percent of wages for retirement each year in order to replace one-third to one-half of their pre-retirement income. Among the three provident funds covered in the report, only Malaysia's EPF earmarks this large a share of wages for retirement savings. In India and Indonesia, there is no earmarking at all. Retirement savings is simply the residual account balance left over after withdrawals for housing, education, unemployment, and other nonretirement needs. Improving retirement security will require reordering current savings priorities.

It will also require reforming outdated design parameters, such as retirement in the fifties and 100 percent lump sum payouts, that are incompatible with lifelong financial security when people live as long as they now do in Asia. To its credit, Indonesia is raising the JHT retirement age in stages from 55 to 65. But in India's and Malaysia's provident funds, the retirement age is still 55. All three provident funds, moreover, allow retirement savings to be withdrawn entirely as a lump sum payout. All provident funds should follow Indonesia's lead and gradually raise the retirement age to 65. All should also require at least the partial annuitization of account balances, something that Singapore's CPF has done. If this is not possible, a second-best option would be to require phased withdrawals.

These reforms would not only improve retirement security for those workers who already participate in provident funds. They would also make provident funds more robust platforms for

expanding coverage to those workers who do not. Low coverage is of course largely a function of high labor-market informality, and afflicts all types of government retirement systems in emerging markets, not just provident funds. Until recently, the obstacles to expanding coverage beyond the formal sector were almost insuperable. However, advances in digital IT, financial inclusion, and national ID systems, as well as the use of financial incentives like matching contributions, are opening up new ways to make government retirement systems more inclusive. Although a detailed discussion of policy initiatives that might extend the reach of provident funds was beyond the scope of the report, it stresses the critical importance of ensuring that a broader cross-section of the workforce saves for retirement, whether through provident funds themselves or through parallel voluntary retirement systems with more flexible contribution and withdrawal rules that are tailored to the needs of informal-sector workers.

The research for the report was largely completed before the COVID-19 pandemic began, and the analysis and recommendations do not address the additional threats to retirement security it poses. Clearly, the pandemic makes pursuing the reform agenda outlined in the report more challenging. Several countries, including India and Malaysia, have enacted emergency measures that temporarily reduce contribution rates and liberalize access to provident fund savings. Although these measures may be necessary, they will further undermine future benefit adequacy. The economic fallout from the pandemic could also stall movement toward diversification of provident fund portfolios. With borrowing needs rising, policymakers may be reluctant to reduce provident fund holdings of government debt. Declines in foreign direct investment could also reinforce the domestic investment bias built into the traditional provident fund model.

As they navigate today's turbulent waters, policymakers would do well to keep their eyes on the long term. The forces of demography and development are inexorably reshaping Asian societies, and the need to develop more adequate and more inclusive retirement systems remains as important today as it was before the pandemic began. As policymakers look to the future, they will find that the provident fund model continues to have many important advantages over alternative retirement system models. But they will also find that the model needs to evolve in important ways if it is to meet tomorrow's challenges effectively. While the pandemic may slow the necessary evolution, it should not and need not derail it.





# Asia's Provident Funds at a Crossroads



There is a large literature on the strengths and weaknesses of pay-as-you-go pension systems, and in particular the financing challenges they face as populations age. There is an equally large literature on fully funded and privately managed personal account systems. Yet the dominant type of retirement system in much of Asia—the fully funded but government-managed provident fund—has received comparatively little attention from policy analysts.

This is unfortunate, since two key features of the provident fund model may make it an attractive choice for both governments and workers in emerging markets. The first is that governments can harness provident fund savings to advance national development objectives, which can be a great advantage in countries that may lack the tax capacity to fund development directly through government budgets. The second is that provident funds can serve a wide range of workers' savings needs beyond the need to save for retirement, from financing home purchases or college educations to providing funds in the event of a medical emergency or the loss of employment. This too can be a great advantage in countries where insurance and credit mechanisms may be underdeveloped and most workers lack precautionary savings.

Yet the same features that make the model attractive may also make it difficult for provident funds to ensure retirement security. Investment policies that are intended to advance national development objectives, even when they are well designed and effective, may not be the policies most likely to maximize returns for participants. The fact that provident funds are all-purpose savings programs may mean that retirement savings takes second place to participants' other savings priorities, which are typically more immediate and pressing. To be successful as retirement systems, provident funds must strike the right balance between their competing goals. What the right balance is, moreover, will necessarily shift over time as countries develop and their populations age.

In the early stages of their evolution, the natural focus of provident funds is on national economic development. Portfolios are usually heavily invested in government debt, governance needs are important but basic, and a large portion of savings flows to nonretirement purposes. As provident funds develop, however, the focus should shift to ensuring retirement security. Along the way, portfolios should be diversified, governance procedures and safeguards should become more sophisticated, and a growing share of savings should flow to retirement.

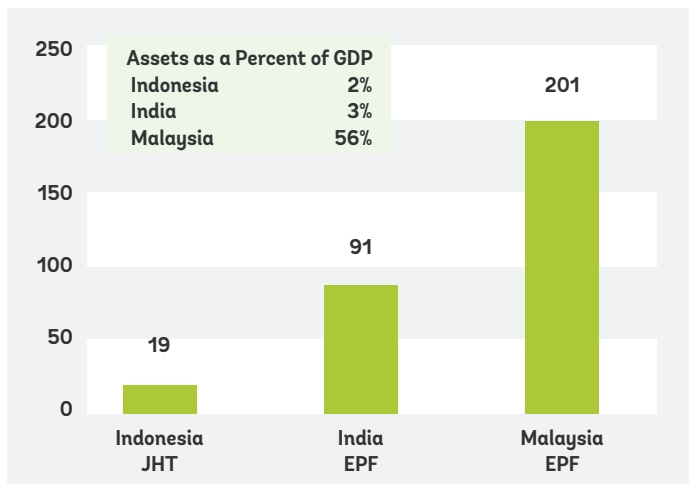
This report turns the spotlight on Asia's provident funds—or more precisely, government-managed provident funds.<sup>1</sup> The term provident fund is sometimes used more broadly in Asia to describe any kind of funded retirement system. In Thailand, for instance, employer pensions are called provident funds. Hong Kong's government-mandated retirement system is also called a provident fund, even though it is a privately managed personal account system. In this report, the term is used exclusively to refer to government-managed provident funds, of which there are many, from Bhutan's and Nepal's to Brunei's and Sri Lanka's. The report focuses on three of them in particular: India's Employees' Provident Fund (EPF), Indonesia's Jaminan Hari Tua (JHT), and Malaysia's Employees Provident Fund (EPF). (See box 1 at the end of the chapter.)

1. For the major data sources used in the report, see the Technical Appendix. This appendix also includes a discussion of methodological issues related to GAI's evaluation of provident fund investment performance and benefit adequacy.

These three provident funds were chosen primarily because they are among Asia's largest, whether measured by assets under management or number of participants. (See figures 1 and 2.) The three countries also represent a wide range of economic development, and so the funds themselves reflect a wide range of provident fund evolution. The other potential candidate was Singapore's Central Provident Fund (CPF), which is even larger, at least in terms of assets under management. But the CPF, whose assets consist entirely of non-marketable government securities, does not invest in financial markets or directly fund development, and so differs fundamentally from Asia's other provident funds. (See box 2 at the end of the chapter.) Although the report makes occasional reference to the CPF, it is not included in the analysis.

> > >

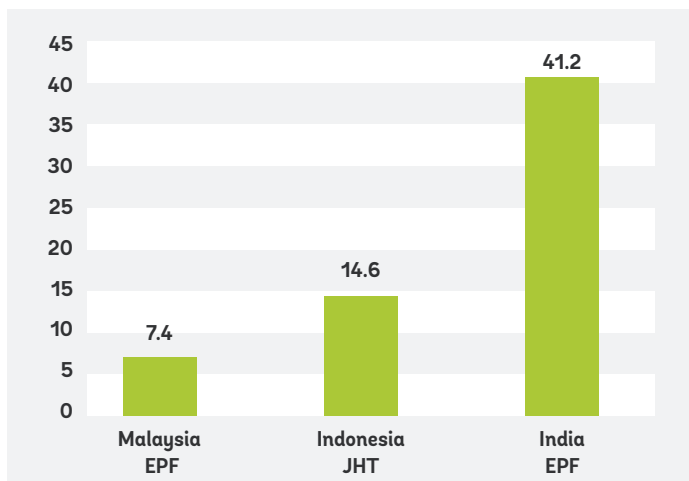
**FIGURE 1 - Assets in Billions of U.S. Dollars at the End of 2018 or Most Recent Year Available**



Note: The figure for India is an estimate for end of March 2018.  
Source: EPFO, BPJS, EPF (Malaysia), and GAI calculations

> > >

**FIGURE 2 - Active Members in Millions at the End of 2018 or Most Recent Year Available**



Note: Data for Indonesia are for the end of 2017; data for India are an average for 2016-17.  
Source: EPFO, BPJS, and EPF (Malaysia)

The purpose of the report is to assess the strengths and weaknesses of the provident fund model, evaluate the performance of India's, Indonesia's, and Malaysia's provident funds, and identify steps that they and other provident funds can take to improve retirement security in a rapidly developing and rapidly aging Asia. This chapter first takes a closer look at the provident fund model. It then discusses the changing demographic, economic, and social environment for retirement security in Asia, and why it makes building more inclusive and more adequate retirement systems such an urgent policy priority.

## The Provident Fund Model

Government provident funds are mandatory, fully funded, government-managed, defined contribution systems. Governments may establish them for special categories of workers, such as civil servants or the armed forces. They may also establish them for private-sector workers, in which case they are, at least aspirationally, national retirement systems. The three provident funds on which the report focuses cover private-sector workers—or, more precisely, private-sector workers in formal employment. In Malaysia, the provident fund is the only contributory government retirement program for private-sector workers. In India and Indonesia, private-sector workers are also covered by defined benefit pension programs.

In general, provident funds function as all-purpose savings programs, rather than dedicated retirement systems. Some, like Malaysia's EPF, allocate members' contributions to separate accounts earmarked for retirement and nonretirement purposes. Others, like India's EPF and Indonesia's JHT, channel all contributions to the same "retirement" account, but allow the early withdrawal of much or even all of account balances for a wide range of reasons. During the accumulation phase, members usually earn an administratively determined rate of return on their savings, which may be only loosely related to actual investment returns on provident fund assets. Some provident funds, including, Malaysia's EPF, also feature minimum rate of return guarantees of one kind or another. During the payout phase, benefits are typically paid as a lump sum, with most provident funds, Singapore's CPF being a notable exception, making no provision for lifetime income.

The provident fund model has important strengths, though it also poses some significant challenges. One strength is that provident funds are fully funded retirement systems. At least at the macro level, funded retirement systems have decisive advantages over pay-as-you-go systems. While countries are still demographically young and economically developing, they can help to broaden and deepen financial markets, a criti-

cal component of the development agenda in any emerging market. By purchasing government debt, they can also reduce government borrowing costs and support government spending on other development priorities. Moreover, if funded retirement systems are government managed, as provident funds are, savings can be directly steered toward infrastructure and other social capital investments. Unless pay-as-you-go systems are at least partially funded, they do not have any of these benefits.

Later, as countries age, funded retirement systems can take pressure off government budgets, which would otherwise be burdened by rising pension expenditures, while also helping to maintain adequate rates of savings and investment. Across the world, from Germany and Japan to Brazil and China, governments with pay-as-you-go systems are being compelled to make large cutbacks in the generosity of retirement provision as their populations age and the ratio of retired beneficiaries to contributing workers rises. South Korea, which had the poor timing to establish its pay-as-you-go National Pension System in the late 1980s, just before its birthrate collapsed, is a case in point. Promised replacement rates have already been cut twice, from the original 70 percent to 40 percent—and with the system still facing large long-term deficits, may have to be cut again.<sup>2</sup> Provident funds will not face this problem.

It is true that full funding is not always an advantage at the micro level. In countries where the workforce and wages are both growing rapidly, as they have been in most of Asia, pay-as-you-go retirement systems, whose implicit rate of return is equal to the growth rate in taxable payroll, may be able to generate higher replacement rates than funded systems, whose rate of return is equal to the return to capital. As populations age, economies develop, and workforce and wage growth slow, however, the advantage shifts to funded retirement systems. Malaysia is already reaching the demographic and economic tipping point where the return to a funded retirement system is likely to exceed the return to a pay-as-you-go system. In India and Indonesia, this tipping point still lies well in the future, which means that switching to pay-as-you-go retirement systems might allow them to deliver more adequate benefits than their provident funds can for some time to come. But sacrificing the considerable macro advantages of funding for a micro advantage that is bound to fade over time might not be a wise policy choice.

Many retirement policy experts would agree that the fact that provident funds are defined contribution systems is also a strength. Almost by definition, defined contribution systems cannot have unfunded liabilities. They are therefore much less likely than defined benefit systems to burden future generations of workers and taxpayers. Because benefits in defined contribution systems are directly proportional to contributions paid in, they are also less likely to distort labor-market decisions. Moreover, by rewarding longer work lives they may encourage later retirement, a potential advantage that will become increasingly important as emerging markets age. It is true that all three of the provident funds covered in the report now allow the withdrawal of some or all of retirement savings beginning in the mid-fifties.<sup>3</sup> But early retirement ages are a design parameter that can be adjusted, not a fundamental feature of the provident fund model. It is also true that defined contribution systems, which do not ordinarily provide for redistribution, need to be backed up by separate poverty protection programs, such as means-tested supplements, a flat benefit, or a social pension. While these programs are not well developed in most Asian countries, that is a failing of social policy, not a defect of the provident fund model.

To be sure, some retirement policy experts fault defined contribution systems for shifting risks to individuals. But the notion that participants bear no risk in defined benefit systems, and in particular government-managed defined benefit systems, is misleading. While participants in these systems may not be subject to investment risk, they are subject to political risk. If promised benefits are underfunded, governments will necessarily have to cut benefits, raise contributions, or shift costs to general taxpayers, who in many cases will be the same people as the retirement system participants. In any case, government-managed provident funds, at least as currently structured, do not shift investment risk to individuals in the same way that privately managed defined contribution systems typically do. The account balances of provident fund members do not automatically rise and fall along with investment performance, and though the administratively determined returns they earn may vary, they are often subject to a minimum guarantee.

This brings us to government management, which distinguishes provident funds from most other types of fully funded defined contribution retirement systems. Government management has a number of potential advantages. It may reduce administra-

2. See OECD, *OECD Economic Surveys: Korea 2018* (Paris, OECD, June 2018), pp. 66-68 and Neil Howe, Richard Jackson, and Keisuke Nakashima, *The Aging of Korea: Demographics and Retirement Policy in the Land of the Morning Calm* (Washington, DC: Center for Strategic and International Studies, March 2007).  
3. India's EPF allows the complete withdrawal of retirement savings at age 55, while Indonesia's JHT does so at age 57. Malaysia's EPF allows the complete withdrawal of retirement savings accumulated up to age 55 at age 55, but requires incremental contributions made after age 55 to be preserved until age 60.

tive costs below what they would be in a privately managed personal account system. It may improve compliance and increase participation. It may even help to foster a sense of social solidarity. Most importantly, it is what allows provident funds to serve as direct instruments of national development policy.

Along with the potential benefits, however, come some significant governance challenges. Ensuring transparency and accountability may be difficult when it is government that is policing itself. Investment decisions may be politically determined, which means that they may be inefficient, and even if they are not politically determined, the sheer size of provident funds may give government undue influence in financial markets. Then there is the question of how provident funds can effectively pursue two objectives: maximizing risk-adjusted returns for participants and promoting national economic development. When the two objectives conflict, it is likely to be the former that loses out. As we will see in Chapter 2, the investment performance of the three provident funds covered in the report has lagged the performance of other large pension funds and sovereign wealth funds around the world, in some cases by a wide margin. Although there are many reasons for this, politically determined investment decisions, along with the inherent tension between provident funds' dual objectives, may have played a role.

A similar tension arises from the fact that provident funds are typically all-purpose savings programs. Like their ability to advance national development objectives, their ability to serve multiple savings goals is part of what makes provident funds attractive. Malaysia's EPF serves as an important source of financing for housing and education, while India's EPF and Indonesia's JHT function as substitutes for unemployment insurance. But just as provident funds' role in advancing national development objectives creates conflicts between competing objectives, so does their pursuit of multiple savings goals. Not surprisingly, it is the adequacy of retirement provision that tends to lose out. Even in Malaysia's EPF, which has relatively strict rules governing early access to savings, nonretirement withdrawals account for two-fifths of total withdrawals. In the case of Indonesia's JHT, where nearly 90 percent of withdrawals are nonretirement withdrawals, one wonders whether it should be considered a retirement system at all.

The provident fund model poses additional challenges. One arises from the fact that the returns members earn on their sav-

ings are not directly linked to market returns. The practice of crediting member accounts with an administratively determined interest rate allows provident funds to smooth returns, which may be beneficial. But it can also open the door to hidden cross-subsidies from provident fund members to government or vice versa. A related challenge arises from the fact that provident funds pool all member contributions in the same identical investment portfolio and, as a rule, credit all members with the same rate of return. While this practice may promote social solidarity, it makes it difficult for provident funds to adopt strategies for optimizing member outcomes that depend on individual customization of the asset portfolio, such as lifecycle investing or other more sophisticated liability-driven approaches to investment. The rate of return guarantees that some provident funds feature may also hurt members in the long run by forcing asset managers to pursue overly conservative investment strategies.

There are other design parameters characteristic of provident funds that may undermine the adequacy of retirement provision, including early retirement ages and the lack of provision for lifetime income. But these parameters can be adjusted without fundamentally altering the provident fund model itself. There is no compelling policy reason, though there may be political reasons, why provident funds could not gradually raise retirement ages as populations age, and indeed Indonesia's JHT has already begun to do just that. Nor is there any compelling policy reason why they could not require at least the partial annuitization of account balances. Although none of the three provident funds covered in the report has done so, Singapore's CPF has.

All types of government retirement systems have potential drawbacks. In the near term, pay-as-you-go systems may encourage governments to promise overly generous benefits, creating large unfunded liabilities, while in the long term they may be rendered unsustainable by the inexorable arithmetic of rising old-age dependency ratios. Privately managed personal account systems avoid the potential pitfalls of government management of retirement savings, but may be plagued by lack of competition, distortionary investment regulations, and high administrative fees. That other models of retirement provision also have drawbacks, however, does not make addressing the challenges posed by the provident fund model any less important. Overcoming them while more fully leveraging the model's strengths will require significant reforms. More fundamentally, it may also require a sea change in philosophy.



# The Crossroads

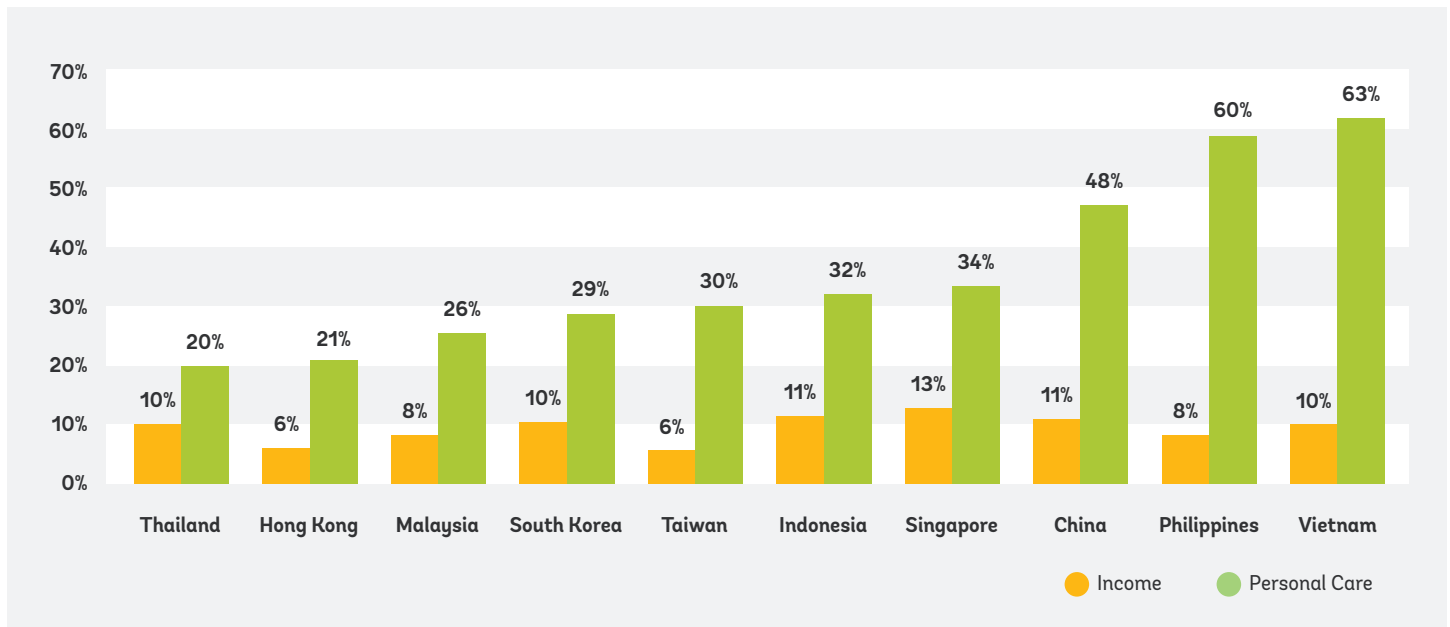
Until recently, governments throughout Asia could assume, with at least some justification, that workers who reached old age without a pension or personal savings would be supported by their extended families. It was this assumption that has allowed them to focus on other development priorities, with building adequate retirement systems often an afterthought. But this assumption is no longer prudent today and will be even less so tomorrow.

To be sure, the extended family continues to play a much larger role in retirement security in Asia than it does in the West. A 2015 Global Aging Institute (GAI) survey of Asian workers and retirees found that rates of multigenerational living remain high. In most Asian countries, at least half of the elderly live in the same household as their grown children. In the region's less developed countries, the share often exceeds three-quarters. In most Asian countries, moreover, income transfers within families continue to flow up the age ladder from young to old, precisely the opposite direction they now flow in most Western countries.<sup>4</sup>

Yet as Asian countries develop and modernize, traditional family support networks for the elderly are coming under increasing stress. Urbanization, industrialization, and the spread of more "individualistic" Western values are breaking up extended families and eroding traditional social and cultural norms. Among these norms is the ethic of filial piety, which in many Asian societies requires grown children to care for their aged parents. In the 2015 GAI survey, representative samples of workers and retirees in ten Asian societies were asked, "who, ideally, should be mostly responsible for providing income to retirees." The possible responses were government, former employers, individuals through their own savings, or grown children or other family members. In none of the ten did the share of respondents saying grown children or other family members exceed 15 percent. Workers and retirees were also asked, "who, ideally, should be mostly responsible for providing personal care to retirees." The share saying grown children or other family members should be responsible for personal care was larger than the share saying they should be responsible for income in all ten societies. Even so, this was the majority view in just two of them, the Philippines and Vietnam. (See figure 3.)

> > >

**FIGURE 3 - Share of Respondents Saying Grown Children or Other Family Members Should, Ideally, Be Mostly Responsible for Providing Income and Personal Care to Retirees**



Source: Richard Jackson and Tobias Peter, *From Challenge to Opportunity: Wave 2 of the East Asia Retirement Survey* (Alexandria, VA: Global Aging Institute, 2015)

4. Richard Jackson and Tobias Peter, *From Challenge to Opportunity: Wave 2 of the East Asia Retirement Survey* (Alexandria, VA: Global Aging Institute, 2015).

Even as the old order of family-based retirement security begins to pass away, adequate government and market substitutes for informal family support networks are not yet fully developed. Civil servants and the armed forces typically participate in special government retirement programs that offer generous replacement rates. But many private-sector workers, and in some Asian countries the vast majority of them, are earning no contributory retirement benefit of any kind. India's EPF and Indonesia's JHT only cover about one-tenth of the workforce. And though the coverage rate is considerably higher in Malaysia's EPF, it is still far from universal. Moreover, as we will see in Chapter 3, many of those workers lucky enough to participate in provident funds receive benefits that are too small to support them in old age. It is true that all three countries covered in the report make at least some provision for tax-favored private retirement savings, whether in the form of employer or personal pensions. But only a tiny sliver of the workforce, ranging from 1 to 3 percent, currently participates in these programs. All three countries also have some kind of noncontributory income support program for the indigent elderly. But only a small fraction of the population in need actually receives benefits. The result is growing retirement insecurity.

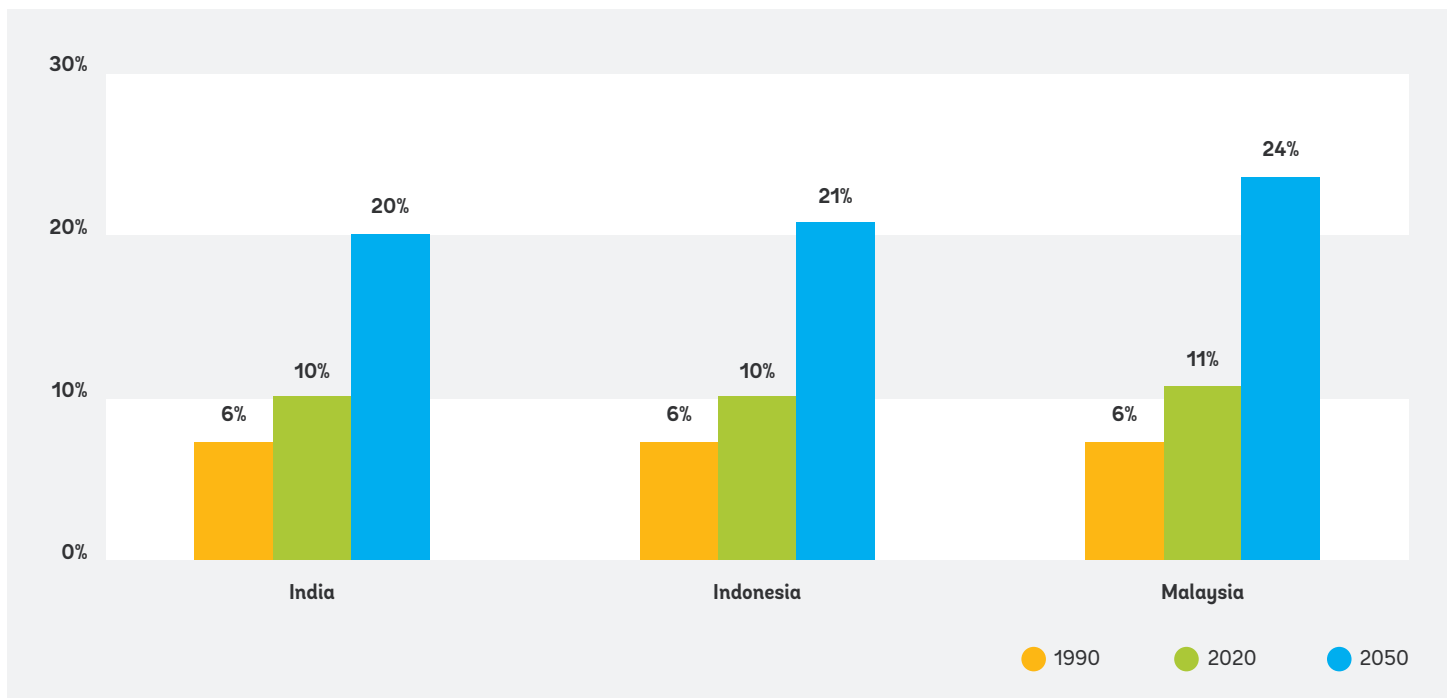
When rapid development is combined with rapid population aging, the vulnerability of the elderly grows. Every Asian country is now progressing through the demographic transition, the shift from high fertility and high mortality to low fertility and low mortality that accompanies development. Many countries, moreover,

are doing so at a breathtaking pace, far faster than Western countries once did. The total fertility rate has now sunk beneath the 2.1 replacement rate throughout East Asia, and though it is still above replacement in most South Asian countries, it is falling fast. Meanwhile, life expectancy has soared and in many Asian countries approaches, equals, or even exceeds life expectancy in Western countries. The result is a dramatic aging of the population. Although the degree of aging varies greatly across Asia, mainly because the fertility rate has fallen much further in some countries than in others, the trend is gathering momentum almost everywhere. In India, Indonesia, and Malaysia the share of the population aged 60 and over has nearly doubled since 1990. In all three countries, moreover, that share is on track to double again by the middle of the century. (See figure 4.)

The aging of the population threatens to put enormous additional stress on family support networks. It is not just that the number of elderly is growing. As family size shrinks, the odds that elders will have a child able and willing to support them will decline, even if the propensity of grown children to support their aged parents does not change. Meanwhile, the aging of the population will also make it more difficult for governments to shore up retirement incomes by expanding noncontributory social pensions. It is one thing for one-third or one-half of the elderly to be dependent on social assistance when the elderly constitute 5 to 10 percent of the population. It will be another thing entirely when they constitute 20 to 40 percent.

> > >

**FIGURE 4 - Elderly (Aged 60 & Over), as a Percent of the Population, 1990-2050**



Source: UN Population Division, *World Population Prospects: The 2019 Revision* (New York: UN Population Division, 2019)

Asia's provident funds thus stand at a crossroads. If they are to meet tomorrow's challenges, they will need to evolve into something closer to dedicated retirement systems. Advancing broad national development objectives may remain an important function of some provident funds, especially in the region's less developed economies. Provident funds may also continue to serve multiple savings purposes. The balance between priorities, however, will need to shift toward ensuring retirement security. This will mean reforming investment policies so that they maximize risk-adjusted returns for provident fund members. It will mean preserving more of members' total savings for retirement. And it will mean reforming design parameters, such as retirement in the fifties and 100 percent lump sum payouts, that are incompatible with lifelong financial security when people live as long as they now do in Asia.

These changes would not only improve retirement security for those workers who already participate in provident funds. They would also make provident funds more robust platforms for expanding coverage to those workers who do not.

The remainder of the report is organized as follows. The second chapter discusses provident fund governance and investment policies, practices, and performance, with a particular focus on India's EPF, Indonesia's JHT, and Malaysia's EPF. The third chapter discusses provident fund benefit design and adequacy, with a focus on the same three provident funds. The fourth and final chapter offers some broad recommendations for improving provident funds' effectiveness in maintaining retirement security.

> > >

## BOX 1 - Provident Fund Profiles: India's EPF, Indonesia's JHT, and Malaysia's EPF

		INDIA		INDONESIA		MALAYSIA
		EPF	EPS	JHT	JP	EPF
Year Established		1952	1995	1992	2014	1951
Administrator		EPFO		BPJS Ketenagakerjaan		EPF Board
Effective Coverage Rate (% Employment)		9%		12%		50%
Contribution Rate	Total	15.7%	9.5%	5.7%	3%	24%
	Earmarked for Retirement	0%	na	0%	na	16.8%
Retirement Age		55	58	57		55
Lifetime Income Requirement		None	DB Annuity	None	DB Annuity	None
Portfolio Allocation	Gov't Bonds & Deposits (% Portfolio)	88%	na	72%	na	34%
	Foreign Investment (% Portfolio)	0%	na	0%	na	27%

Note:

**Effective Coverage Rate.** The effective coverage rate equals active members as a share of total employment. Data for Malaysia are for the end of 2018; data for Indonesia are for the end of 2017; and data for India are an average for 2016-17. The effective coverage rates for India and Indonesia refer to the EPF and JHT, respectively; effective coverage rates under the EPS and JP differ slightly.

**Contribution Rate.** In Malaysia, the total contribution rate refers to the contribution rate for members under age 60; the contribution rate earmarked for retirement refers to the Account I contribution rate.

**Portfolio Allocation.** Data for Malaysia are for the end of 2018; data for India and Indonesia are for the end of 2017. In Indonesia, government bonds include non-government bonds.

## India's EPF

The Employees' Provident Fund (EPF), established in 1952, is administered by the Employees' Provident Fund Organization (EPFO), which in turn is part of the Ministry of Labour and Employment. Participation is mandatory for workers at private-sector firms with at least twenty employees, as well as for workers at some smaller firms in a few specified industries. Firms can apply to the EPFO for an exemption that allows them to manage their employees' EPF accounts in house. As of 2017, roughly 1,500 mostly large firms operated an EPF Private Trust, as this arrangement is called. Self-employed workers can participate in the EPF on a voluntary basis, while civil servants and the armed forces are covered by separate retirement systems. Given the large size of India's informal sector, EPF coverage is limited. As of 2017, 41 million workers, or 9 percent of the workforce, were active EPF contributors.

Most EPF members also participate in the Employees' Pension Scheme (EPS), a defined benefit program established in 1995 that is administered by the EPFO in parallel to the EPF. Employers and employees each contribute 12 percent of basic salary to the EPFO up to a contributable wage ceiling, which is currently Rs 15,000 per month. Of the 24 percent total, 15.67 percent is directed to the EPF, while 8.33 percent funds the EPS. There is also a small government contribution of 1.17 percent of basic salary earmarked for the EPS, which boosts the total EPS contribution to 9.5 percent.

The EPF standard retirement age is 55, after which account balances are usually disbursed in a single lump sum payment. There is no provision for lifetime income. Before age 55, the early withdrawal of most or even all of EPF savings is permitted under many circumstances, including to purchase a home or pay off a mortgage, to pay for medical expenses, and to finance the education or marriage of one's children. Members can also cash out the portion of their account balances that is attributable to their own contributions when they quit or are laid off from their current job, provided that they are unemployed for at least two months. The EPS full benefit retirement age is 58, but reduced early retirement benefits can be claimed starting at age 50.

Despite being in operation for nearly seven decades, the EPF is still in the early stages of provident fund development. Although the EPFO has recently begun to make small investments in domestic equities, the EPF portfolio remains heavily tilted toward government debt and other fixed-income securities. Foreign investment is not allowed.

## Indonesia's JHT

The Jaminan Hari Tua (JHT), established in 1992, is administered by BPJS Ketenagakerjaan, one of Indonesia's two social security agencies. Prior to the creation of the BPJS in 2014, the JHT was administered by PT Jamsostek, a state-owned enterprise. Since coming under BPJS administration, JHT coverage has in principle been expanded to include all private-sector employees, though in practice it is limited to those employed in the formal sector. Self-employed workers can participate in the JHT on a voluntary basis, while civil servants and the armed forces are covered by separate retirement systems. As of 2017, 15 million workers, or 12 percent of the workforce, were active JHT contributors.

JHT members also participate in the Jaminan Pensiun (JP), a defined benefit pension program. The JP, however, was only introduced in 2014 and will not begin paying pensions until the first cohorts who meet the program's minimum fifteen-year contribution requirement begin retiring a decade from now. Employees contribute 2 percent of wages to the JHT while employers contribute 3.7 percent, for a total contribution rate of 5.7 percent. There is no ceiling on contributable wages. The JP contribution rate is 3 percent, with employees contributing 1 percent and employers 2 percent.

The JHT and JP standard retirement age, originally 55, is being raised in stages to 65, which it will reach in 2043. As of 2020, it stood at 57. When members reach retirement age, JHT account balances are usually disbursed in a single lump sum. There is no provision for lifetime income. Nonretirement withdrawals make up the great majority of all withdrawals. Partial withdrawals are allowed to finance home purchases, while complete withdrawals are allowed whenever workers lose or change jobs.

The JHT is in the early stages of provident fund development. Most investments are still in government debt and other fixed-income securities, and foreign investment is not allowed. However, the JHT also has a sizeable position in domestic equities.

## Malaysia's EPF

The Employees Provident Fund (EPF), established in 1951, is administered by the EPF Board, which operates under the supervision of the Ministry of Finance. Coverage is mandatory for private-sector employees with regular employment contracts, as well as for those public-sector employees not eligible to join the civil service retirement system. It is voluntary for self-employed workers, as well as foreign workers. There are separate retirement systems for most civil servants and the armed forces. As of 2018, 7 million workers, or 50 percent of the workforce, were active EPF contributors.

The EPF contribution rate is 24 percent on wages up to RM 5,000 per month for members under age 60, with employees contributing 11 percent and employers 13 percent. On wages above RM 5,000, the contribution rate is 23 percent. Members aged 60 to 74 who are still employed contribute at a reduced rate, while those aged 75 and over are not required to make contributions. There is no ceiling on contributable wages.

The EPF consists of two accounts: Account I, which is earmarked for retirement, receives 70 percent of total contributions, while Account II, which can be accessed

prior to retirement for specified purposes, from purchasing a home to making the Haj, receives 30 percent. The standard EPF retirement age is 55. When workers turn 55, their Account I balance and any remaining Account II balance is transferred to a new account called Akaun55. The transferred funds may be withdrawn in whole or in part as a lump sum, taken as phased withdrawals, or left in the account to earn interest. Any incremental contributions made by members who remain employed past age 55 are allocated to another new account, called Akaun Emas, which cannot be accessed until age 60.

The EPF, which has a globally diversified portfolio with substantial exposure to equities, has progressed well beyond the early stages of provident fund development. As in other provident funds, members earn an administratively determined return on their account balances. The EPF Members Investment Scheme (MIS), however, allows members whose balances exceed the “basic savings” amount to withdraw a portion of their savings and invest it in approved investment funds, where it earns a market return. The basic savings amount, which rises along with age, is the amount of savings that the EPF calculates would be sufficient to provide a minimum monthly benefit roughly equal to the poverty line.



> > >

## BOX 2 - The Special Case of Singapore's CPF

The Central Provident Fund (CPF), established in 1955, operates under the Ministry of Manpower. Coverage is mandatory for employees who are citizens or permanent residents. The self-employed are required to contribute to MediSave, the CPF subaccount that finances health care, but their participation in the rest of the CPF is voluntary. Foreign workers are excluded from coverage. As of 2018, 2 million workers, or 56 percent of the workforce, were active CPF contributors.

Like most provident funds, the CPF serves multiple savings purposes. Contributions are split between three accounts, with the apportionment varying by age. There is the Ordinary Account (OA), which may be accessed prior to retirement for specified purposes, including purchasing a home and financing the education of family members; the MediSave Account (MA), which is earmarked for paying health insurance premiums and out-of-pocket medical expenses; and the Special Account (SA), which

is earmarked for retirement. The overall contribution rate is 37 percent of ordinary wages for members under age 55 up to a contributable wage ceiling of SG \$6,000 per month, with employees contributing 20 percent and employers 17 percent. (Members aged 55 and over contribute at a reduced rate.) Over the course of a full career from age 20 to age 64, 54 percent of total contributions go to the OA, 27 percent to the MA, and 19 percent to the SA.

Where the CPF differs from other provident funds is in its unique approach to investment. Rather than invest member contributions in financial markets, the CPF invests them in Special Singapore Government Securities (SSGS). These securities, which are nonmarketable government bonds, are similar in nature to the nonmarketable bonds that many governments issue to keep track of intragovernmental borrowing. The yields on the CPF's SSGS holdings, which vary by account,

are set by formulas which peg those yields to the yields on equivalent marketable securities, while also providing for an interest rate floor. The government transfers the SSGS proceeds to the GIC Private Limited, one of Singapore's two sovereign wealth funds. The GIC, which was established in the 1970s with the objective of securing the long-term economic future of the country, invests the proceeds, along with other government funds, outside of Singapore in a globally diversified portfolio.

The CPF also differs from other provident funds in that it requires the partial annuitization of account balances upon retirement. When CPF members turn 55, a new Retirement Account (RA) is created for them using savings from their SA and, if necessary, their OA. Members who are homeowners are required to set aside an amount called the Basic Retirement Sum (BRS), while those who are not homeowners are required to set aside an amount called the Full Retirement Sum (FRS), which is twice as large. The funds transferred to the RA are used to purchase a government provided annuity, called CPF Lifelong Income for the Elderly, or CPF Life for short. Monthly benefits ordinarily begin at age 65, which is known as the Payout Eligibility Age, but members can choose to defer their annuities up to age 70, in which case they receive higher monthly benefits.

The CPF's partial annuitization requirement is one

that other provident funds in the region would do well to emulate. Other funds also have much to learn from the pivotal role that CPF savings has played in helping members finance homeownership, which is now close to universal in Singapore. As is the case in most Asian provident funds, CPF retirement benefits are often modest, which is not surprising given the relatively small allocation of total contributions to the SA account. The CPF reports that two-fifths of members turning 55 in 2018 did not have sufficient funds in their OA and SA to set aside the BRS, which is meant to cover basic living expenses in retirement. Yet the partial annuitization requirement provides critically important protection against longevity risk that other provident funds lack. Meanwhile, as homeowners, CPF members will not need as much cash income in retirement as they would as renters.

It is less clear that other provident funds should emulate the CPF's approach to investment. Singapore's circumstances, after all, are unique. As a high-income country with a fully developed economy, it does not need provident fund savings to finance domestic development. Nor, as a global financial hub, does it need provident fund savings to broaden and deepen its capital markets. The CPF's approach to investment may serve Singapore's special needs. But if other countries were to adopt it, they would sacrifice some of the most critical advantages of the provident fund model.

2







# Investment and Governance

The provident fund model allows emerging markets to pursue two critical objectives at once: advancing national development and improving retirement security. The balance between the two objectives, however, should shift over time. While the needs of development policy may outweigh the needs of retirement policy when countries are demographically young and economically growing, strengthening retirement security should ultimately take precedence as countries become more developed and their populations age. This shift in focus is especially important in Asia, which is both developing and aging faster than anywhere else on earth.

An accompanying evolution in investment and governance is essential to support such a shift in focus. This chapter begins with an examination of the stages of evolution in provident fund investment and governance, as well as some of the special challenges that provident funds may face as they evolve. It then evaluates the investment performance of India's EPF, Indonesia's JHT, and Malaysia's EPF relative to the performance of a selection of other large pension funds and sovereign wealth funds around the world. Finally, it takes a step back and offers a more detailed discussion of specific investment and governance issues and concerns in each of the three provident funds.

## The Stages of Provident Fund Evolution

---

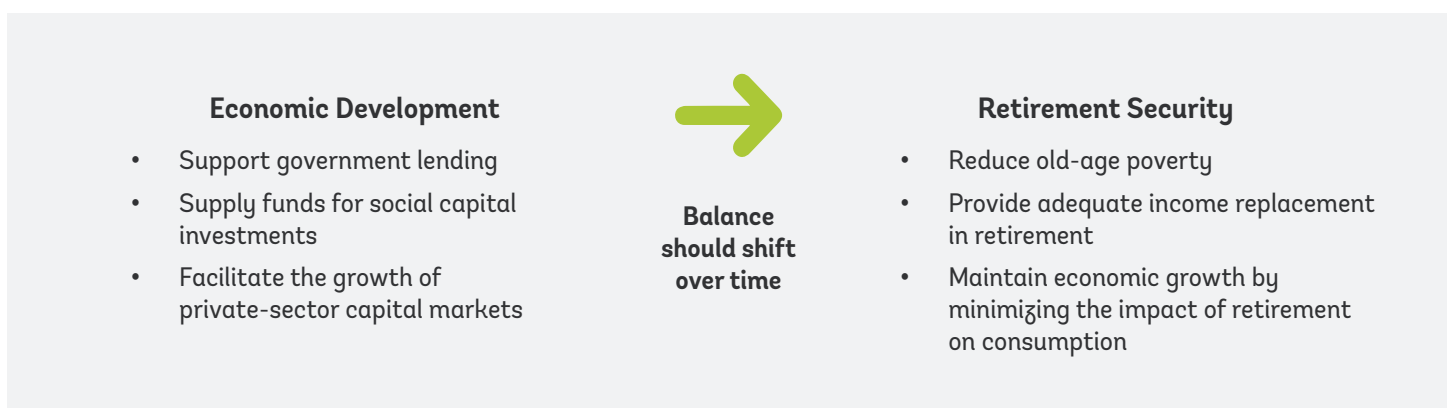
The dual objectives of provident funds create an inevitable tension between different approaches to investment and governance, but also suggest a natural evolutionary path. Figure 5 offers a schematic depiction of the natural evolution in provident fund objectives, while figure 6 offers a schematic depiction of the accompanying evolution in investment and governance. The schemas are both proscriptive and descriptive. They illustrate how provident fund objectives, and with them investment and governance, should evolve over time. But they also illustrate how, to a significant extent, this evolution is actually occurring in Asia's provident funds.

When provident funds are first established, they invest almost exclusively in domestic government bonds and deposits, an arrangement that can serve both of their objectives. On the one hand, by becoming major holders of government debt provident funds can reduce government borrowing costs and support government spending. On the other hand, because developing-country debt offers a significant credit spread or risk premium,<sup>5</sup> it can provide a reasonable return to provident fund members. As countries' economies develop, the risk premium earned by owning domestic government debt naturally drops. At the same time, however, the growing size of provident funds, together with the development of domestic financial markets, allows them to diversify their portfolios. In

almost every country with a large funded retirement system, the retirement system and domestic financial markets are intertwined, the one supporting the development of the other as they both grow. By diversifying their portfolios to include domestic corporate equity and debt, provident funds can help to broaden and deepen domestic financial markets, a critical pillar of national economic development, while also helping to maintain reasonable returns for their members—at least for a time. Ultimately, as provident funds continue to grow and domestic capital markets begin to mature, maintaining reasonable returns will require global diversification of investment portfolios.

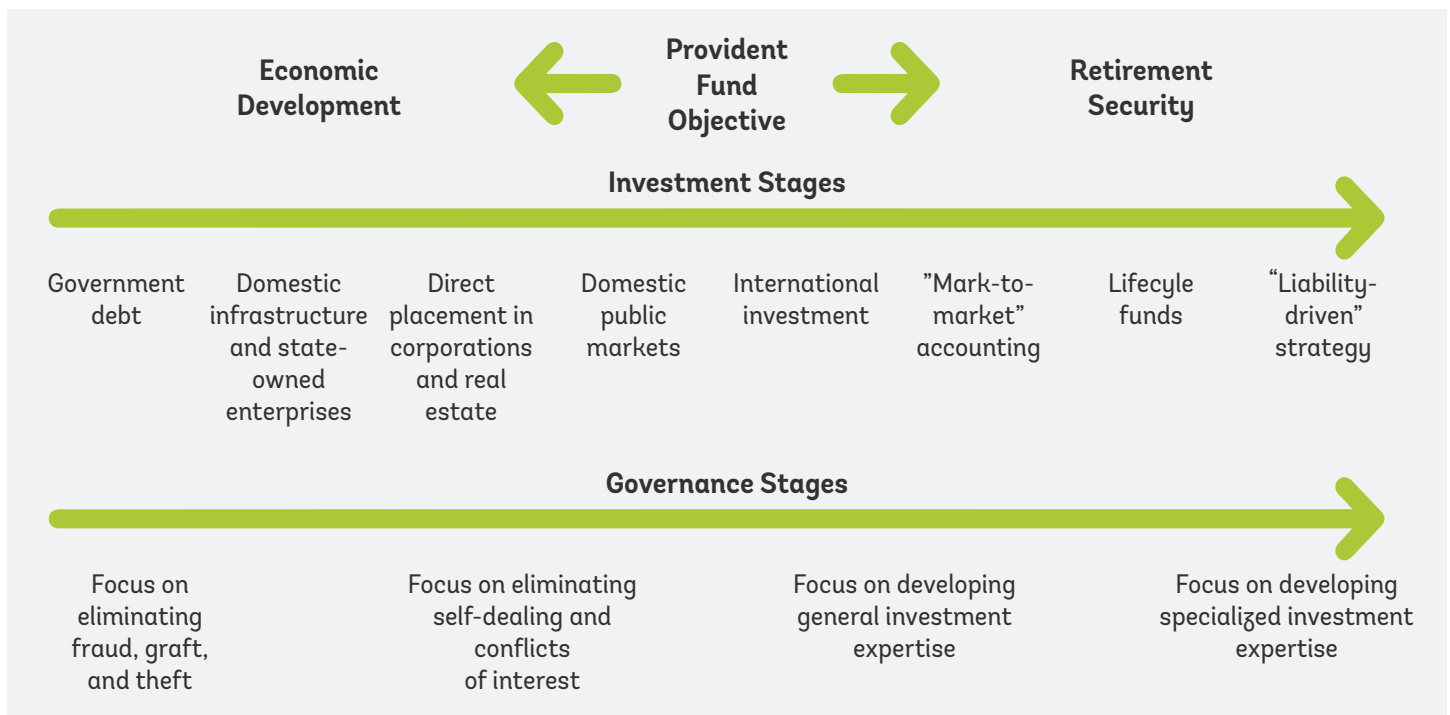
> > >

**FIGURE 5**



> > >

**FIGURE 6**



5. Governments in developing countries pay higher rates on their debt than those in developed countries to compensate lenders for the risk of default related to economic, political, and legal uncertainty. See Aswath Damodaran, *Country Risk: Determinants, Measures, and Implications—The 2015 Edition* (New York: New York University, July 2015).

The three provident funds covered in the report now find themselves situated somewhere along this continuum. (See table 1.) India's EPF is still overwhelmingly invested in government debt. Although it has recently expanded its portfolio to include some exposure to domestic equities, no foreign investment of any kind is allowed. Indonesia's JHT also invests heavily in government debt, but has a much larger exposure to domestic equities. As with India's EPF, no foreign investment is allowed. Ten to fifteen years ago, the situation would have been similar in Malaysia's EPF. Since then, however, it has acquired a globally diversified portfolio. It is important to note that the place of each of the provident funds in the continuum has little to do with how long the provident fund has been operating. India's and Malaysia's provident funds both date to the 1950s, while Indonesia's was established in the 1990s. Rather, its place reflects each country's stage of economic development.

There is, at least potentially, another evolutionary stage in investment policies and practices that none of the three provident funds has yet reached. During this stage, opportunities open up to optimize member outcomes through individual customization of the asset portfolio. Taking advantage of these opportunities, however, would require fundamental changes in the way that provident funds currently operate. Some provident funds may determine that the advantages are important enough and will evolve in this direction, while others may not.

As explained in Chapter 1, provident funds typically pool member contributions in the same identical investment portfolio and,

as a rule, credit all members with the same rate of return. In defined contribution systems, however, asset allocation is ideally tailored to each member's age. In the early years of a member's career, it is appropriate for portfolios to assume a high level of risk, which most of the time should result in high returns. As the member grows older and retirement approaches, however, portfolios should become progressively more conservative. Along with lifecycle investing, as this age-related investment strategy is called, customization of the asset portfolio may also involve liability-driven approaches to investment that aim to reduce income risk in retirement by matching asset cash flows with future income needs through attention to currency risk, inflation risk, and bond duration. Although these strategies have the potential to improve investment outcomes for provident fund members, they might challenge the sense of common national interest that underlies the whole provident fund model.

It is true that one of the three provident funds covered in the report, Malaysia's EPF, already allows for a degree of individual customization of the asset portfolio. Members whose account balances exceed certain thresholds are allowed to withdraw the excess and invest it in one or more approved investment funds of their choosing. But this special program, called the Members Investment Scheme (MIS), is relatively small. More importantly, self-directed retirement accounts are unlikely to be the most effective way to optimize investment outcomes. Individual customization of the asset portfolio can and should be achieved within provident funds' overall collective investment framework.

> > >

**TABLE 1 - Asset Allocation at the end of 2018 or Most Recent Year Available**

	India EPF	Indonesia JHT	Malaysia EPF
Government Debt	79%	63%	28%
Deposits	9%	9%	6%
Non-Government Debt	8%	0%	22%
Equities	4%	27%	39%
Real Estate/Infrastructure/Other	0%	1%	5%
Memo: Foreign Investment	0%	0%	27%

Note: Data for India and Indonesia are for the end of 2017. Government debt in Indonesia includes non-government debt.

Source: EPFO, BPJS, and EPF (Malaysia)

Progressing to the next evolutionary stage might also require altering the way that provident funds account for and credit investment returns. Provident funds typically value assets without marking them to market. For bonds, which are accounted for as “held to maturity,” this means that interest income is recognized as it is received, but no change in market value is recognized when interest rates change. For equities, it means that returns are equal to dividends plus any gains or losses realized on sales, with unrealized gains and losses kept in a reserve account.

This approach allows provident funds to smooth returns, which has potential benefits. Crediting member accounts with stable returns may serve to increase public trust and confidence. It can also shield members close to retirement from large downswings in financial markets. At the same time, however, the approach can distort investment decision-making in ways that undermine long-term performance. Rather than focus on maximizing long-term returns, provident funds may feel compelled to “strategically” sell assets in order to manage near-term returns and meet public expectations. Unrealized investment losses can also build up and ultimately lead to larger reductions in returns for members than if account values had moved with the market. In addition, the subjective nature of administratively determined returns, relative to the objective nature of market returns, creates additional governance challenges and may subject policymakers to criticism for picking winners and losers. While there may be advantages to an accounting approach that allows governments to engineer results with participants’ best interests in mind, moving to market-linked returns can streamline governance and improve long-term outcomes.

In whatever direction provident funds evolve, investment expertise will become increasingly important. One key decision is whether assets will be managed internally or outsourced to asset managers. Most large investment funds around the world move toward in-house asset management as their pool of assets grows, with only investments requiring specialized knowledge outsourced. Developing the requisite expertise, however, takes time. The high compensation and competitive private-sector atmosphere that may be most conducive to successful in-house management may also be difficult to duplicate in government-managed provident funds. External asset management may thus have some important practical advantages, particularly as an interim arrangement while provident funds are developing their own in-house investment expertise, a strategy that Malaysia’s EPF has successfully pursued.<sup>6</sup> It may also help to reduce political influence, a concern in any

government-managed system, by keeping investment decisions at arms-length.

Needless to say, governance procedures and safeguards need to evolve in tandem with investment policies and practices. In the early stages of development, when provident funds invest largely or even exclusively in government debt and deposits, simple safeguards against corruption may be sufficient. As assets under management grow, as economies and financial markets develop, and as portfolios are expanded to include investments in all types of domestic assets, more elaborate safeguards against self-dealing, nepotism, favoritism, and manipulation of markets must be added. By the time a provident fund has acquired a fully diversified global portfolio, the rules governing asset allocation, along with the entire investment decision-making process, should have become an integral part of the governance structure itself.

It is important to recognize that provident funds face some special governance challenges that arise less frequently in other types of funded retirement systems. One such challenge is how to minimize political influence over investment decisions. The most effective approach would be to set up provident funds as independent quasi-public corporations. The Canada Pension Plan, which takes this approach, provides an impressive model for how to manage public pension assets at arms-length from government. (See box 3.) The reality is that provident funds are set up as state-run agencies or corporations with boards that typically include, and may indeed be chaired by, high ranking government officials. All three provident funds covered in the report appear to have effective safeguards against self-dealing by government officials. Some, like Malaysia’s EPF, also have investment committees that, in principle, are insulated from political influence. But no matter how well such matters are handled, the possibility remains that governments may use provident funds to influence financial markets, whether by directing investment to politically favored industries or by assuming stakes in private companies that are so large that the government in effect controls them.

Another related governance challenge arises from the fact that most provident funds pursue two objectives that may be at odds with each other. After all, investment policies that are intended to advance national development objectives, even when they are well designed and effective, may not be the policies most likely to maximize returns for participants. It is important for provident funds to develop explicit guidelines for balancing national economic development and retirement security objectives, yet none of the three covered in the re-

6. See William Joseph Price et. al., *Case Study on the Employees Provident Fund of Malaysia*, The Malaysia Development Experience Series (Washington, DC: World Bank Group, June 2018).

port appear to have done so. It is also important for them to have governance procedures in place for resolving conflicts between their dual objectives, yet none of the three appear to have them. Finally, provident funds should have clear metrics for measuring how effective they are at achieving both objectives. While returns to assets under management may consti-

tute a reasonable measure of the benefits of provident fund investment policies to members, more sophisticated “social impact” indicators are needed to track the benefits of investment policies to society as a whole. None of the three provident funds currently have such metrics, though to its credit Malaysia’s EPF is considering how to develop them.

> > >

### BOX 3 - Canadian Public Pensions: Governance Lessons

The successful evolution of provident funds into systems with a primary focus on retirement security, and with governance and investment policies that support this focus, will be facilitated by a long-term vision and thoughtful planning. The Canada Pension Plan (CPP), Canada’s national retirement system, as well as other large provincial public pension funds in Canada, provide a model for this kind of evolution. The development of Canadian public pension funds from the 1980s to today has been studied by the World Bank,<sup>\*</sup> and is described here because of the important lessons it teaches about governance.

As recently as the 1980s, Canada’s large public pension funds were government entities subject to strict investment limits and often invested entirely in government bonds. Today the funds have globally diversified portfolios with excellent performance track records and an arms-length relationship to government. At the end of the plan’s 2019 fiscal year, the CPP managed close to CA \$400 billion, with only about 15 percent of the fund invested in Canada.

Because the natural development of provident funds is from a focus on national economic development, with portfolios invested largely or entirely in government bonds, to a focus on retirement security, with globally diversified portfolios, the Canadian experience has relevance. Although this experience relates to defined benefit pension plans, which must manage more complex financial issues than defined contribution provident funds, the ultimate goal is the same: financial security in retirement. No matter what the benefit structure of a funded retirement system is, governance must be grounded in the same fiduciary objective of achieving optimal outcomes for members.

Fully replicating the remarkable success achieved by Canada would be an ambitious goal for Asian provident funds to set. But key aspects of the Canadian experience could certainly be replicated in Asia. Since the time horizon for achieving the kind of change that Canada has achieved is decades, it can only happen if there is a long-term vision and plan in place. The most important lessons from the Canadian experience include the following:

**INDEPENDENCE.** The goal is an arms-length relationship to government. In Canada, even the CPP Investment Board (CPIB), which manages the investment portfolio for Canada’s partially funded national retirement system, operates independently from government. Achieving this degree of separation requires a concerted effort, and must start with an appropriate legislative and regulatory framework. The lesson from Canada is that it is also critical to develop a high level of trust among the key stakeholders, including government, employers, workers, and financial service providers. This can be accomplished by appointing the right people to the fund board and key management roles, and by making use of the highest-caliber administrators and investment experts.

**ACCOUNTABILITY AND TRANSPARENCY.** Clear and complete financial reporting is an essential aspect of good governance. So is effective communication with a wide variety of stakeholders—policymakers, regulators, members, employers, journalists, and taxpayers—all of whom have differing but valid interests in understanding the rules, objectives, and performance of national retirement systems. The experience of Canada teaches that prioritizing transparency and accountability will foster the kind of ethical and professional culture which can be both successful and independent from government.

<sup>\*</sup> World Bank, *The Evolution of the Canadian Pension Model: Practical Lessons for Building World-Class Pension Organizations* (Washington, DC: World Bank Group, 2017).

> > >

**INVESTMENT POLICY.** The transition from a portfolio largely or entirely invested in government bonds to a globally diversified portfolio requires governance that evolves with or even ahead of changes to investment policy. Even as Canada’s large public pension funds drew on external expertise, they also worked to develop and maintain in-house expertise with appropriate recruiting and compensation and a culture focused on long-term results. The CPPIB now employs over 1,500 investment professionals to manage its portfolio. Key characteristics of the investment policies of the funds include: diversification across asset classes and geographies; significant allocations to infrastructure and real estate, in part because the value of these assets tends to grow with inflation; and liability-driven strategies which assess risk based on expected future benefit payments. While most of the funds invest with the exclusive objective of maximizing long-term returns for their members, some do maintain a mandate to contribute to regional economic development.

**LONG-TERM PLANNING.** A vision for future change is needed, but the ability to adapt to circumstances, recover from failures, and take advantage of opportunities is also important.

The following schematic, which is adapted from the World Bank’s report, summarizes the main phases in the development of Canadian public pension funds.

Phase	Relationship to Government	Investment	Expertise
<b>Pre-Reform</b>	Integrated	Government bonds	Most expertise contracted externally
<b>Solid Foundation</b>	Strategy for independence with buy-in from stakeholders	Beginning to diversify	In-house expertise developing, outside experts still prominent
<b>Independence</b>	Independent	Diversified portfolio, limited opportunity set	Evolving toward in-house expertise
<b>Mature Organization</b>	Independent	Highly diversified, global portfolio	Fully developed in-house expertise, selective use of external experts

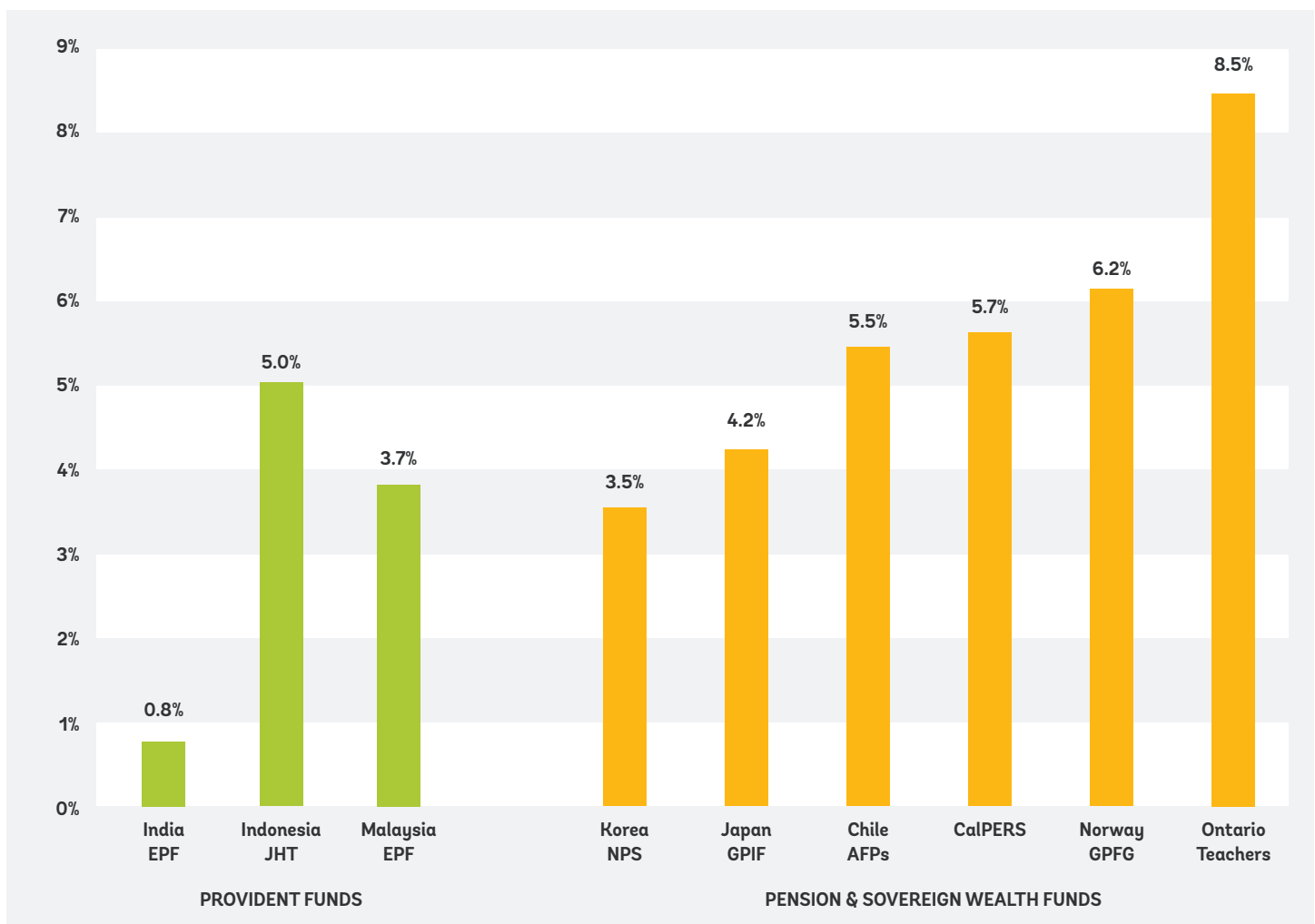
Source: World Bank, *The Evolution of the Canadian Pension Model: Practical Lessons for Building World-Class Pension Organizations*

## Assessing Investment Performance

One obvious way to assess the investment performance of provident funds is to compare it with the performance of investment funds around the world. Figure 7 compares the average annual real rate of return of India’s EPF, Indonesia’s JHT, and Malaysia’s EPF from 2009 to 2018 with that of a selection of six large pension funds and sovereign wealth funds over the same period. As is readily apparent, four of the other funds outperformed all three of the provident funds, in some cases by a wide margin, and all of the other funds outperformed India’s EPF.

There are several explanations for provident funds’ relatively poor performance. One explanation is that they allocate smaller shares of their portfolios to equities and other higher-risk,

higher-return growth assets than the large pension funds and sovereign wealth funds do. The smaller allocations to growth assets in part reflect the stage of economic development in each country. As development progresses in the future, and as the investment experience of provident funds grows, the exposure to growth assets can be expected to increase, and, along with it, real rates of return. Significantly, Malaysia’s EPF, which has the most diversified portfolio and the highest allocation to growth assets of the provident funds covered in the report, had a real rate of return that was much closer to that of the large pension funds and sovereign wealth funds than India’s EPF did. The real rate of return registered by Indonesia’s JHT was also much closer, but that was due in large part to the high risk premium on its government debt holdings.

**FIGURE 7 - Real Rate of Return: Ten-Year Average, 2009-2018**

*Note: The ten-year average return for India's EPF refers to the fiscal years beginning 4/1/2008 and ending 3/31/2018. Japan's GPIF also has a 3/31 fiscal year; in calculating its ten-year average return for 2009 to 2018, returns for 4/1/08 to 3/31/18 and 4/1/09 to 3/31/19 were averaged. CalPERS has a 6/30 fiscal year; in calculating its ten-year average return for 2009 to 2018, returns for 7/1/08 to 6/30/18 and 7/1/09 to 3/31/19 were averaged. The return for Chile's AFPs is the simple average of returns for all fund classes.*

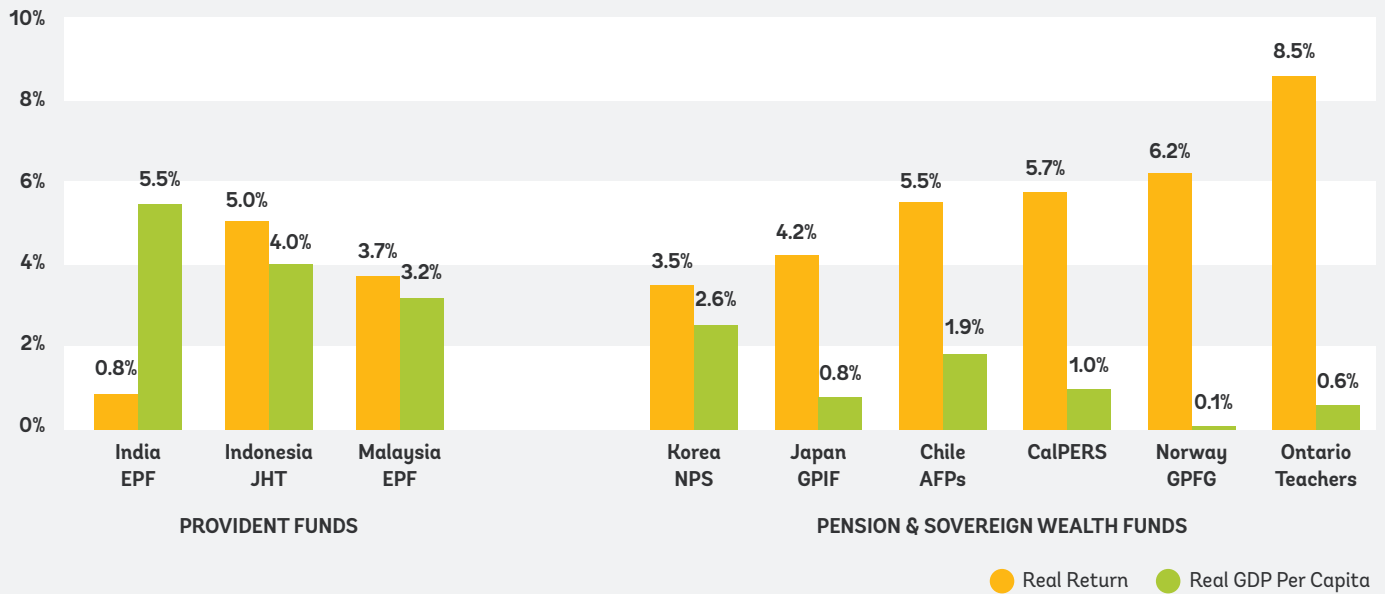
*Source: EPFO, BPJS, EPF (Malaysia), Korea's NPS, Japan's GPIF, Chilean Superintendency of Pensions, CalPERS, Norges Bank Investment Management, Ontario Teachers' Pension Plan, and GAI calculations*

A number of important technical factors also disadvantaged provident funds relative to the large pension funds and sovereign wealth funds over this particular comparison period. For one thing, slow global growth and massive central bank intervention combined to drive interest rates down to record lows—and asset prices up to record highs. Since provident funds generally do not mark their asset values to market, these price gains were not realized in provident funds to the same extent that they were in the large pension funds and sovereign wealth funds. For another thing, the comparison period begins just after the most dramatic part of the downturn in financial markets in 2008-2009, which weighed much more heavily on the large pension funds and sovereign wealth funds than it did on provident funds, with their more conservative portfolios. If returns had been compared over the 2008-2017 period

instead of the 2009-2018 period, the relative performance of provident funds would have appeared more favorable.

A final explanation is that provident funds are typically pursuing two objectives, while the large pension funds and sovereign wealth funds are pursuing just one—namely, maximizing investment returns. If provident fund investment returns could somehow be adjusted to include the social returns the funds generate by underwriting national development, the picture might appear quite different. It is possible that their social returns more than compensate for their lower investment returns, at least in some theoretical accounting framework. Unfortunately, the metrics needed to determine whether this is so do not currently exist for any of the provident funds covered in the report.

**FIGURE 8 - Real Rate of Return vs. Growth Rate in Real GDP Per Capita: Ten-Year Average, 2009-2018**



Return above GDP Per Capita					
India's EPF	-4.7%	Korea's NPS	1.0%	CalPERS	4.7%
Indonesia's JHT	0.9%	Japan's GPIF	3.4%	Norway's GPFG	6.1%
Malaysia's EPF	0.5%	Chile's AFPs	3.6%	Ontario Teachers	7.9%

Note: See figure 7.

Source: EPFO, BPJS, EPF (Malaysia), Korea's NPS, Japan's GPIF, Chilean Superintendency of Pensions, CalPERS, Norges Bank Investment Management, Ontario Teachers' Pension Plan, and GAI calculations

Another way to assess the performance of provident funds is to compare the real returns on their investment portfolios with real growth in living standards in each country. It is not enough for funded retirement systems to beat inflation. To generate meaningful benefits, they must also beat real wage growth. Figure 8 compares real rates of return from 2009 to 2018 in the three provident funds and the six large pension funds and sovereign wealth funds with growth rates in real GDP per capita, used here as a proxy for real wage growth, for which it is difficult to compile data on a consistent basis across countries. In Indonesia and Malaysia, real rates of return exceeded growth rates in real GDP per capita, but only by a narrow margin of 0.9 and 0.5 percentage points, respectively. In India, the real rate of return lagged behind growth in real GDP per capita by an enormous 4.7 percentage points. In

all of the pension funds and sovereign wealth funds, real rates of return exceeded growth rates in real GDP per capita, and in five of the six the margin was at least 3 percentage points. One reason for the poor performance of the provident funds relative to the pension funds and sovereign wealth funds is of course that their real rates of return were generally lower. But another reason is that real GDP per capita in the provident fund countries has been growing much faster.

All of this suggests that provident funds will need to improve their investment performance as their focus shifts from national development to retirement security. This may require abandoning old strategies and adopting new ones, some of which could involve changes in the way that provident funds currently operate. To begin with, provident funds may need to relax



portfolio allocation restrictions, particularly on foreign investment. While a primary or even exclusive focus on domestic investment may have made sense in the past, it will make less sense in the future as economies develop, populations age, and returns to domestic investment decline. Provident funds may also need to reconsider the minimum rate of return guarantees which some now feature. While such guarantees can protect members against adverse investment outcomes in the near term, most economists agree that in the long term they reduce retirement benefits by compelling asset managers to pursue overly conservative investment strategies.<sup>7</sup> More fundamentally, some provident funds may decide to move toward greater individual customization of the asset portfolio, which in turn may require moving from administratively determined returns to market-linked returns.

As provident funds prepare for the future, they are likely to confront the same lower-return environment that may be challenging retirement systems worldwide. It is almost certain that the high rates of return to financial assets that retirement systems have become accustomed to over the past decade cannot be repeated over the next, for the simple reason that the drop in interest rates and corresponding rise in asset prices that propelled them cannot be repeated. Rates of return, moreover, may fall further in emerging markets than in fully developed economies, since they naturally start out higher there and drop over time as the default risk on government bonds declines and equity markets grow and become more diverse, less volatile, and more liquid.

Yet there may also be a silver lining for emerging markets. Although rates of return may be lower in the future than they were in the past, economic growth is likely to be slowing too. If the slowdown were due to failed development, that would be a problem. But in the emerging markets of Asia, it will not be due to failure but to success. As their economies develop, the rapid rates of income growth that Asian countries have experienced will gradually converge to developed-world rates. When it comes to retirement policy, this means that provident funds will not need to achieve as high a rate of return in the future as they would have in the past in order to beat real wage growth, a bottom line prerequisite for providing adequate retirement benefits.

It will be interesting to follow the progress that the less developed provident funds make in coming years as they diversify their portfolios, both by asset class and outside the country. It may be even more interesting to follow the more developed provident funds as they continue to evolve, perhaps by intro-

ducing lifecycle funds or liability-driven approaches to investment. The steps they take will determine how successfully they manage the necessary transition from a primary focus on national economic development to a primary focus on retirement security.

## Three Provident Funds in Focus

The remainder of the chapter takes a closer look at investment and governance in each of the three provident funds covered in the report. The discussion focuses in particular on investment policy and investment performance, where a detailed evaluation is possible using published data, available primarily in the funds' annual reports and financial statements. It also pays close attention to accounting practices, since they are an important aspect of governance and can shed light on how provident funds operate. As we will see, the financial statements of the three provident funds vary in their clarity and transparency, with Malaysia's being considerably more sophisticated than India's or Indonesia's. Although other aspects of governance are also important for the success of provident funds, it was not possible to evaluate them, since a thorough, "on-the-ground" assessment of governance was not within the scope of the report. Nonetheless, some key issues of potential concern are mentioned.

The section on each provident fund begins with a set of charts. The first chart, which relates to investment policy, shows how the provident fund's asset allocation has evolved over the past decade. The second chart, which relates to investment performance, compares the provident fund's nominal rate of return from 2009 to 2018, labelled "Reported Return" on the charts, with inflation and the ten-year bond yield, both of which are important benchmarks. As the price of goods and services rises, provident funds must achieve a return above inflation in order to provide any value to members. Achieving a return significantly above the ten-year bond yield generally indicates that a fund's portfolio has diversified out of government bonds and is successfully earning a risk premium over time on behalf of members. The chart also includes an inset that compares the provident fund's ten-year average real return with the ten-year average growth rate in real GDP per capita. Achieving a real return significantly above the growth rate in real GDP per capita indicates that members' account balances are growing faster than their incomes, a critical goal if provident funds are to generate adequate replacement rates.

7. See the discussion in OECD, "Design and Delivery of Defined Contribution (DC) Pension Schemes: Policy Challenges and Recommendations" (report presented at the Cass Business School Conference on Defined Contribution Pensions: Guarantees and Risk Sharing, London, March 5, 2013).

The third chart, which relates to accounting, compares two different measures of investment returns: the provident fund's Reported Return, already shown on the previous chart, and a measure of return called the GAI Calculated Return. The Reported Return is the rate of return which is reported as credited to member accounts in the provident funds' annual reports. In India and Malaysia, this number is also widely reported in the press and is the subject of considerable public anticipation and discussion. The GAI Calculated Return is derived from information in the provident funds' financial statements on beginning-of-year balances, investment return amounts, and other cash flow, such as contributions and withdrawals. To the extent that the information is provided, assets are marked to market value.<sup>8</sup> The following formula, in which the denominator represents the average balance of the fund assuming even cash flows throughout the year, was used:

$$\text{GAI Calculated Return \%} = \text{Investment Return \$} / (\text{BOYB} + 0.5 \times \text{CF})$$

WHERE:

**Investment Return \$** = Investment return amount, with assets marked to market if possible

**BOYB** = Beginning-of-year balance

**CF** = Cash flow other than investment returns, including contributions, withdrawals, and expenses

This comparison can throw light on important investment and governance issues. As explained above, provident funds do not normally mark assets to market value. When the GAI Calculated Return reflects marked-to-market asset values and the Reported Return does not, as is the case with Malaysia's EPF, differences between the two measures reveal the potential which the provident fund has to smooth returns. But even when there is no difference in the way assets are valued, as is the case with India's EPF and Indonesia's JHT, the comparison can still be instructive. In such cases, the two measures should track each other closely. If they do not, it may indicate

that there are cross-subsidies from the general government budget to the provident fund, or vice versa. Although such cross-subsidies would not themselves be an indication of poor governance, lack of transparency about them would be.

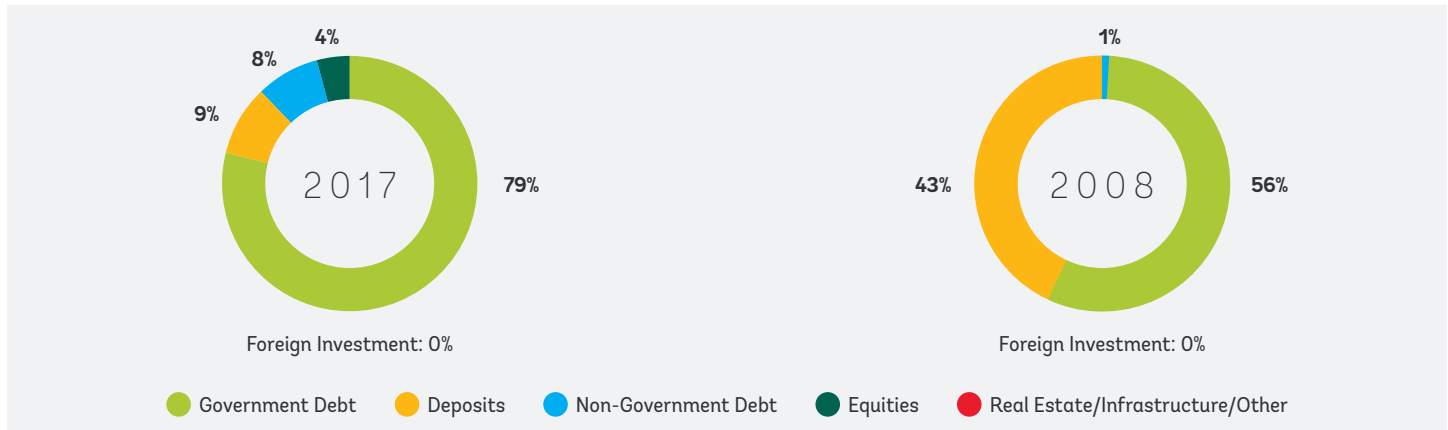
While there are certain investment and governance fundamentals that apply to all provident funds, other policies and practices need to be tailored according to the stage of development of each fund. The following discussion tries to take into account the unique circumstances in each country.

8. None of the three provident funds' financial statements provide the information needed to mark bonds to market value. For equities, the financial statements for Malaysia's EPF provide the needed information; those for Indonesia's JHT do not; and those for India's EPF, unusually for a provident fund, already mark equities to market value.

# India's EPF

> > >

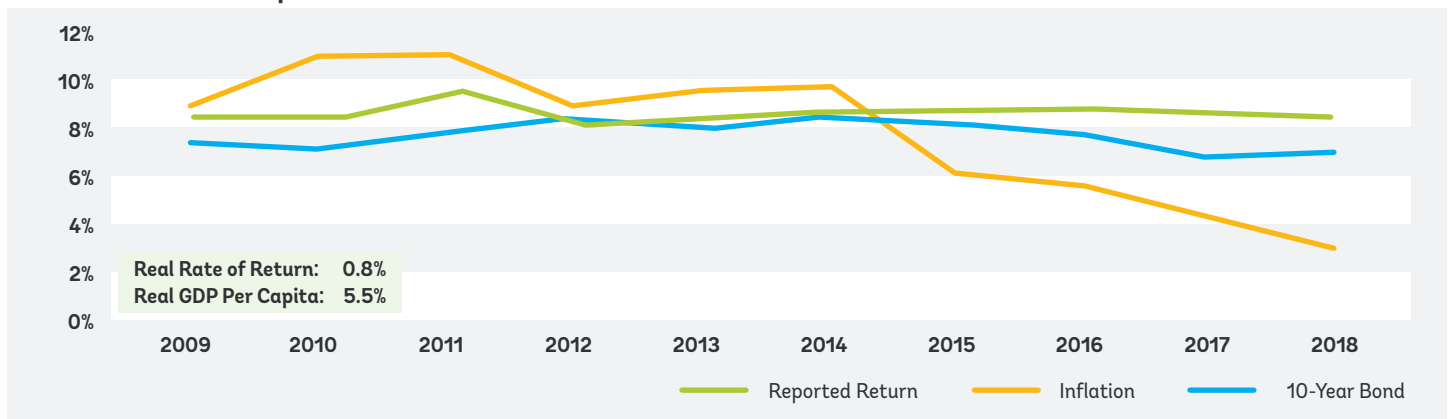
**FIGURE 9 - Portfolio Allocation at the End of 2008 and 2017**



Note: Asset allocation is as of 5/31/2008 and 12/31/2017.

> > >

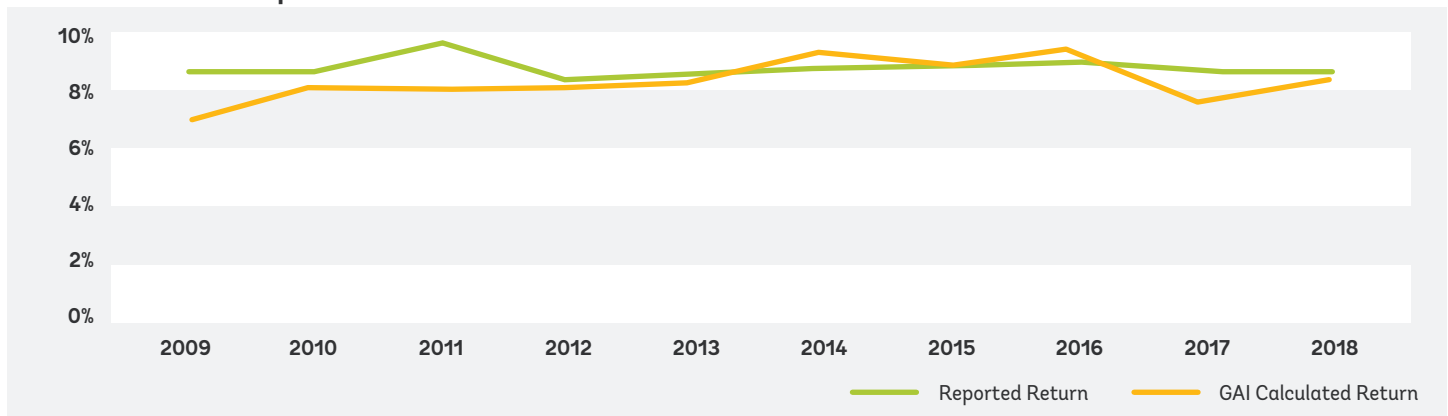
**FIGURE 10 - Reported Return vs. Inflation and Ten-Year Bond Yield**



Note: Returns are for fiscal years ending 3/31.

> > >

**FIGURE 11 - Reported Return vs. GAI Calculated Return**



Note: Returns are for fiscal years ending 3/31.

	10-Yr. Avg.	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Reported Return	8.67%	8.50%	8.50%	9.50%	8.25%	8.50%	8.75%	8.75%	8.80%	8.65%	8.55%
GAI Calculated Return	8.2%	6.9%	7.8%	8.0%	8.1%	8.8%	9.2%	8.8%	9.2%	7.6%	8.4%
10-Year Bond	7.8%	7.5%	7.3%	7.9%	8.5%	8.2%	8.5%	8.3%	7.7%	6.9%	7.0%
Inflation	7.9%	9.0%	11.2%	11.2%	9.0%	9.7%	9.8%	6.2%	5.6%	4.3%	3.1%

The Employees' Provident Fund (EPF) is administered by the Employees' Provident Fund Organization (EPFO), which in turn is part of the Ministry of Labour and Employment. In addition to the EPF, the EPFO also administers two related programs on behalf of its members, the Employees' Pension Scheme (EPS), which provides retirement, disability, and survivors pensions, and the Employees' Deposit Linked Insurance Scheme (EDLI), which provides a life insurance benefit in an amount linked to members' EPF account balances. GAI's analysis is limited to the EPF. The financial statements and investment return information reviewed by GAI cover the period April 1, 2008 to March 31, 2018.<sup>9</sup>

## Investment Policy

Although the EPF was established in the 1950s, when it comes to investment policy it is still in the early stages of development. The overwhelming majority of EPF assets consist of securities issued by the central and state governments or by state-run institutions. (See figure 9.) To be sure, there has been some evolution in asset allocation over the past decade. Corporate debt holdings have increased, and for the first time the fund has begun investing in equities. Together, however, these two asset classes only comprise 12 percent of the EPF portfolio, with equities comprising just 4 percent. The largest movement has been out of deposits, and in particular the central government's Special Deposit Scheme, and into government debt, a category that includes state development loans. The large allocation to government debt, together with a prohibition on foreign investment of any kind, suggest that domestic development remains a primary policy objective.

The EPFO outsources asset management to investment firms, which vary in number from year to year. There are currently just two: the State Bank of India and UTI Asset Management, both of which are state owned. The investment firms are subject to strict quantitative portfolio allocation guidelines, including minimum allocations to government debt and maximum allocations to equities. Equity investments, moreover, are exclusively in ETFs, with the total split between the two large domestic equity indexes, the Nifty50 and Sensex. As a result, the yield achieved by the different managers in most years varies by only a few basis points.

## Investment Performance

EPF nominal returns have been high, averaging almost 9 percent from 2009 to 2018. However, inflation has been nearly

as high, meaning that real returns have been quite low: just 0.8 percent. (See figure 10.) With India's economy growing rapidly, the growth rate in real GDP per capita has exceeded the real EPF return by an enormous 4.7 percent per year over the period, making it extremely difficult for the system to generate adequate replacement rates. The good news is that real returns have improved significantly since 2014 as inflation has dropped, a trend that will help improve future benefit outcomes if it continues. The risk premium earned by the EPF above the yield on ten-year central government securities has been modest, as would be expected from a portfolio invested primarily in government bonds. Measured against the EPF Reported Return it was 0.9 percent, while measured against the GAI Calculated Return it was 0.4 percent.

## Accounting

The EPFO's accounting sometimes lacks the clarity and transparency that one would expect from a large investment fund. This is especially true when it comes to the central question of how investment returns are credited to member accounts.

Figure 11 shows that the EPF Reported Return is sometimes significantly higher or lower than the GAI Calculated Return. The reasons for the discrepancy are not entirely clear, but it may be the result of inconsistencies in accounting. Although the EPF Reported Return for a given year is based, at least loosely, on the fund's earnings for that year, interest is not credited to member accounts until the following year. In the interim, the earnings are held in an aggregate "interest account," which functions as a holding account. The interest account gives the EPFO some flexibility in smoothing returns, which may be desirable. The problem is that, when it comes time to credit member accounts, the EPFO does not always appear to use the same account balance basis. There have also been occasions when the EPFO has discovered, sometimes years after the fact, that member accounts were never credited at all.<sup>10</sup> The discrepancy between the EPF Reported Return and the GAI Calculated Return may also indicate the existence of cross-subsidies between the government and the EPF designed to keep reported returns stable within a narrow and politically acceptable range. Whatever the explanation, it is not attributable to mark-to-market accounting. In the case of India's EPF, the Reported Return and the GAI Calculated Return value assets on exactly the same basis.

The EPFO's decision to begin investing in equities has created additional accounting challenges. Although the first equity in-

9. The analysis excludes so-called exempted establishments operating an EPF Private Trust. The EPF accounts of employees at these generally large establishments are managed in house rather than by the EPFO.

10. In 2011, for instance, it was unexpectedly determined that sufficient excess funds were in the interest account to both increase the reported return for the year and update millions of EPF account balances that had not been updated for decades. See "EPFO May Offer 9.5% Interest on PF This Year Too," *The Economic Times*, June 23, 2011.



vestments were made in 2016 and some earnings from those investments were added to the interest account and allocated to member accounts in 2018, the ultimate method for allocating equity earnings had not yet been implemented as of the end of the fund's 2018 fiscal year. There will apparently be two options. Members may elect to have their pro rata share of the EPF's market return on equity investments allocated to separate "equity accounts" opened in their name. If they do not make this election, their regular EPF accounts would continue to be credited with a fixed rate of interest that would presumably factor in returns on the equity component of the EPF's portfolio, but would be subject to the same administrative decision-making process that currently determines the interest credited to member accounts.

## Governance

The EPFO is overseen by a forty-three member Central Board of Trustees. The Chairman, Vice Chairman, and CEO, known as the Central Provident Fund Commissioner, are all officials from the Ministry of Labour and Employment, which also over-

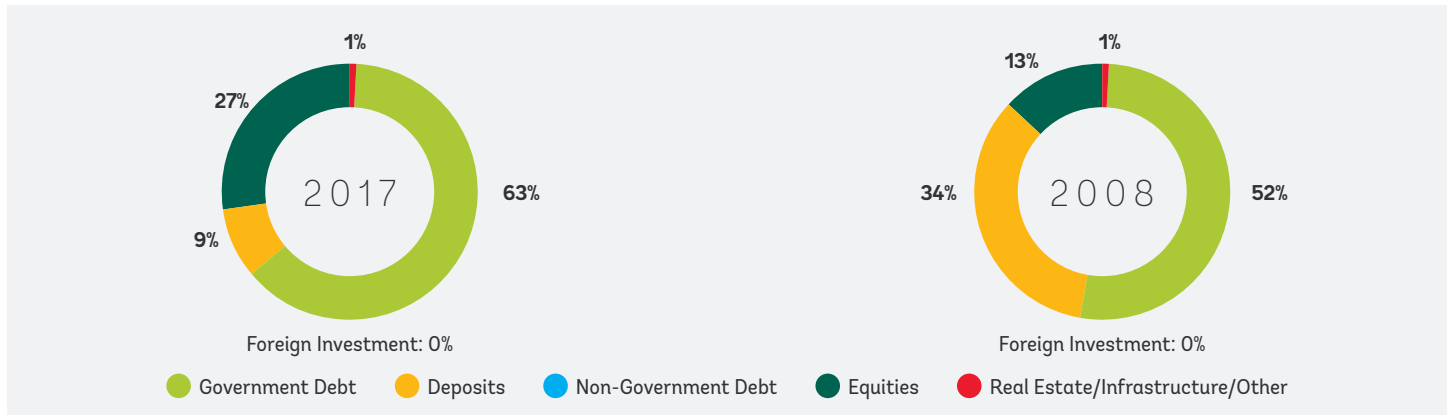
sees the appointment of the other board members. Of these, five are central government representatives and fifteen are state government representatives. There are also ten employer and ten employee representatives.

Because the EPF is in the early stages of provident fund development, governance needs are important but basic. As the fund continues to evolve, improving the clarity and transparency of accounting should be a primary governance objective. So should improving in-house investment expertise, which will be necessary for designing an effective long-term strategy whether or not the EPFO continues to outsource investment management. The diversification of the EPF's portfolio into equities was an important step, and has been implemented in a way that minimizes governance concerns about self-dealing and conflicts of interest. However, limiting equity investment to ETFs that track the two major domestic market indices may not be optimal in the long run. Over time, the EPFO will need to take a more sophisticated approach to investing in domestic equities. It will also need to consider global diversification of the EPF investment portfolio.

# Indonesia's JHT

> > >

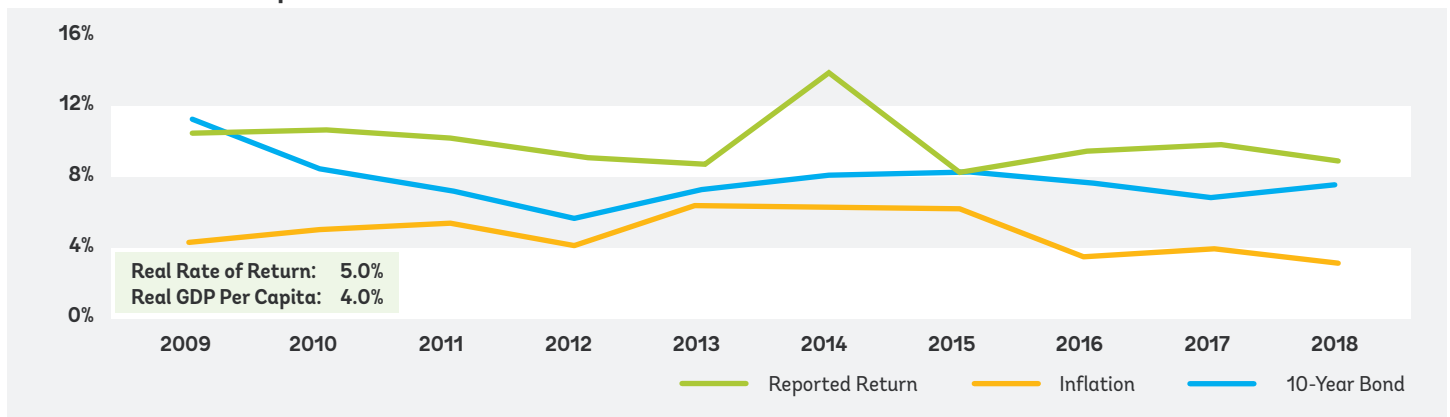
**FIGURE 12 - Portfolio Allocation at the End of 2008 and 2017**



Note: Government debt includes non-government debt. Asset allocation is as of 12/31/2008 and 12/31/2017.

> > >

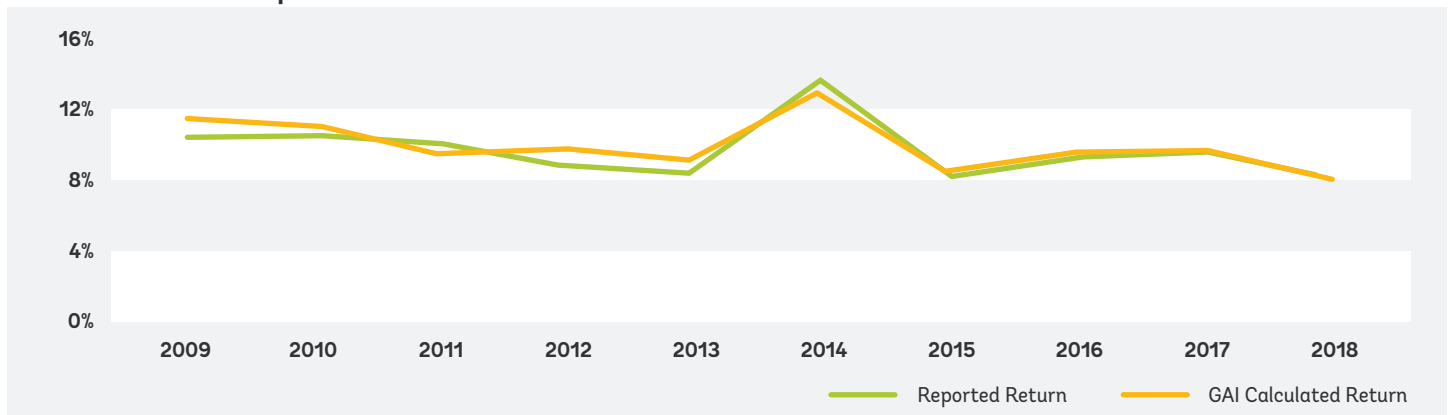
**FIGURE 13 - Reported Return vs. Inflation and Ten-Year Bond Yield**



Note: The Reported Return for 2017 is estimated from return amount and cash flow.

> > >

**FIGURE 14 - Reported Return vs. GAI Calculated Return**



Note: The Reported Return for 2017 is estimated from return amount and cash flow.

	10-Yr. Avg.	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Reported Return	9.9%	10.6%	10.6%	10.1%	9.1%	8.7%	13.8%	8.4%	9.5%	9.8%	8.1%
GAI Calculated Return	10.1%	11.7%	11.1%	9.7%	9.8%	9.2%	13.2%	8.8%	9.9%	9.8%	8.1%
10-Year Bond	7.8%	11.0%	8.5%	7.2%	5.8%	7.2%	8.1%	8.2%	7.6%	6.9%	7.5%
Inflation	4.9%	4.4%	5.1%	5.4%	4.3%	6.4%	6.4%	6.4%	3.5%	3.8%	3.2%



The Jaminan Hari Tua (JHT) is administered by BPJS Ketenagakerjaan, one of Indonesia's two social security agencies. Prior to the establishment of the BPJS in 2014, the JHT was administered by PT Jamostek, a state-owned enterprise. In addition to the JHT, the BPJS also administers three other programs: the Jaminan Kecelakaan Kerja (JKK), which provides work accident benefits; the Jaminan Kematian (JK), which provides life insurance benefits; and the Jaminan Pensiun (JP), which provides retirement, disability, and survivors pension benefits. GAI's analysis is limited to the JHT. The financial statements and investment return information reviewed by GAI cover the period January 1, 2009 to December 31, 2018.

## Investment Policy

The BPJS sometimes fails to report basic information on investment policy, strategy, and performance. These gaps are particularly striking in the area of asset allocation. There is no indication in its annual reports of the division of fixed-income

investments between government and corporate securities, and there is no detail provided on either publicly traded equity investments or direct placements. This is surprising, since PT Jamostek typically provided much greater detail on JHT investments in its annual reports, including allocations to each asset class, returns by asset class, and industry exposure. There was even a discussion of how the maturity profile of bonds was matched to liabilities for benefit payments.

The information that the BPJS does provide indicates that the JHT, though still in the early stages of provident fund development, is beginning to diversify its portfolio. To be sure, like India's EPF, the JHT remains primarily invested in fixed-income securities. (See figure 12.) Although the mix is not disclosed, if the allocation is similar to what was reported under PT Jamostek the investments are primarily in government debt and state-owned enterprises, including the four state-owned banks and Indonesia's Regional Development Bank. As in India, moreover, foreign investment is prohibited. Yet the JHT also has a sizeable equity position, which has grown over the

past decade from 13 to 27 percent of its total portfolio. In addition, there are small allocations to infrastructure, real estate, and private equity.

The BPJS appears to weigh development objectives heavily in its investment decisions. In recent annual reports, there is discussion of targeting investments that contribute to workers' welfare, particularly in the areas of homeownership, food security, education, and transportation. There is also a focus on infrastructure investment. Although infrastructure currently constitutes a small portion of the JHT portfolio, plans have been announced to increase allocations to infrastructure projects of state-owned enterprises.<sup>11</sup> Investment policy seems to be determined and implemented internally, and there is no mention of external managers, except for small allocations to mutual funds.

## Investment Performance

The JHT earned an average nominal return of just under 10 percent from 2009 to 2018, slightly higher than the return earned by India's EPF over the same period. At 5.0 percent, however, the real JHT return was much higher than the real EPF return. (See figure 13.) The better results are attributable in part to the high credit risk premium on Indonesian bonds and in part to Indonesia's lower inflation rate. The real JHT return also exceeded the growth rate in real GDP per capita by 0.9 percentage points over the ten-year period—not a wide margin, but still a better performance on this metric than that achieved by any of the other three provident funds covered in the report. Relative to the Indonesian ten-year bond yield, JHT's investment portfolio has provided a 2.1 percent risk premium. While the BPJS provides no analysis of this excess return, the JHT's equity investments presumably contributed much of it. From 2009 to 2018, the Jakarta Composite Index registered returns in excess of 15 percent per year.

## Accounting

The BPJS does not provide sufficient accounting detail to determine with assurance how investment returns are credited to member accounts. However, it appears that the BPJS makes use of a reserve account to smooth JHT returns. This was the case when the fund was administered by PT Jamostek, whose annual reports clearly indicated that most investments were not marked to market value and presented figures for unrealized capital gains held in the reserve account. Although no such information is included in the BPJS annual reports, these practices presumably continue. As is clear from figure

13, JHT returns have continued to be relatively stable. The exception is 2014, when there was a spike in returns attributable to what is described as "profit-taking" in equity investments. While 2014 was a good year for equities, it may not be coincidental that it was also the year that provident fund assets were transferred from PT Jamostek to the BPJS.

Figure 14 compares the JHT Reported Return with the GAI Calculated Return for the fund. Since there were no data available to adjust the GAI Calculated Return for marked-to-market asset values, one would expect the two measures to track each other closely. They are indeed well aligned, with only small deviations. This finding is significant. Whatever limitations BPJS accounting may have, there is no significant difference between reported investment earnings and the earnings actually credited to member accounts, as there is in India's EPF. This in turn indicates that there are no cross-subsidies from the government to JHT members or vice versa.

## Governance

The BPJS is a public legal entity that reports to the President of Indonesia. As is typical in Indonesia, a Board of Commissioners is responsible for setting policies and oversees a Board of Directors, which is more directly responsible for managing operations. The members of both boards are selected and approved by the President and Parliament. Of the seven members of the Board of Commissioners, two are government representatives.

Although the JHT is in many ways still in an early stage of provident fund evolution, its substantial allocation to domestic equities, as well as its material level of investment in private equity and state-owned enterprises, create special governance needs. Investment expertise is important for any provident fund that has diversified its portfolio beyond government bonds and deposits. The lack of clear and complete information on investment policy, strategy, and performance in the BPJS annual reports suggests that further developing this expertise should be a primary governance objective. Given the JHT's investment in private equity and state-owned enterprises, it will also be important for the BPJS to ensure that adequate mechanisms for handling conflicts of interest and guarding against self-dealing are in place. The focus on development objectives in investment decisions similarly indicates that it will be important to monitor and manage possible tensions between those objectives and maximizing investment returns.

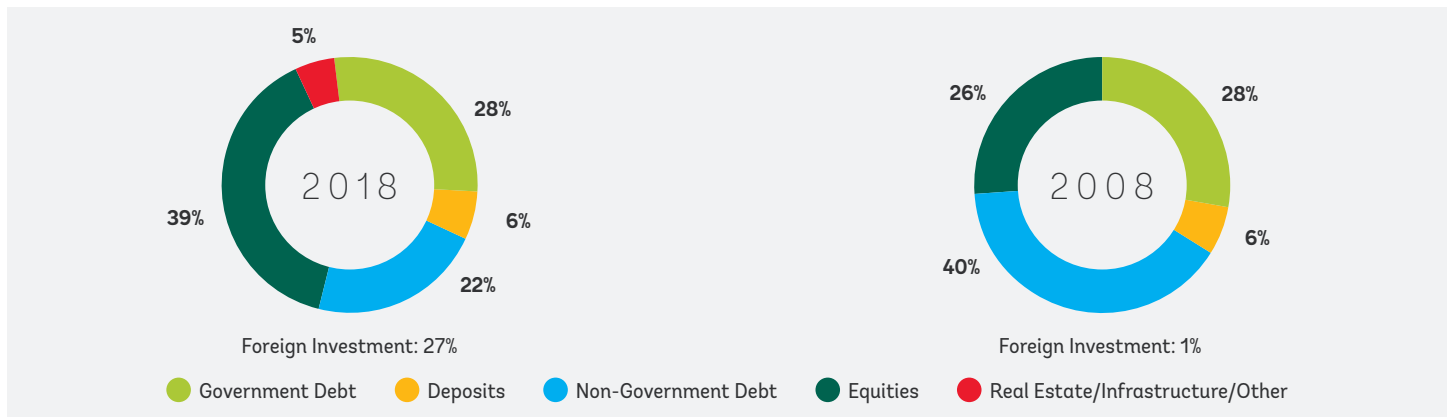
11. "BPJS Ketenagakerjaan to Boost Investment in Infrastructure Projects," *Jakarta Globe*, August 8, 2016.



# Malaysia's EPF

>>>

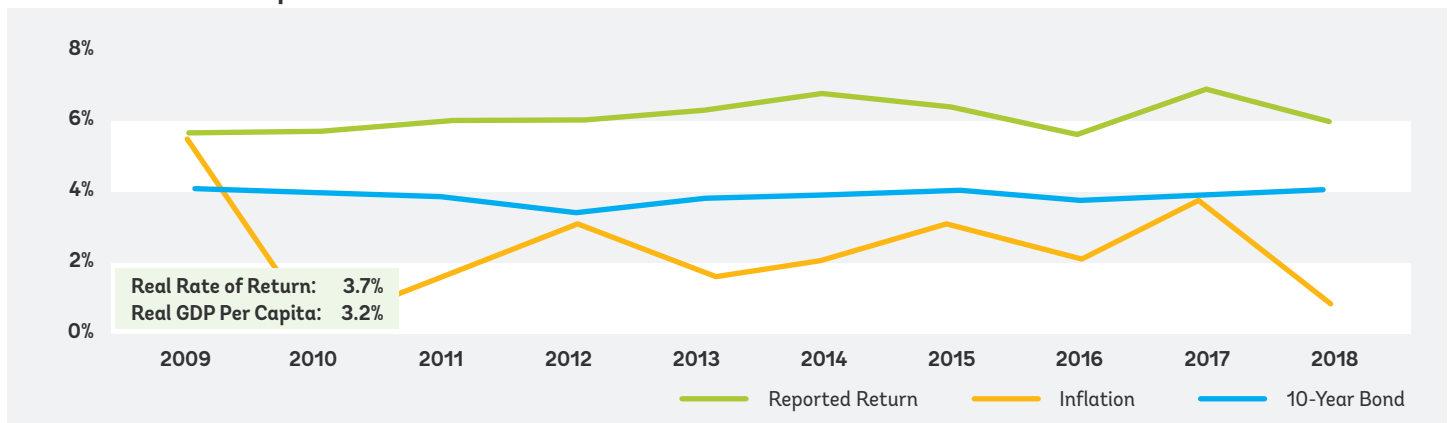
**FIGURE 15 - Portfolio Allocation at the End of 2008 and 2018**



Note: Asset allocation is as of 12/31/2008 and 12/31/2018.

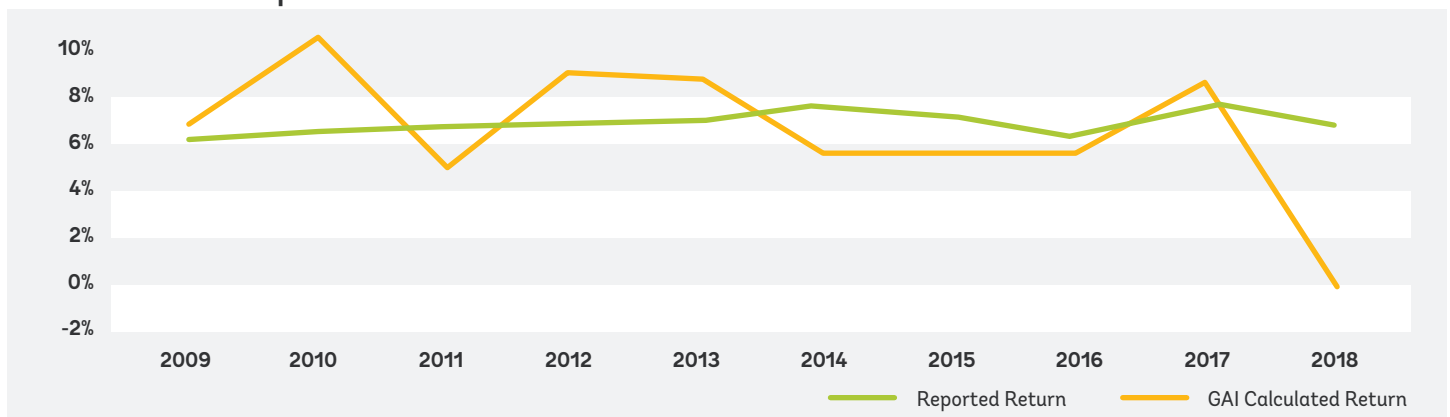
>>>

**FIGURE 16 - Reported Return vs. Inflation and Ten-Year Bond Yield**



>>>

**FIGURE 17 - Reported Return vs. GAI Calculated Return**



Note: The GAI Calculated Return includes unrealized gains/losses on equity investments.

	10-Yr. Avg.	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Reported Return	6.2%	5.7%	5.8%	6.0%	6.2%	6.4%	6.8%	6.4%	5.7%	6.9%	6.1%
GAI Calculated Return	5.8%	5.8%	9.4%	4.5%	8.2%	7.9%	4.9%	5.0%	4.9%	7.7%	-0.2%
10-Year Bond	3.9%	4.1%	4.0%	3.9%	3.5%	3.8%	4.0%	4.0%	3.9%	4.0%	4.1%
Inflation	2.4%	5.4%	0.6%	1.6%	3.2%	1.7%	2.1%	3.1%	2.1%	3.9%	0.9%

The Employees Provident Fund (EPF) is administered by the EPF Board, which operates under the supervision of the Ministry of Finance. The EPF consists of two accounts: Account I, which is earmarked for retirement savings; and Account II, which is earmarked for nonretirement savings. GAI's analysis includes both accounts. The financial statements and investment return information reviewed by GAI cover the period January 1, 2009 to December 31, 2018.

## Investment Policy

---

The EPF, with USD \$203 billion in assets under management at the end of 2018, is among the world's largest pension funds. Founded in the early 1950s, it initially invested almost exclusively in government securities. Beginning in the 1990s it began to diversify its portfolio, and now has significant holdings in riskier growth-oriented assets. (See figure 15.) Although 56 percent of total assets were still invested in fixed income at the end of 2018, there were also sizeable investments in Malaysian and global equity markets, as well as sizeable direct placements in Malaysian corporations. Private equity investments make up almost 10 percent of the portfolio, and include entities classified as joint ventures (some management influence), associates (significant management influence), and subsidiaries (also significant management influence). Over the past decade, foreign investment has grown rapidly, increasing from just 1 percent of the EPF's portfolio at the end of 2008 to 27 percent at the end of 2018.

The EPF has two rate of return targets. The first, which is a legal requirement, is to declare at least a 2.5 percent nominal return or "dividend" each year, while the second is to deliver at least a 2.0 percent real return on a rolling three-year basis. Over the period examined, these targets have always been met. There are policies in place that determine both tactical (short-term) and strategic (long-term) adjustments to asset allocation. Assets are managed both internally and by external fund managers. As EPF's in-house investment expertise has grown, however, the share of assets managed internally has steadily increased and now stands at about 85 percent of the total. Since 2017, members have had the option of investing their savings in a new Shariah compliant investment portfolio, which to date has delivered only slightly lower returns—50 basis points in 2017 and 25 basis points in 2018—than the conventional investment portfolio.

## Investment Performance

---

The EPF's nominal return averaged 6.2 percent from 2009 to 2018, which may seem low compared with the returns registered by India's and Indonesia's provident funds. However, the

EPF's real return averaged a solid 3.7 percent—high enough to exceed the growth rate in real GDP per capita, though only by a narrow margin of 0.5 percentage points. The EPF earned a reasonable risk premium of 2.3 percentage points above the average ten-year bond yield, thanks to its substantial equity holdings. The EPF's investment performance has not only been respectable, but also quite stable, with annual returns over the period only deviating from the average return by about plus or minus 0.5 percentage points. For a fund with significant holdings in equities and other risky assets, this pattern of returns seems quite remarkable. One explanation is that the EPF's sizeable private equity investments are not subject to the ups and downs of a public market. The more important explanation, however, lies in how the EPF accounts for gains and losses on the publicly traded assets in its portfolio.

## Accounting

---

The EPF Board publishes thorough, detailed financial statements and disclosures that allow important insights into its accounting practices. Investments are not marked to market value. Unrealized gains and losses are held in a reserve account, whose balance is presented in the financial statements but is not widely disclosed to the public. Each year, the investment earnings allocated to member accounts include interest, dividends, and rental income, which together have provided about a 3.5 percent return in recent years. In addition, any realized gains on assets sold are also allocated to member accounts. This has added about 2 to 3 percentage points to returns in recent years, resulting in a total dividend that is usually between 6.0 and 6.5 percent.

The EPF's accounting practices allow it to smooth member returns. As can be seen in Figure 17, the GAI Calculated Return, which is based on marked-to-market investment returns, has risen and fallen significantly from year to year over the past decade, while the EPF Reported Return, or dividend, has remained stable. While smoothing returns has its advantages, when reported returns and actual investment returns diverge greatly, as they did in 2018, it can create problems. Despite a negative investment return for the year, sufficient assets were sold and investment gains realized to keep dividend rates (both conventional and Shariah) in the 6.0 to 6.5 percent range. The asset sales, however, depleted the EPF reserve account, which dropped from RM 41.9B to RM -7.3B at the end of 2018. Thus, at the beginning of 2019, the EPF found itself in a position where, instead of being able to realize gains in order to boost dividends, it might have to realize losses, thereby lowering dividends. And indeed, despite large gains on its equity investments in 2019, when that year's dividend



was declared it came in at just 5.45 percent, the lowest level since 2008.

It is interesting to note that the EPF Board's interpretation of international accounting standards is a key question addressed by the Auditor General for Malaysia in its opinion on the 2018 financial statements. These standards establish that the deferral of gains and losses for equity securities is only allowable if an irrevocable decision is made at the time the securities are purchased and if the securities are not intended to be traded in the short term. It is not clear and obvious that the EPF's equity investments meet these criteria.

## Governance

The EPF Board is appointed by the Minister of Finance. In 2018, there were eighteen members. Besides the Chairman of the Board and the CEO of the EPF, these included five gov-

ernment representatives, four employer representatives, four employee representatives, and three members chosen for their professional expertise.

Any large, globally diversified investment fund requires a well-developed governance function. When that fund also holds large direct ownership stakes in domestic enterprises, as the EPF does, that function becomes even more important. Some of the EPF's direct ownership stakes are in private enterprises, while others are in public ones. The EPF is one of Malaysia's seven Government-Linked Investment Companies (GLICs), and is thus authorized to invest in Government-Linked Companies, such as national banks, utilities, and transportation companies, which together make up over one-third of Bursa Malaysia market capitalization.<sup>12</sup> Although the EPF has policies in place designed to insulate investment decisions from government influence, ensuring the effectiveness of these policies remains a key governance challenge.

12. Jayan Menon, "Government-Linked Companies: Impacts on the Malaysian Economy," Policy Ideas no. 45 (Kuala Lumpur: Institute for Democracy and Economic Affairs, December 2017).

3





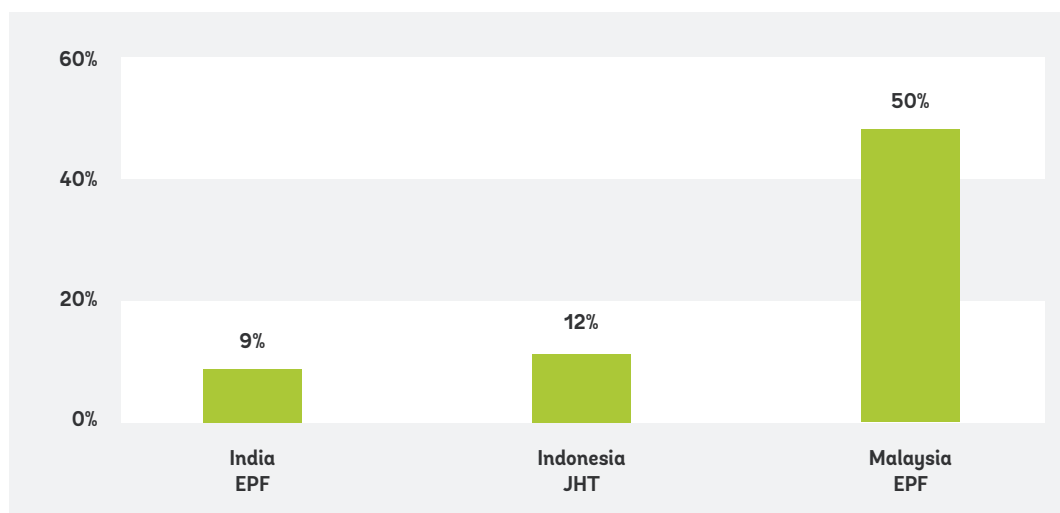
# Benefit Design and Adequacy

At the most basic level, there are two dimensions to the adequacy of government retirement systems: their breadth, as measured by the share of the workforce that participates, and their depth, as measured by the share of preretirement income that they replace.

When it comes to the first dimension of adequacy, the performance of the three provident funds covered in the report gives obvious cause for concern. In India and Indonesia, only around one-tenth of the workforce contributes to the EPF or the JHT in a given year. In Malaysia, the coverage rate is considerably higher. Still, just one-half of the workforce contributes to the EPF in a given year. (See figure 18.) Including participants in special retirement schemes for civil servants and the armed forces, the share of the workforce covered by a contributory government retirement program is at least somewhat higher in all three countries and significantly higher in Malaysia, which has an unusually large public sector. But in none of them is the overall coverage rate close to universal.

> > >

**FIGURE 18 - Effective Coverage Rate at the End of 2018 or Most Recent Year Available**



*Note: The effective coverage rate equals active members as a share of employment, where active members are defined as members whose employers make regular contributions on their behalf (India) or members who have made a contribution within the past year (Indonesia and Malaysia). Data for Indonesia are for the end of 2017; data for India are an average for 2016-17.*

*Source: EPFO, BPJS, EPF (Malaysia), ILO, and GAI calculations*

This low coverage problem, however, is not a failing of the provident fund model. Although low coverage constitutes a serious policy challenge, it is no more of a challenge for provident funds than for other types of contributory retirement systems in emerging markets. Low coverage is mainly a function of labor-market informality, and it is little affected by how retirement systems are organized and financed. While there are steps that the three provident funds could take to increase coverage, some of which will be discussed in the next chapter, so long as informality remains widespread progress will be difficult. In India and Indonesia in particular, where between 80 and 90 percent of the workforce labors in informal employment, substantially increasing cov-

erage will likely require substantially increasing the size of the formal sector. The ability of countries to do so will in turn depend on the success of their broader development agendas, and especially initiatives that increase human capital and reduce inequality. This reality is why it is so critical for emerging markets to back up their contributory retirement systems with robust social pension systems.

This report focuses on the second dimension of retirement system adequacy, in part because it receives less attention and in part because the outcomes are more closely, though by no means exclusively, related to the design of provident funds themselves. The evidence suggests that, beyond the low coverage problem, there is also cause for concern about the adequacy of retirement benefits in all three provident funds covered in the report. The chapter begins with a discussion of the factors that tend to undermine benefit adequacy, then reviews what we know about the benefit levels of current retirees. Finally, it presents stylized projections of replacement rates for future retirees.

## Adequacy Today

A common problem in funded retirement systems is that contribution rates may be too low to generate adequate replacement rates. This is clearly a problem in Indonesia's JHT, whose combined employer-employee contribution rate is just 5.7 percent of wages. It is not a problem, however, in the other two provident funds covered in the report. In India's EPF, the contribution rate is 15.7 percent of wages, while in Malaysia's EPF it is 24 percent for most members.<sup>13</sup> It is true that contribution rates in India and Malaysia were much lower in the past. But most of those members who have recently retired or are approaching retirement age were subject to the current higher contribution rates throughout most or all of their careers.

What does undermine the adequacy of retirement benefits in all three provident funds is that much of what workers contribute is not preserved for retirement. Provident funds, after all, serve multiple savings purposes. In the case of Malaysia, the allocation of savings to retirement and nonretirement purposes is, in large part, the result of deliberate policy choices. Each EPF member has two accounts. Account I, which is earmarked for retirement, receives 70 percent of total contributions while Account II, which can be accessed prior to retirement for a variety of purposes, from purchasing a home to

making the Haj, receives 30 percent. In India and Indonesia, there are no separate accounts for retirement and nonretirement purposes, and consequently no clear distinction between retirement and nonretirement funds. All member contributions flow to the same account, which can be accessed prior to retirement under a wide array of circumstances. In India's EPF, these include purchasing a home or paying off a mortgage, paying for medical expenses, and financing the education or marriage of one's children. Members can also cash out the portion of their EPF balances that is attributable to their own contributions when they quit or are laid off from their current job, provided that they have been unemployed for at least two months. Indonesia's JHT allows partial withdrawals to finance home purchases, as well as complete cash outs in the event workers lose their job.

There are no longitudinal data available that reveal how much of members' total savings is on average preserved for retirement over the course of their careers. However, for two of the provident funds there are data on current-year withdrawals by type, and these data suggest that nonretirement withdrawals greatly reduce the ultimate adequacy of retirement benefits. In 2018, nonretirement withdrawals accounted for 42 percent of the total funds withdrawn from Malaysia's EPF. In Indonesia's JHT, where the data refer to 2017, the corresponding figure is an astonishing 88 percent. Although the figure for India's EPF was not available, it would be surprising if it were not also very large.

Then there is the matter of early retirement ages. In India's EPF the retirement age, after which members can withdraw any remaining account balance, is just 55. In Malaysia's EPF it is also 55, although, as of 2017, any incremental contributions made by workers who remain employed past age 55 must be preserved until age 60. Until recently, the retirement age in Indonesia's JHT was 55 as well. Indonesia, however, has begun raising the JHT retirement age in stages to 65, which it will reach in 2043. As of 2020, it stood at 57. Early retirement ages can greatly lower replacement rates, since they both reduce the number of working years during which contributions are made and increase the number of retirement years that account balances need to finance. All other things being equal, postponing retirement from age 55 to 65 nearly doubles potential replacement rates.

There is also the lack of provision for lifetime income. In India's EPF, Indonesia's JHT, and Malaysia's EPF account balances can be cashed out entirely as lump sums payouts, which of-

13. In Malaysia's EPF, contribution rates are lower for members aged 60 and over, as well as on earnings above a relatively high threshold.

fer no protection against inflation risk or longevity risk. Among Asia's major provident funds, only Singapore's CPF requires even the partial annuitization of account balances.

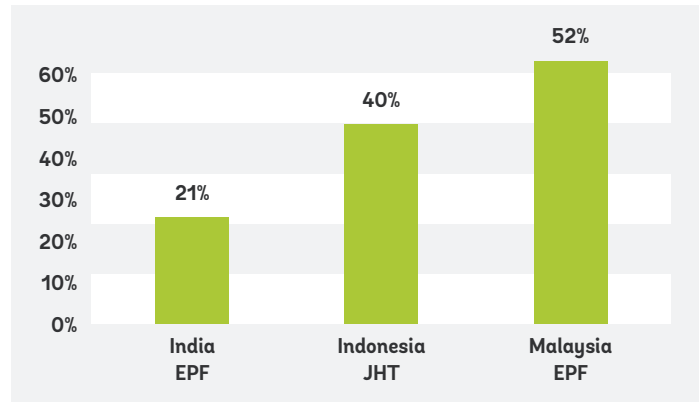
Beyond design features like nonretirement withdrawal rules or retirement ages, over which policymakers have control, there are two broader economic and labor-market factors that can affect the adequacy of funded retirement benefits. One is low "contribution density," which is a close relative of low coverage rates. Many workers in emerging markets may start, stop, and then restart contributing to government retirement systems a number of times during the course of their working lives. Some workers, particularly women, may leave the labor force altogether to raise children or care for other family members, then later reenter it. Even if workers remain continuously employed, they may cycle in and out of covered employment, spending part of their careers in the formal sector and part in the informal sector. A substantial literature confirms that low contribution density has played a central role in undermining the adequacy of retirement benefits in Latin America's personal account systems.<sup>14</sup> The limited data available suggest that it is also a significant problem in most of Asia's provident funds.

Active members, variously defined as members whose employers make regular contributions on their behalf (India) and members who made a contribution within the past year (Indonesia and Malaysia), represent just a fraction of total members in the three provident funds covered in the report. In India's EPF, about one-fifth of members were classified as active in the most recent year for which data are available, in Indonesia's JHT about two-fifths were, and in Malaysia's EPF about one-half were. (See figure 19.) It is true that the ratio of active members to total members is not a direct measure of contribution density, and may significantly understate it in some countries. In India in particular, the fact that many EPF members have duplicate accounts may make the number of inactive members appear larger than it actually is. Still, these ratios suggest that contribution density is low enough in all three countries to have a large negative impact on savings accumulation. In Malaysia, where more detailed data on contribution histories are available, there is no question that it does. A large sample of EPF records reveals that in 2012 just 53 percent of individual members aged 16 to 54 made any contributions to their accounts, a share that is almost identical to the ratio of active members to total members.<sup>15</sup>

The other broader factor that can critically affect the adequacy of retirement benefits is rapid real wage growth. As explained

> > >

**FIGURE 19 - Active Members as a Percent of Total Members at the End of 2018 or Most Recent Year Available**



*Note: For the definition of active members, see figure 18. Data for Indonesia are for the end of 2017; data for India are an average for 2016-17. In Indonesia, active members refer to JHT members; total members refer to BPJS members, excluding Jakon workers. Source: EPFO, BPJS, EPF (Malaysia), and GAI calculations*

in Chapter 2, over the past decade the real rate of return on investment in the three provident funds covered in the report has at best modestly exceeded the growth rate in real GDP per capita, which is used in this report as a proxy for real wage growth, and in one of the three has lagged well behind it. Part of the explanation is that provident fund investment performance has failed to match that of many other large pension funds and sovereign wealth funds. But the more important part is that the growth rate in real GDP per capita has been very rapid in most of Asia, averaging 3.2 percent per year in Malaysia, 4.0 percent per year in Indonesia, and 5.5 percent per year in India. To put these numbers in perspective, even the slowest growing country, Malaysia, had a growth rate in real GDP per capita that was nearly three times the growth rate in U.S. real GDP per capita over the same period.

While a higher rate of return raises the replacement rate in a funded pension system, a higher rate of real wage growth lowers it. Although this dynamic is often not appreciated, it is an immutable fact of retirement economics that the faster income is growing the larger is the share of income that needs to be saved each year in order to generate the same final salary replacement rate. Given the same contribution rate, the same contribution density, and the same real rate of return, account balances at retirement relative to preretirement wages, and hence replacement rates, would be just half as large at 5 percent real wage growth as they would be at 1 percent real wage growth.

14. For a comprehensive discussion of the issue, see OECD/IDB/World Bank, *Pensions at a Glance: Latin America and the Caribbean* (Paris: OECD/IDB/World Bank Group, 2014).  
 15. The dataset, which includes over 20,000 records, is described in Robert Holzmann et al., "Employees Provident Fund Data for Evidence-Based Social Protection Policies in Malaysia," SSRC Working Paper Series no. 2016-1 (Kuala Lumpur: Social Security Research Centre, March 2016). Professor Halimah Binti Awang of the University of Malaya, one of the co-authors, kindly shared an extract from the dataset with GAI.

Assessing how all of this has affected benefit adequacy is challenging. None of the three provident funds covered in the report publish replacement rate estimates for current retirees. Nor do they publish the data on account balances by age and salary level that would allow others to calculate them. Still, there are sufficient data available to reach some tentative conclusions.

Malaysia, where the situation is reasonably clear, is a good place to begin. The EPF recently established a minimum target for retirement savings called the “basic savings” amount. For members turning 55, the EPF’s retirement age, this amount was RM 240,000 as of 2018, a sum designed to provide a modest retirement income of RM 1,000 per month for twenty years, or about two-fifths of the current urban median wage. Yet at the end of 2018, the average account balance of 54-year-old EPF members was only RM 209,862. Moreover, since EPF savings is highly skewed by income, most members did not have account balances nearly that high. In 2018, just 10 percent of 54-year-old members accounted for 43 percent of the total savings of members that age—and just 28 percent accounted for 69 percent of it. All told, 72 percent of 54-year-old members had an EPF balance of less than RM 250,000, approximately the basic savings amount. Twenty-four percent had less than RM 50,000 in savings, meaning that if they spent their lump sum payouts at the rate of RM 1,000 per month they would exhaust them in less than five years.

The situation in India and Indonesia is even more worrisome. Although India’s EPF does not publish data on account balances by age, the available data indicate that the average account balance of all members was roughly Rs 45,000 at the end of March 2017. Assuming that the average account balance of members nearing retirement age exceeds the average balance of all members by about the same ratio it does in Malaysia, it may have been roughly twice as much, or around Rs 100,000. If so, it only amounted to about one-half of the average annual wage for regular urban employees that year. In Indonesia’s JHT, the average lump sum retirement withdrawal was Rp 45 million in 2017, or about one and one-half times the average annual wage of formal-sector employees. Without data on preretirement balances or retirement withdrawals by salary level, it is not possible to say with any precision what actual replacement rates were for typical workers. Nonetheless, these numbers clearly indicate that for many if not most workers they were far from adequate in both countries. As a point of reference, a final-balance-to-final-salary ratio of 1.0 at age 55 would barely be

sufficient, given current Indian and Indonesian life expectancy, to finance an inflation-adjusted annuity equal to 5 percent of preretirement wages.

It is true that in India and Indonesia provident fund members also participate in defined benefit pension programs. Indonesia’s program, which is called the Jaminan Pensiun (JP), will eventually deliver replacement rates of between 20 and 35 percent of final salary to full-career workers, which is a meaningful benefit level.<sup>16</sup> However, the program does little to help today’s retirees. The JP, which was introduced in 2015, will not begin paying pensions until the 2030s, when the first participants who meet the system’s minimum fifteen-year contribution requirement begin reaching retirement age. In the meanwhile, retirees will receive lump sum payouts, which currently average just Rp 3 million, or about a month’s wages for an average earner. India’s program, which is called the Employees’ Pension Scheme (EPS), is designed to deliver replacement rates to full-career workers of around 50 percent of final salary. But this too lies in the future. Like Indonesia’s JP, the EPS, which was launched in 1995, is still maturing. Replacement rates for most current retirees are quite modest, both because no one now retired contributed to the EPS for a full career and because the cap on contributable wages has, historically, lagged far behind wage growth. Roughly one-third of current retirees receive the subsidized minimum EPS pension of Rs 1,000 per month, a benefit equal to about one-fifth of the national minimum wage floor.

## Adequacy Tomorrow

The adequacy of retirement benefits can be expected to improve at least somewhat over the next few decades in all three provident funds covered in the report. Today’s younger workers will probably experience slower wage growth over the course of their careers than today’s retirees did over theirs, making it easier for their account balances to grow faster than their incomes. Contribution density could also increase as younger, better-educated workers, who may be less likely than older workers to cycle in and out of formal employment, climb the age ladder. In Malaysia, where there are data on contribution density by age, average density for all EPF members aged 16 to 54 was 53 percent in 2012, but for members in their twenties it was 69 percent. Moreover, workers may preserve more of their savings for retirement, both because some provident

16. The JP benefit formula replaces 1 percent of wages per year. But since wage histories are only indexed to inflation in calculating benefit awards, final salary replacement rates will depend critically on the rate of real wage growth over the course of workers’ careers. The high end of the replacement rate range cited here assumes 1 percent real wage growth over the course of a full forty-five year career, while the low end assumes 5 percent real wage growth.



funds, particularly India's and Indonesia's, are attempting to tighten nonretirement withdrawal rules and because today's workers do not expect to rely as much in retirement on their extended families as today's retirees do. In the 2015 Global Aging Institute survey cited earlier in the report, no more than one in five workers in any of the ten Asian countries surveyed said that they expect to be financially dependent on their grown children when they are retired, and in some of the more developed countries the share was as low as one in twenty.<sup>17</sup> Meanwhile, in India and Indonesia, the maturation of the EPS and JP programs will also be improving retirement income prospects.

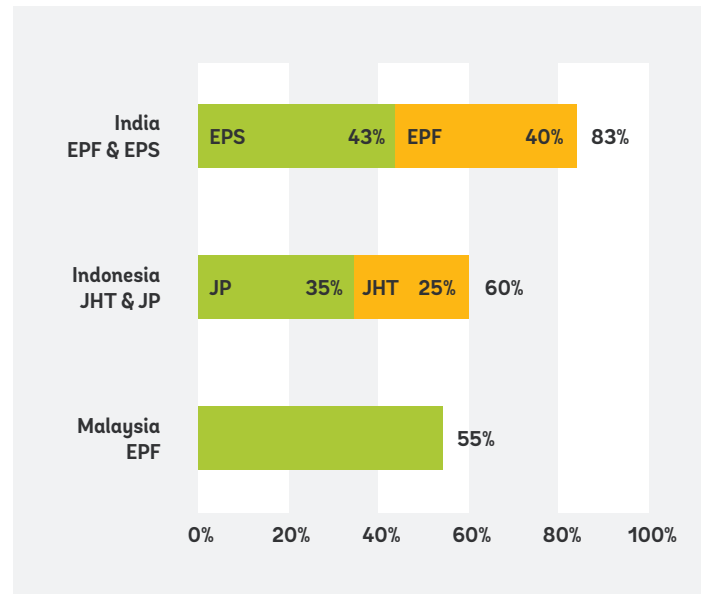
To gain some sense of the range of possible outcomes, GAI made stylized projections of gross replacement rates using the same basic projection methodology that the OECD uses in its *Pensions at a Glance* series.<sup>18</sup> All of the GAI projections refer to workers who enter the workforce in 2020 at the age of twenty, earn the economy-wide average wage throughout their careers, and retire at the standard retirement age in each of the three countries. That age is assumed to remain unchanged at 55 in India and Malaysia, but to rise from 57 to 65 in Indonesia in accordance with current law.<sup>19</sup> To facilitate comparability across countries, account balances are converted into inflation-adjusted annuities at retirement. The calculations of account balances assume a 3.0 percent real rate of return while the annuity calculations assume a 2.0 percent real discount rate, the same assumptions that the OECD uses. For simplicity of presentation, replacement rates are calculated using unisex life tables. Because women live longer than men in all three countries, male replacement rates would be somewhat higher and female replacement rates would be somewhat lower.

Given these assumptions, future replacement rates will depend critically on three additional variables: real wage growth, contribution density, and nonretirement withdrawals. GAI begins with a scenario, labeled "GAI Projection with OECD Assumptions" on the accompanying charts, that adopts the OECD's assumptions for all three of these variables. This scenario, which should be considered a best-case scenario, assumes that real wage growth will be 1.25 percent per year, that contribution density will be 100 percent, and that 100 percent of provident fund savings will be preserved for retirement. Under these assumptions, GAI projects that gross replacement rates

for today's twenty-year olds would be 83 percent in India, 60 percent in Indonesia, and 55 percent in Malaysia.<sup>20</sup> (See figure 20.) Most policy experts would consider all of these replacement rates at least adequate, and in the case of India and Indonesia, where provident fund benefits are supplemented by defined benefit pension benefits, quite generous.

> > >

**FIGURE 20 - Future Gross Replacement Rates: GAI Projection with OECD Assumptions**



*Note: Projections refer to workers who enter the workforce at age twenty in 2020 and retire at the standard retirement age in each country. Account balances are converted into inflation-adjusted annuities using unisex life tables. All scenarios assume a 3.0% real rate of return and a 2.0% real discount rate. The GAI Projection with OECD Assumptions assumes 1.25% real wage growth, 100% contribution density, and 100% savings preservation.*

*Source: GAI calculations*

While this scenario provides a useful reference point for what is potentially achievable, it would be a mistake to use it as a guide to policymaking. The OECD's assumptions for real wage growth and contribution density, which it uses in its projections for all countries, both developed and developing, are unrealistic for Asia's emerging markets. It is true that real wage growth is likely to fall in the future along with development. But even in Malaysia, where it has averaged nearly 4 percent over the past decade, it is doubtful that it will fall all the way to 1.25 percent. In the other countries, where real wage growth has been even higher, it is almost inconceivable. It is also true that contribution density may rise, but not all the way to 100 per-

17. Jackson and Peter, *From Challenge to Opportunity: Wave 2 of the East Asia Retirement Survey*.

18. In particular, GAI consulted OECD, *Pensions at a Glance: Asia/Pacific 2018* (Paris: OECD, 2018), which includes projections for all three provident funds covered in the report. More recent projections for two of them, India's EPF and Indonesia's JHT, are published in OECD, *Pensions at a Glance 2019: OECD and G20 Indicators* (Paris: OECD, 2019).

19. In India, the fact that the EPF and EPS have different standard retirement ages creates some additional complexity. GAI's projections for the EPF component of the overall replacement rate assume that retirement savings is withdrawn and converted into an annuity at age 55, while those for the EPS component assume that benefits continue to accrue until age 58.

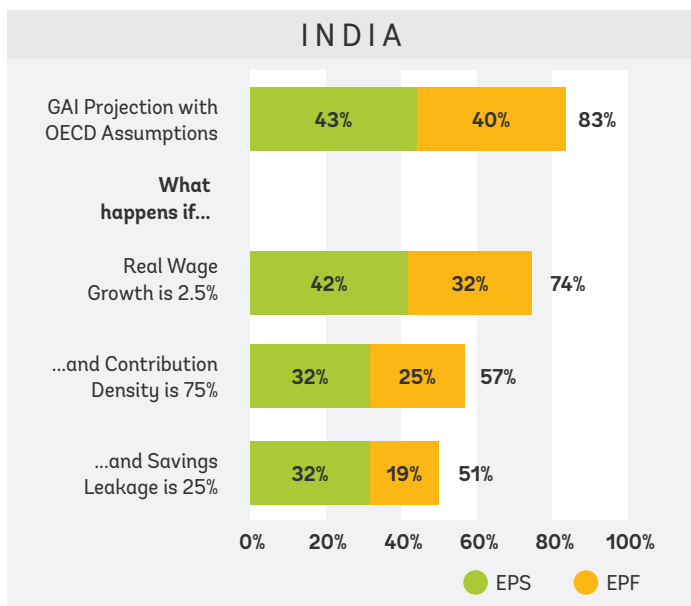
20. Some readers may have noted that, despite using the same key assumptions, GAI's projected replacement rate for Malaysia is lower than the OECD's projection published in *Pensions at a Glance: Asia/Pacific 2018*. GAI discussed this discrepancy with the lead author of the OECD study, Andrew Reilly, who determined that the OECD's published results significantly overstated Malaysia's replacement rate.

cent, a goal which, in practice, no contributory pension system ever attains. As for nonretirement withdrawals, there is simply no reason to think that India, Indonesia, and Malaysia can entirely eliminate them without major changes in policy.

GAI therefore offers a second scenario that is more realistic, though in some respects still quite optimistic. In this scenario, it is assumed that real wage growth will be 2.5 percent per year, still much less than the recent average in all three countries. It is also assumed that contribution density will be 75 percent, which would represent a large improvement in all three countries. As for preretirement withdrawals, it is assumed that 75 percent of total provident fund savings will be preserved for retirement, which would represent a significant improvement for Malaysia and an enormous one for India and Indonesia. Together, these changes in assumptions have a dramatic impact on projected replacement rates. In fact, they cut them by as much as one-half, to 51 percent in India, 31 percent in Indonesia, and 26 percent in Malaysia. (See figures 21 to 23.) Although the retirement security prospects for most future retirees in this scenario would still improve relative to the prospects for most current retirees, the improvement would not be nearly as large. This scenario, moreover, is far from a worst-case scenario.

> > >

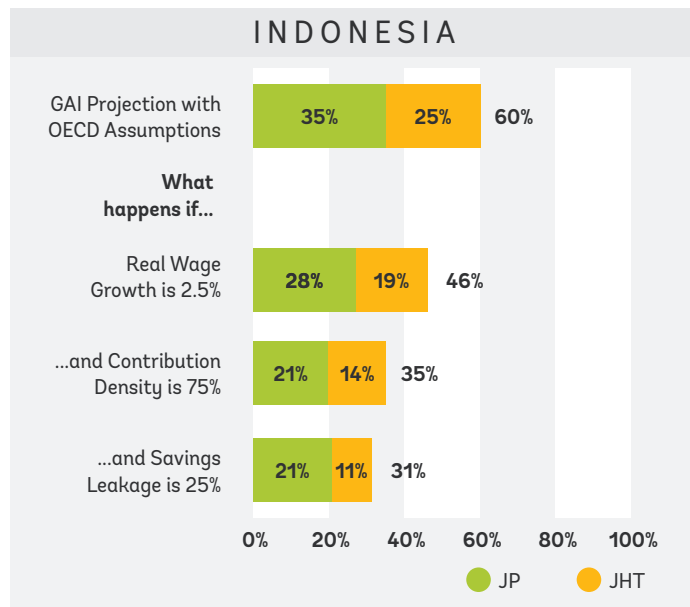
**FIGURE 21 - Gross Replacement Rates for EPF Members Entering the Workforce in 2020**



Note: See figure 20.  
Source: GAI calculations

> > >

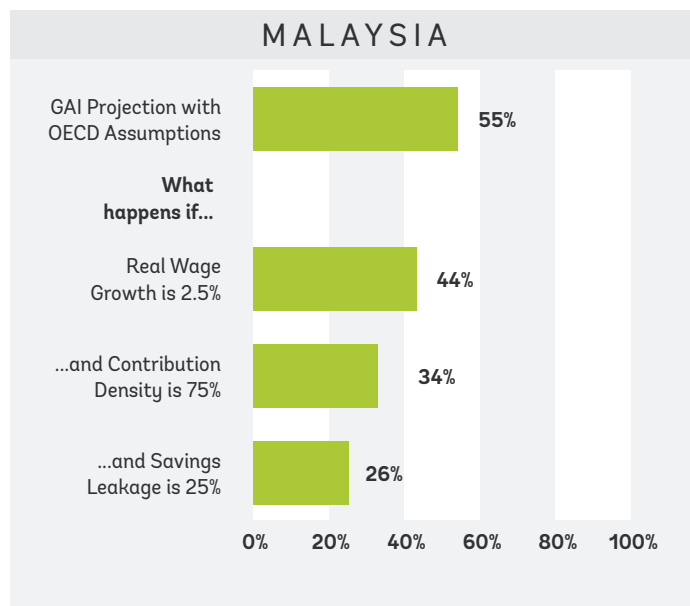
**FIGURE 22 - Gross Replacement Rates for JHT Members Entering the Workforce in 2020**



Note: See figure 20.  
Source: GAI calculations

> > >

**FIGURE 23 - Gross Replacement Rates for EPF Members Entering the Workforce in 2020**



Note: See figure 20.  
Source: GAI calculations

All of this suggests that the three provident funds may need to enact significant reforms if they are to meet the future retirement needs of existing members, much less serve as a platform for expanding coverage to a broader cross-section of the workforce. The good news is that governments in all three countries are increasingly focused on the challenge. India's EPF is beginning to tighten up nonretirement withdrawal rules, while Indonesia's JHT is trying to do the same. Meanwhile, Malaysia's EPF has made improving benefit adequacy a policy priority, highlighting its urgency in recent annual reports and other publications.<sup>21</sup> More will be needed, but these are all steps in the right direction.

---

21. See, for instance, Ng Say Fen, "Towards Better Retirement Well-Being," *Social Protection Insight*, vol. 3 (2018).





## Directions for Reform

This report has argued that, as Asian societies develop and their populations age, provident funds will need to evolve into something closer to dedicated retirement systems. Although advancing broad national development objectives may remain an important function of some provident funds, especially in the region's less developed economies, the focus will need to shift toward ensuring retirement security. Similarly, although provident funds may continue to serve multiple savings purposes, the goal of accumulating adequate retirement savings will need to take precedence over nonretirement savings goals. Bringing about this transition will require significant reforms. More fundamentally, it may also require a sea change in philosophy.

The intent of this chapter is not to supply a reform blueprint for each of the three provident funds covered in the report, but rather to point to broad directions for reform that can serve as guidelines for policymakers. The three funds, of course, reflect a wide range of provident fund evolution. The stage of economic and financial market development in each country also varies significantly, as does each country's institutional capacity. As a consequence, not all of GAI's recommendations apply to all three provident funds. In the discussion that follows, some of the most important distinctions are noted.

## Investment and Governance

Meeting tomorrow's retirement security needs will require adopting policies that maximize risk-adjusted returns and optimize investment outcomes. The place to start is for provident funds to develop explicit guidelines for balancing national economic development and retirement security objectives, put in place procedures for resolving conflicts between them, and develop metrics for measuring and evaluating outcomes. Provident funds could also improve their performance by continuing to diversify their investment portfolios. Some may also want to consider moving toward market-linked returns and individual customization of the asset portfolio. Retirement security could be further improved by enhancing the clarity and transparency of financial reporting and better educating members about the importance of retirement savings.

- **Develop explicit guidelines for balancing national economic development and retirement security objectives.** Managing the tension between these objectives is a fundamental challenge for provident funds, and effective investment policy and governance must be built on guidelines that spell out the relative weight to be given to each. The balance between the objectives should be made clear to all stakeholders; there should be regular evaluation of whether policies and outcomes are consistent with the guidelines; and the balance between the objectives should be reexamined and updated over time as the country's economy develops and the provident fund grows.

This clarity is essential because investment policies that are intended to advance national development objectives, even when they are well designed and effective, may not be the policies most likely to maximize returns for participants. In the early stages of provident fund evolution, when development is usually the primary focus, a failure to achieve market returns on every investment may not be a significant problem. But over time, as ensuring retirement security becomes more important, provident funds would benefit from putting in place explicit guidelines for balancing their sometimes competing objectives, as well as governance procedures for resolving conflicts between them. For these procedures to be effective, moreover, provident funds need to be able to compare the social returns to the investments they make with the financial returns to members, which

in turn will require developing social impact indicators. These indicators might include increases in wages, reductions in inequality, and improvements in a variety of socioeconomic factors, from health outcomes to educational attainment, that are factored into the UN's Human Development Index. To GAI's knowledge, none of the three provident funds covered in the report have such procedures in place, and none have developed such indicators, though, to its credit, Malaysia's EPF is considering how it might do so. As an interim measure while more robust indicators are being developed, provident funds could increase investments in sustainable, green, and other types of "labeled bonds," which have the explicit objective of furthering social and development goals while also delivering reasonable returns.

- **Continue to diversify investment portfolios.** Maximizing risk-adjusted returns requires a well-diversified and, increasingly, a global investment portfolio. Yet many provident funds remain heavily invested in government debt and prohibit foreign investment. It is understandable that governments often prefer retirement savings to be invested in government debt, since this supports direct government spending on infrastructure and other social capital projects. Yet as development progresses and the returns on government debt decline, diversification into domestic corporate bonds, equities, and real estate can mitigate the impact on provident fund returns. It is also understandable that governments often prefer retirement savings to be invested in domestic capital markets, since this supports financial development, business expansion, and job creation. Yet as provident funds continue to grow, reducing domestic investment bias can improve outcomes for provident fund members while still leaving room for development priorities.<sup>22</sup> Global diversification, moreover, will become even more important as economic growth slows and returns to capital decline due to Asia's aging populations. If provident funds fail to diversify their investment portfolios over time, they risk becoming "captive investors" that finance government activities by imposing below-market returns on members.

Malaysia understands this, and has been steadily diversifying the EPF's investment portfolio over the past

22. See, for instance, Juan Pablo Afanador, Richard Davis, and Alvaro Pedraza, International Diversification of Pension Funds: An Index-Based Rating for Countries (forthcoming World Bank Group working paper).

ten to fifteen years, at first domestically and then internationally. India and Indonesia will want to build on their recent steps toward diversification by increasing EPF and JHT investments in domestic capital markets and, eventually, international capital markets. As they do, they will need to further develop in-house investment expertise, while ensuring that adequate safeguards against self-dealing, nepotism, favoritism, and manipulation of markets are in place.

- **Consider moving toward market-linked returns.**

The lack of mark-to-market accounting, together with the practice of crediting member accounts with administratively determined returns, may distort investment decisions and lead to suboptimal investment outcomes. Administratively determined returns can create an unrealistic expectation that provident funds will always deliver the returns to which members have become accustomed. When gains and losses are deferred until assets are sold, provident funds may be tempted to “strategically” sell assets in order to boost near-term returns and meet the public’s expectations, even if this could lower long-term returns. Unrealized losses can also build up and ultimately lead to larger losses for members than if asset values had moved with the market. At the same time, minimum rate of return guarantees, designed to protect workers against downside risk, may compel asset managers to shift investment portfolios toward lower-risk and lower-return assets. While these guarantees help bolster members’ confidence in the near term, they can lead to lower retirement benefits in the long term.

For all of these reasons, market-linked returns are worth considering. Some provident funds, however, may not want to sacrifice the ability to smooth returns that they now enjoy. One way to preserve some of the benefits of smoothing would be to pay an administratively determined return on account balances up to some threshold. Once that threshold is reached, incremental contributions would earn market returns. Interestingly, India’s EPF is considering a similar arrangement in which members would earn a market return on their pro rata share of provident fund equity holdings, but would continue to receive an administratively determined return on the rest of their account balance.

- **Consider moving toward individual customization of the asset portfolio.** In defined contribution systems, asset allocation is ideally tailored to each member’s age, with the portfolio tilted toward equities when individu-

als are young, but progressively shifted to fixed-income securities as they grow older. This lifecycle approach allows the level of financial risk related to investment to start out high, at a time in life when individuals have few financial assets and a long career before them, but to be reduced as their financial wealth increases and the human capital risk related to their future employment income decreases.

As provident funds are currently structured, all member contributions are pooled and collectively invested in the same identical investment portfolio. Some provident funds may decide, as a matter of policy, that the current structure, which supports return smoothing and return guarantees, should be retained. Others may evolve toward a more market-based approach to accounting for and crediting investment returns. For those that do, customizing the asset portfolio along lifecycle lines may significantly improve investment outcomes for members. Evolving in this direction would also allow the adoption of liability-driven investment strategies, where asset allocation, including the duration of fixed-income securities, is aligned with the objective of providing income in retirement.

One workable approach would be for provident funds to shift to a multifund model like those used in several of Latin America’s personal account systems, including Chile’s, Colombia’s, and Mexico’s. Instead of one investment fund, provident funds would administer several funds with different age-related risk profiles. It is true that the multifund model would require more sophisticated administrative systems than most provident funds now possess. However, if migration from one fund to another is made automatic based on age, with no individual discretion, the additional complexity can be minimized. The approach might also help preserve some of the sense of common national interest that underlies the provident fund model. Although the returns that members earn would vary by age, they would not vary within age cohorts.

To be clear, this is not a recommendation to turn provident funds into self-directed retirement accounts. As explained in Chapter 2, Malaysia currently allow members whose account balances exceed certain thresholds to withdraw the excess and invest it in approved investment funds of their choosing. But few provident fund members have the expertise to allocate their savings between the large number of funds on offer, and this may reduce returns or increase risk unnecessarily.

Policymakers should bear in mind that protecting members against bad choices is likely to result in better outcomes than facilitating individual choice. To the extent that provident funds move toward market-linked returns and individual customization of the asset portfolio, they can and should do so within the overall collective investment framework that is one of the provident fund model's greatest strengths.

- **Enhance the clarity and transparency of financial reporting.** Proper accounting is an important aspect of good governance, and all three provident funds have potential to improve in this area. While the financial statements for Malaysia's EPF meet a high standard, the use of a reserve account to smooth returns could be disclosed more prominently. The financial statements for India's EPF and Indonesia's JHT fail to meet reasonable standards in important respects. In recent statements for Indonesia's JHT, key information on investment strategy and performance is lacking, and there is no disclosure of unrealized gains and losses. India's EPF has struggled with allocating interest and equity returns in a timely and consistent manner, making it difficult to gain a clear, detailed picture of its financial position. As these two provident funds continue to develop, ensuring clarity and transparency in financial reporting will need to be a high priority.
- **Better educate members about the importance of retirement savings.** Educating members about how much they need to save in order to enjoy a secure retirement is another important aspect of good governance. India's EPF and Indonesia's JHT give members access to information about account transactions and balances, but otherwise offer little guidance in this regard. Malaysia's EPF does considerably more, including publicizing minimum retirement savings targets and offering retirement planning advice to members approaching retirement age. While this is helpful, it is still not enough. All provident funds should provide members with periodic customized estimates of the monthly benefits they can expect to receive if they remain active contributors until retirement age. Ideally, these statements would also include illustrative scenarios that show how failing to contribute regularly or making nonretirement withdrawals can affect benefit levels.

## Benefit Design and Adequacy

Improving the adequacy of retirement benefits will require significant changes in benefit design. Most provident funds will need to increase the amount of savings dedicated to retirement, raise standard retirement ages, and institute provisions for lifetime income. Most will also need to explore ways to increase provident fund coverage and contribution density, while at the same time strengthening the safety net for those who arrive in old age with inadequate savings.

- **Increase savings dedicated to retirement.** Provident funds often fail to ensure that even full-career workers set aside sufficient savings for retirement. Replacement rates in defined contribution systems depend on many factors, from real rates of return and real wage growth to retirement ages and life expectancy at retirement. However, a reasonable rule of thumb is that workers need to save 10 to 15 percent of wages for retirement each year in order to replace one-third to one-half of their preretirement income.

Among the three provident funds covered in the report, only Malaysia's EPF requires that this large a share of wages be saved for retirement. Of an overall contribution rate of 24 percent of wages, 16.8 percent is dedicated to Account I, which must be preserved for retirement. In Indonesia's JHT, the overall contribution rate is just 5.7 percent of wages, and only a small fraction of this ends up being saved for retirement. At 15.7 percent of wages, the overall contribution rate in India's EPF is seemingly more adequate. But just as in Indonesia's JHT, nonretirement withdrawals are largely unrestricted.

If retirement security is to be improved, this will need to change. Indonesia should raise the JHT contribution rate, perhaps doubling it in stages. It should also consider following Malaysia's example by dividing the JHT into two accounts, one earmarked for retirement savings and the other for nonretirement savings. India should consider doing the same with the EPF. The share of total provident fund savings preserved for retirement should be determined by informed policy decisions. It should not be the residual left over after withdrawals for housing, education, unemployment, and other nonretirement needs. Although the need is less urgent, even



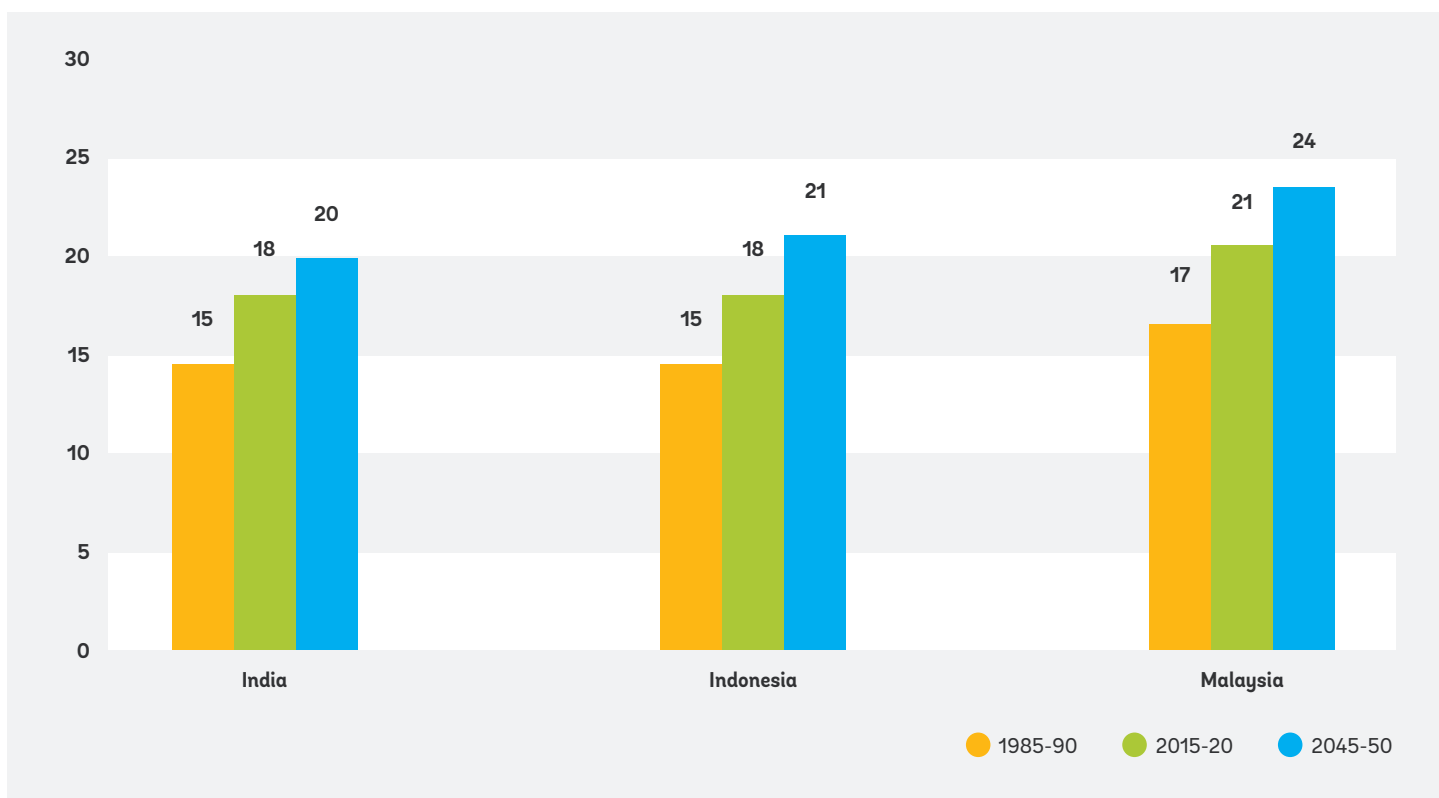
Malaysia might consider increasing the share of EPF savings that it allocates to retirement.

It could be argued that preserving provident fund savings for retirement is less important in India and Indonesia than it is in Malaysia, since workers in these countries also participate in government defined benefit pension programs. As explained in Chapter 3, however, the EPS and JP are not yet mature. EPS benefits are still modest, and the JP will not even begin paying pensions until the 2030s. It is also important to note that the JP is seriously underfunded, and will not be able to pay promised benefits to today's younger workers unless the current 3.0 percent contribution rate is raised.<sup>23</sup>

- **Raise standard retirement ages.** In rapidly developing economies with growing workforces, it may make sense to encourage older workers to retire early in order to make room for younger ones. With educational attainment rising rapidly, the young have the skills to fill high value-added jobs in the growth sectors of the economy, while the old do not. As today's younger adults climb the age ladder, however, later retirement will not only become feasible, but also necessary. It will become feasible because the skills gap between young and old will gradually close, and it will become necessary because life expectancy is rising, leaving retirees at a growing risk of outliving their savings. (See Figure 24.) As explained in Chapter 3, postponing retirement can greatly increase retirement security. In fact, all other things being equal, postponing retirement from age 55 to 65 nearly doubles income replacement rates.

> > >

**FIGURE 24 - Unisex Life Expectancy at Age 60, 1990-2050**



Source: UN Population Division, *World Population Prospects: The 2019 Revision* (New York: UN Population Division, 2019)

23. See Agus Susanto, "Indonesia's Pension in 2018 under BPJS Ketenagakerjaan," *Nomura Journal of Asian Capital Markets*, 3:2 (Spring 2019).

Two of the three provident funds covered in the report are now moving in the right direction. The laggard is India's EPF, which allows retirement savings to be withdrawn in full at age 55 and has announced no plans to raise that age. Although India still has a relatively youthful population, it is not too soon to begin preparing for the future. Indonesia, whose demographics are similar to India's, has already begun raising the JHT retirement age in stages to 65. Meanwhile, Malaysia recently enacted a reform which requires that the incremental EPF contributions of workers who remain employed past age 55 be preserved until age 60. While this is a good first step, Malaysia should consider locking up all Account I savings until age 60, then further raising the retirement age in stages to 65.

- **Institute provisions for lifetime income.** All three provident funds covered in the report allow retirement savings to be withdrawn entirely as a lump sum. Lump sum payouts may have made sense in yesterday's more traditional Asian societies in which virtually all of the elderly were supported by their grown children and few lived into their eighties or nineties. They no longer make sense in today's rapidly modernizing, industrializing, and urbanizing societies in which life expectancy keeps rising year after year. Although the complete annuitization of account balances may not be advisable, especially in India and Indonesia, where workers also participate in defined benefit pension programs, all countries would ideally follow the lead of Singapore's CPF and require at least partial annuitization. If this is not possible, a second-best option would be to require phased withdrawals. Provident funds might also consider combining phased withdrawals and/or partial lump sum payouts with a deferred annuity starting at (say) age 80. This would have the advantage of allowing some flexibility in the use of retirement savings while still providing back-end protection against longevity risk.

While there are potential obstacles to annuitizing account balances, they can be overstated. It is true that private annuity markets are underdeveloped in many Asian countries. But if private markets are underdeveloped, government can provide annuities, as it does in Singapore. Since doing so in effect shifts longevity risk to government, it has potential budget implications. But from a policy perspective, the cost is well worth assum-

ing. It is also true that, because annuities are subject to moral hazard and asymmetric information, it can be difficult to price them fairly. But this is only true if annuities are optional. If they are mandatory, longevity risk can be averaged across the entire population, meaning that efficient annuities ought to be easy to price. Finally, it is true that lump sum payouts are deeply ingrained in the culture of most Asian countries. But the public's preference for lump sums may not be as strong as policy-makers assume. In the Global Aging Institute's survey of retirement attitudes and expectations, the share of respondents saying that they would prefer to receive retirement benefits "all in regular monthly payments" exceeded the share saying that they would prefer to receive them "all in a single lump sum" by sizeable margins in all ten countries surveyed.<sup>24</sup>

- **Explore ways to increase coverage and contribution density.** Even as governments better align provident funds' contribution and benefit rules with future retirement needs, they should also seek to extend their reach to a broader cross-section of the workforce. Low coverage and low contribution density are largely a function of labor-market informality, and as long as informality remains high progress will be difficult. Still, there are steps that governments could take today to make provident funds more inclusive.

In all three provident funds covered in the report, self-employed workers are exempted from mandatory coverage, though they may participate voluntarily. Although many of the self-employed work at family-owned micro-businesses or in other low-skill jobs, some are well-educated professionals for whom it should be relatively simple to mandate participation. Even when mandating participation is not practical, governments could employ financial incentives, such as matching contributions, to encourage low-skilled, informal-sector workers, whether employed or self-employed, to participate on a voluntary basis. Until recently, the obstacles to extending coverage beyond the formal sector were almost insuperable. However, advances in digital IT, financial inclusion, and national ID systems are opening up new ways to reach informal-sector workers.<sup>25</sup> The Indonesian government, to its credit, has set an explicit long-term goal of extending JHT coverage to the entire labor force.

24. Jackson and Peter, *From Challenge to Opportunity: Wave 2 of the East Asia Retirement Survey*.

25. See, among others, Yu-Wei Hu and Fiona Stewart, "Pension Coverage and Informal Sector Workers: International Experiences," OECD Working Papers on Insurance and Private Pensions no. 31 (Paris: OECD, 2009); Richard Hinz et al. eds., *Matching Contributions for Pensions: A Review of International Experience* (Washington, DC: World Bank Group, 2013); World Bank, *Live Long and Prosper: Aging in East Asia and Pacific* (Washington, DC: World Bank Group, 2016); Richard Jackson, *Voluntary Pensions in Emerging Markets: New Strategies for Meeting the Retirement Security Challenge* (Alexandria, VA: Global Aging Institute, 2017); and Parul Seth Khanna, William Price, and Gautam Bhardwaj, eds., *Saving the Next Billion from Old Age Poverty: Global Lessons for Local Action* (Singapore: Pinbox Solutions, 2018).

Alternatively, governments could set up separate contributory retirement savings systems with more flexible contribution and withdrawal rules that are tailored to the needs of informal-sector workers. A growing number of developing countries are experimenting with such systems, including India (the Atal Pension Yojana) and Malaysia (the i-Saraan and i-Suri programs, which operate under the EPF's umbrella). Although their track record is mixed, some have been remarkably successful at increasing participation. It has been less than a decade since China launched two new informal-sector voluntary retirement savings systems, and already several hundred million rural and migrant workers have joined. This is an astonishing accomplishment that the World Bank calls "unprecedented in global experience."<sup>26</sup>

- **Strengthen the old-age safety net.** However successful reform efforts are, some significant share of the workforce in most Asian countries will be reaching old age without adequate retirement savings for decades to come. This reality underscores the importance of having a robust old-age safety net in place. India, Indonesia, and Malaysia all make at least some provision for

old-age poverty protection in the form of means-tested, noncontributory social pensions. In India, there is the Indira Gandhi National Old Age Pension Scheme; in Indonesia, the Asistensi Sosial Lanjut Usia Terlantar; and in Malaysia, the Bantuang Orang Tua. While these programs help some indigent elders, only a fraction of the population in need is enrolled and benefit levels are quite modest. Strengthening them should be a high government priority.

\*\*\*\*\*

Asia's provident funds stand at a crossroads. As the region's societies develop and its populations age, retirement security can no longer take a backseat to other policy priorities. With each passing year, the need to build more adequate and more inclusive retirement systems is becoming more urgent. As policymakers look to the future, they will find that the provident fund model continues to have many important advantages over alternative retirement system models. But they will also find that the model needs to evolve if it is to meet tomorrow's challenges effectively. The good news is that policymakers throughout the region understand this, and are beginning to make the necessary adjustments.

26. World Bank, *Live Long and Prosper: Aging in East Asia and Pacific*, 151.





# Technical Appendix

The technical appendix is divided into four sections. The first section supplies references to the basic data and informational sources used by GAI; the second offers additional detail on GAI's financial analysis of the three provident funds covered in the report; the third offers additional detail on the rate of return comparisons with other large pension funds and sovereign wealth funds; and the fourth offers additional detail on GAI's replacement rate projections.

## Basic Data Sources

Demographic, economic, and financial market data cited in the report or used in the analysis come from standard sources. Population data, both historical and projected, come from the UN Population Division's *World Population Prospects: The 2019 Revision*, and are available at <https://population.un.org/wpp>. Labor-force data come from the ILO's ILOSTAT database, and are available at <https://ilostat.ilo.org>. Most economic data, including data on GDP and inflation, come from the World Bank's World Development Indicators database, and are available at <https://data.worldbank.org>. Most financial market data, including ten-year bond yields, come from Investing.com, and are available at <https://www.investing.com>. Data on exchange rates come from XE.com, and are available at <https://www.xe.com>. Data on wages come from national surveys. For India, they come from the Periodic Labour Force Survey (PLFS), available at <http://www.mospi.gov.in>; for Indonesia, they come from Labor Situation in Indonesia, available at <https://bps.go.id/>; and for Malaysia, they come from the Salaries and Wages Survey Report, available at <https://www.dosm.gov>.

Unless otherwise indicated, all data on provident fund finances and benefits come from the provident funds themselves, and are available in the annual reports, financial statements, and related documents posted on their websites. Most information on investment and governance practices, as well as system parameters such as coverage rates, contribution rates, and retirement ages, also comes from the provident funds themselves, and is available on their websites at, for India's EPF, <https://epfindia.gov.in>; for Indonesia's JHT, <https://www.bpjsketenagakerjaan.go.id>; for Malaysia's EPF, <https://www.kwsp.gov.my>; and for Singapore's CPF, <https://www.cpf.gov.sg>.

# Financial Analysis

Each of the provident funds covered in the report is set up as part of an entity which could be viewed as a kind of state-run corporation. The financial statements that were reviewed for the report are financial statements for that corporate entity. The provident funds themselves are just part, although typically a very large part, of the corporate entity. Moreover, provident fund accounts are just part, although once again typically a very large part, of the provident funds, which may include reserves or other moneys that are not allocated to member accounts.

The corporate entity has its own balance sheet with assets, liabilities, equity, and a profit and loss statement. The assets of the provident fund make up a large portion of the entity's assets, but also represent an equal obligation to make benefit payments to provident fund members. The investment income earned on provident fund account balances does not constitute profit for the entity because it is allocated to member accounts where, once again, it represents both an asset to the entity and a liability to make benefit payments to members. GAI's financial analysis refers to provident fund accounts, rather than to the corporate entity as a whole.

India's and Indonesia's provident funds are part of broader social security systems that include defined benefit pension and insurance programs. In these countries, the corporate

entities that administer the provident funds also administer the other programs, and the financial statements for the entities include the other programs. GAI's financial analysis, however, is limited to the provident funds, whose transactions are reported separately in the entities' annual reports.

Just as any corporation does, the entities that administer provident funds have operating expenses, including for office space, IT systems, and the compensation of employees. The way that these expenses are defrayed varies from country to country. In India, operating expenses are covered by a separate charge to employers. In Malaysia, they are subtracted from investment income before it is allocated to member accounts. Although it is not documented in the financial statements, this appears to be the practice in Indonesia as well.

The "Reported Return" discussed in the report is the rate of return which is reported as credited to member accounts in the provident funds' annual reports. The "GAI Calculated Return" is derived from information in the provident funds' financial statements on beginning-of-year balances, investment return amounts, and other cash flow. To the extent the information is provided, assets are marked to market value in deriving the GAI Calculated Return.

The following formula was used:

$$\text{GAI Calculated Return \%} = \text{Investment Return \$} / (\text{BOYB} + 0.5 \times \text{CF})$$

WHERE:

**Investment Return \$** = Investment return amount, with assets marked to market if possible

**BOYB** = Beginning-of-year balance

**CF** = Cash flow other than investment returns, including contributions, withdrawals, and expenses

The remainder of this section includes some specific notes related to GAI's financial analysis of each provident fund.

## India

The Employees' Provident Fund (EPF) is administered by the Employees' Provident Fund Organization (EPFO). In addition to the EPF, the EPFO also administers the Employees' Pension Scheme (EPS), a defined benefit pension program, and the Employees' Deposit Linked Insurance Scheme (EDLI), a life insurance program. GAI's financial analysis is limited to the EPF. The financial statements and investment return information reviewed by GAI cover the period April 1, 2008 to March 31, 2018. EPFO annual reports, as well as separate "consolidated annual accounts," are available at [https://search.epfindia.gov.in/OperationStatistics/operational\\_stats\\_en.php](https://search.epfindia.gov.in/OperationStatistics/operational_stats_en.php).

Notes: (1) GAI's financial analysis excludes EPF Private Trusts. (2) Government debt in GAI's asset tabulations includes "Government Securities," "State Government Securities," "State Development Loans," and "Public Sector Financial Institutions." (3) Although the EPF financial statements do not include an investment reserve account, there is an aggregate "interest account" in which earnings are held pending crediting to member accounts. (4) The EPFO began investing in equity ETFs in 2016, but earnings from the investments were only credited to member accounts starting in 2018. (5) Final financial statements were not yet available for the EPF's 2018 fiscal year at the time GAI completed its analysis; account information for 2018 is based on minutes of the midyear meetings (137 and 138) of the Financial Investment Committee, also available at [https://search.epfindia.gov.in/OperationStatistics/operational\\_stats\\_en.php](https://search.epfindia.gov.in/OperationStatistics/operational_stats_en.php).

## Indonesia

The Jaminan Hari Tua (JHT) is administered by BPJS Ketenagakerjaan. In addition to the JHT, the BPJS also administers three other programs: the Jaminan Kecelakaan Kerja (JKK), a workers' compensation program; the Jaminan Kematian (JK), a life insurance program; and the Jaminan Pensiun (JP), a defined benefit pension program. GAI's financial analysis is limited to the JHT. The financial statements and investment return information reviewed by GAI cover the period January 1, 2009 to December 31, 2018. BPJS annual reports are available at <https://www.bpjsketenagakerjaan.go.id/laporan-tahunan.html>.

Notes: (1) The BPJS did not report a return percentage for 2017; GAI therefore set the Reported Return for that year equal to the GAI Calculated Return. (2) Although the JHT appears to have an investment reserve account, the BPJS does not discuss the account or report the amounts in it in its annual reports and financial statements.

## Malaysia

The Employees Provident Fund (EPF) is administered by the EPF Board. The EPF consists of two accounts: Account I, which is earmarked for retirement savings, and Account II, which is earmarked for nonretirement savings. GAI's financial analysis includes both accounts. The financial statements and investment return information reviewed by GAI cover the period January 1, 2009 to December 31, 2018. EPF annual reports are available at <https://www.kwsp.gov.my/about-epf/news-highlights/publications>.

Notes: (1) The EPF financial statements include an investment reserve account, whose size, use, and impact are discussed in some detail in Chapter 2 of the report.

## Pension and Sovereign Wealth Funds

Two of the six large pension funds and sovereign wealth funds included in the rate of return comparisons in Chapter 2 have noncalendar fiscal years. Since the comparison period of January 1, 2009 to December 31, 2018 begins in the midst of the Great Financial Crisis, this could skew the results. One of the funds in question, Japan's GPIF, did not have a significant exposure to equities in 2008-2009, so the issue is unimportant. However, the other fund, CalPERS, did.

This issue is addressed by estimating CalPERS returns for January 1, 2009 to December 31, 2018 as an evenly weighted average of ten-year returns from July 1, 2008 to June 30, 2018 and July 1, 2009 to June 30, 2019. That this method roughly captures the impact of the financial crisis on global equity returns is borne out by the following calculations using MSCI All Country World Index, All Cap (MSCI ASCW AC) returns over the two periods:

### GLOBAL EQUITY (MSCI ASCW AC INDEX)

$\frac{1}{2} \times (7/1/2008 - 6/30/2018) = 4.00\%$

$\frac{1}{2} \times (7/1/2009 - 6/30/2019) = 8.13\%$

ESTIMATED 1/1/2009 - 12/31/2018 = 6.07%

ACTUAL 1/1/2009 - 12/31/2018 = 7.56%

The annual reports and financial statements of the pension funds and sovereign wealth funds included in the comparison are available online:

- **CalPERS:** <https://www.calpers.ca.gov/page/investments/about-investment-office/investment-financial-reports>
- **Chile's AFPs:** <https://www.spensiones.cl/apps/centroEstadisticas/paginaCuadrosCCEE.php?menu=sest&menuN1=sistpens&menuN2=fondosp>
- **Japan's GPIF:** <https://www.gpif.go.jp/en/performance>
- **South Korea's NPS:** [https://fund.nps.or.kr/jsppage/fund/prs\\_e/prs\\_e\\_04.jsp](https://fund.nps.or.kr/jsppage/fund/prs_e/prs_e_04.jsp)
- **Norway's GPF Global:** <https://www.nbim.no/en/publications>
- **Ontario Teachers' Pension Plan:** <https://www.otpp.com/corporate/ontario-teachers-reporting>



# Replacement Rate Projections

GAI's projections of gross replacement rates use the same basic projection methodology that the OECD uses in its *Pensions at a Glance* series.

The GAI projections refer to workers who enter the workforce in 2020 at the age of twenty and earn the economy-wide average wage throughout their careers. Since there is no age-wage profile, final salary replacement rates and replacement rates expressed as a share of (wage-indexed) lifetime earnings are identical. Workers are assumed to retire at the standard retirement age in each of the three countries. That age remains unchanged at 55 in India and Malaysia, but rises from 57 to 65 in Indonesia in accordance with current law. In India, the fact that the EPF and EPS have different standard retirement ages creates some additional complexity. GAI's projections for the EPF component of the overall replacement rate assume that retirement savings is withdrawn and converted into an annuity at age 55, while those for the EPS component assume that benefits continue to accrue until age 58.

To facilitate comparability across countries, account balances are converted into inflation-adjusted annuities at retirement. The calculations of account balances assume a 3.0 percent real rate of return while the annuity calculations assume a 2.0 percent real discount rate, the same assumptions that the OECD uses in *Pensions at a Glance: Asia/Pacific 2018* (Paris: OECD, 2018). No administrative fees are charged to the accounts during the accumulation phase, which could be interpreted as meaning either that there are no fees or that the assumed 3.0 percent real rate of return is net of fees. Nor is any load charged when converting account balances into annuities. While this assumption would be unrealistic for privately provided annuities, it seems reasonable for mandatory government provided annuities, which would entail no marketing expenses and would not need to provide for profits. Annuity factors are calculated based on mortality

rates derived from country-specific, unisex life tables for the year in which workers retire. The lifetables used are from the UN's *World Population Prospects: The 2019 Revision*. The replacement rates presented in the report are thus unisex replacement rates. Because women live longer than men in all three countries, male replacement rates would be somewhat higher and female replacement rates would be somewhat lower.

Within this basic framework, GAI ran two projection scenarios that illustrate the impact that differences in real wage growth, contribution density, and nonretirement withdrawals can have on benefit adequacy. The GAI Projection with OECD Assumptions scenario adopts the OECD's assumptions for all three of these variables. Specifically, it assumes that real wage growth will be 1.25 percent per year, that contribution density will be 100 percent, and that 100 percent of provident fund savings will be preserved for retirement.

GAI's projected replacement rates for India and Indonesia in this scenario are similar to the OECD's projections. However, its projected replacement rate for Malaysia is lower than the OECD's projection published in *Pensions at a Glance: Asia/Pacific 2018*. GAI discussed this discrepancy with the lead author of the OECD study, Andrew Reilly, who determined that the OECD's published results significantly overstated Malaysia's replacement rate.

GAI's second projection scenario assumes that real wage growth will be 2.5 percent per year, that contribution density will be 75 percent, and that 75 percent of provident fund savings will be preserved for retirement. GAI believes that these assumptions yield more realistic estimates of replacement rates than those in the GAI Projection with OECD Assumptions.





## About the Authors

### Richard Jackson

---

Richard Jackson is president of the Global Aging Institute (GAI), which he founded in 2014. Prior to founding GAI, Richard directed a research program on global aging at the Center for Strategic and International Studies. He is an internationally recognized authority on global aging and the author or co-author of numerous policy studies on the challenges it poses, including *Meeting India's Retirement Challenge* (2018); *Voluntary Pensions in Emerging Markets: New Strategies for Meeting the Retirement Security Challenge* (2017); *From Challenge to Opportunity: Wave 2 of the East Asia Retirement Survey* (2015); *The Global Aging Preparedness Index, Second Edition* (2013); and *The Graying of the Great Powers: Demography and Geopolitics in the 21st Century* (2008). Richard regularly speaks on aging-related issues and is widely quoted in the media. He holds a B.A. from SUNY at Albany and a Ph.D. from Yale University.

### Evan Inglis

---

Evan Inglis is an actuary and investment expert with a global perspective who has worked with some of the largest pension funds in the world. Evan is also a respected thought leader in the actuarial profession, as well as a frequent speaker and author on retirement policy issues. He has developed innovative concepts, such as demographic-based investing for pension plans and The Feel Free Retirement Spending Strategy, and has extensive experience working on pension and investment issues in Europe, Latin America, Africa, and Asia. Evan is a former member of the Society of Actuaries Board of Directors and currently serves on the Board of Actuaries for the Civil Service Retirement System. He is also a Fellow of the Society of Actuaries and a CFA Charterholder.





## About the Global Aging Institute

The Global Aging Institute (GAI) is a nonprofit research and educational organization dedicated to improving our understanding of global aging, to informing policymakers and the public about the challenges it poses, and to encouraging timely and constructive policy responses. GAI's agenda is broad, encompassing everything from retirement security to national security, and its horizons are global, extending to aging societies worldwide.

GAI was founded in 2014 and is headquartered in Alexandria, Virginia. Although GAI is relatively new, its mission is not. Before launching the institute, Richard Jackson, GAI's president, directed a research program on global aging at the Center for Strategic and International Studies (CSIS) which, over a span of nearly fifteen years, produced a large body of cutting-edge research and analysis that played a leading role in shaping the debate over what promises to be one of the defining challenges of the twenty-first century. GAI's Board of Directors is chaired by Thomas S. Terry, who is CEO of the Terry Group, past president of the International Actuarial Association, and past president of the American Academy of Actuaries. To learn more about the Global Aging Institute, please visit its website at [www.GlobalAgingInstitute.org](http://www.GlobalAgingInstitute.org).

