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Pension System

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FOREWORD

The high economic growth of Asian countries has been attributed to the so-called "demographic bonus" with the increased ratio of working-age population to dependent population since 1960s. However, some Asian countries have started to experience a "demographic onus" due to demographic changes since around 2010. Population ageing and declining birth rates are expected to continue in the long term. The United Nations estimates that the total fertility rate will fall below two and the ratio of population aged 60 years and older to the total population will exceed 20% by 2040 in the region. Generally, population ageing and a decline in birth rate are likely to lower the economic growth rate through a decrease in the working-age population and an increase in social security expenditures. Against this background, Asian countries are looking at improving their pension systems, one of the most important pillars of social security systems.

Pension systems are largely still in the development stage in the ASEAN region, but various reforms have been implemented in recent years. Public pensions are managed on a pay-as-you-go basis in some ASEAN countries. The balance between active workers and pensioners is expected to change due to further population ageing and declines in fertility rates. Experts predict that pension systems are not likely to be sustainable in the long term if the present trends continue. Various measures are under consideration, including raising contribution rates, pension ages, and retirement ages as well as reemploying older workers.

There is also growing concern that people may not have enough money for their retirement if they only rely on public pensions. This concern highlights the urgent need to raise people's awareness of savings and promote their asset formation. Under such circumstances, private pensions have become more important, and defined contribution (DC) retirement schemes for individuals have been introduced to supplement public pensions. While tax incentives are provided under such private pension schemes to promote participation, there is still a long way to go before they become widely used. Moreover, increasing pension coverage, especially the inclusion of informal sector workers, is a significant challenge to be tackled as a mid- and long-term goal.

Pensions also play an important role in developing capital markets in the ASEAN region. First, as major institutional investors, pension funds provide long-term investments to capital markets, especially equity and bond markets. Second, pension funds can contribute to the growth of asset management industries by promoting capacity building for asset managers through investment outsourcing. Third, DC pension programs that offer a broad range of investment opportunities promote financial literacy among participants.

This issue of Nomura Journal of Asian Capital Markets features articles on progress in, major challenges for, and the future outlook of pension systems in five ASEAN countries, with insights into the role of pensions in developing the region's capital markets.

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Japan's Pension System: Challenges and Implications

Diversity of Pension Systems

The fundamental purpose of the pension system is to help people secure income during retirement and their senior years. There are many ways to achieve that goal. For example, the World Bank has provided the concept of multi-pillar pension systems (Table 1). How to combine these pillars is up to each country, and there will therefore be a variety of patterns based on historical and indigenous circumstances.

While one should not look for "one size fits all" answers, there are always some things to learn from developments in other countries. As described in the next section, Japan's pension system consists of multi-pillars, as recommended by the World Bank. Nonetheless, Japan has encountered a number of problems. Some have been resolved, some not, and Japan is now facing new challenges, related to demographic, economic and societal changes. Asian countries, in some way or another, will face many of the same challenges as their populations age and their economies mature.

Japan's Pension System

The Japan pension system consists of the public pension system and private-sector pension plans (Figure 1). The public pension system is part of Japan's social security system and consists of the National Pension Insurance (NPI) and Employees' Pension Insurance (EPI). Participation in the public pension system is mandatory. NPI is the basic income portion that covers everybody. EPI is the income replacement portion that covers public and private sector employees.

Private pension plans consist of two types. One is the defined benefit (DB) type and the other is the defined contribution (DC) type. Private pension plans are voluntary in nature, and employers are not required to offer these pension plans. Public employees are covered by DB plans.

National Pension Funds (NPFs) and individual DC plans are individual pension plans. NPFs are for the self-employed and individual DC plans are for most of the working-age population, including non-working spouses. Eligible individuals can join at their discretion.

Applying the World Bank multi-pillar concept, the Japanese pension system incorporates the elements of Pillar 0 (part of National Pension Insurance), Pillar 1 (part of NPI and EPI) and Pillar 3 (DB and DC plans).

Challenges for the Public Pension System: How to Enhance Sustainability

Achieving universal coverage

The public pension system should aim at covering everybody. In Japan that goal was achieved in 1985.

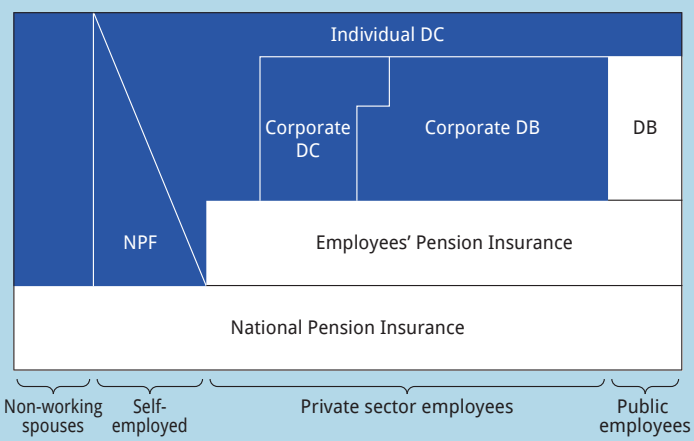
Often, pension plans based on the workplace are introduced first. In Japan's case, a mandatory pension plan for private company workers was introduced in 1942. This later became today's EPI, and the pension plan for government employees and private school teachers was established in the 1950s. In 1961, the NPI for self-employed people was introduced. All workers were now covered, realising universal coverage. However, those pension plans were separate from each other and the pension system as a whole was not well integrated. Thus, the Basic Pension was introduced in 1985. The NPI became

Table 1: Multi-Pillar Pension Concept

	Characteristics	Funding
Pillar 0	Basic or social pension, at least social assistance, universal or means-tested Participation: Universal or residual Major target: Lifetime poor	Budget/general revenues
Pillar 1	Public pension plan, DB or notional DC Participation: Mandatory Major target: Formal sector	Contributions, perhaps with financial reserves
Pillar 2	Occupational or personal pension plans Fully funded DB or fully funded DC Participation: Mandatory Major target: Formal sector	Financial assets
Pillar 3	Occupational or personal pension plans Partially or fully funded DB or funded DC Participation: Voluntary Major target: Formal and informal sector	Financial assets
Pillar 4	Access to informal (e.g. family support), other social program (e.g. health) and other individual financial and nonfinancial assets (e.g. home ownership) Participation: Voluntary Major target: Informal sector and lifetime poor	Financial and non-financial assets

Note: DC=defined contribution, DB=defined benefit
Source: Robert Hozmann, Richard Hinz and Mark Dorfman, "Pension Systems and Reform Conceptual Framework," SP Discussion Paper No. 0824, World Bank, June 2008.

Figure 1: Japan's Pension System



Note: (1) Blue areas are voluntary pension plans.
(2) NPF=National Pension Fund
Source: Ministry of Health, Labour and Welfare (MHLW), Nomura Institute of Capital Markets Research (NICMR).

the Basic Pension and part of EPI and the government employee pension also were included in the Basic Pension. The participation of non-working spouses also became compulsory. In theory, everybody regardless of working status now was covered by a common system, the Basic Pension. In 2015, the salary-related portion of the government employee pension was integrated into the EPI.

Rapid ageing and sustainability of the public pension system

The ageing of the Japanese population has been more rapid than projected. To strengthen public pension funding, the public pension premium has had to be raised repeatedly. However, this has meant increasing the burden on the working generation, which cannot be continued forever. Sustainability thus became the biggest challenge for the Japan's public pension system.

Besides raising the premium, policy measures to improve funding prospects and enhance the sustainability of the public pension system include raising the retirement age, reducing the benefit level, and finding other sources of funding. Raising the retirement age has been adopted by a number of developed countries. To give people sufficient time to prepare for such changes to the public pension scheme, the changes must be introduced gradually over a long period of time. In Japan's case, the seriousness of the nation's low fertility rate was recognised in the early 1990s, and the decision to gradually raise the retirement age from 60 to 65 years old was made. Japan is still in the midst of raising the minimum retirement age, which is now scheduled to reach 65 in 2025 for men and 2030 for women.

In 2004, Japan implemented a comprehensive public pension reform. This reform included (1) gradually raising the premium from 13.58% to 18.3% between 2005 and 2017, after which it would remain fixed at the higher level , (2) introducing an automatic benefit control mechanism called the "macroeconomic slide" when the mechanism was ready for use, (3) keeping the income replacement ratio (percent of average public pension benefit to average worker's income) above 50%, (4) financing half of basic pension income from general government revenues, and (5) conducting funding reviews every five years to secure the sustainability of the public pension system for the next 100 years.

In 2012, Japan also decided to raise its consumption tax from 5% to 8% and eventually to 10% and to use the additional revenue for strengthening its social security system. The consumption tax rate was raised to 8% in April 2014, and the increase to 10% is now scheduled for October 2019.

Automatic benefit control mechanism

The automatic control mechanism (the macroeconomic slide) is a fairly complex method of reducing the purchasing power of the public pension benefit over a long period of time. Basically, public pension benefits are increased based on the wage increase for new benefit recipients and on the consumer price increase for retirees. When the automatic control is applied, benefit increases will be diminished

by the "slide adjustment rate," which is calculated by the Ministry of Health, Labour and Welfare (MHLW) based on the life expectancy and fertility rate. For example, if the consumer prices rise 2.0% and the slide adjustment rate is 0.9%, the pension benefit will be increase by only 1.1% instead of 2.0% for that year. The same exercise will be repeated until the demographic imbalance between the working generation and retirees is resolved.

To date, the macroeconomic slide has been fully applied only once, in fiscal 2015. It was decided that the nominal benefit amount should not be decreased unless wages or consumer prices decrease. Accordingly, for example, if the consumer price increase is only 0.5% and the slide adjustment rate is 0.9%, the benefit will be kept at the same level (0% increase/decrease) instead of reducing it by the 0.4% difference between the rise in consumer prices and the slide adjustment rate. The law was revised in 2016 to record the forgone adjustments and apply them when possible.

It is never easy to decrease the public pension benefit level. One could say that the macroeconomic slide was devised to implement the decrease without consuming unnecessary political capital by making the decrease automatic. No one could foresee that the Japanese economy would suffer from low growth and deflation after the 2004 reform. It remains to be seen whether the benefit adjustment mechanism will be able to resolve the public pension stability issue over the long run.

A more urgent issue, however, is how individuals and households should make up for the scheduled decrease in the public pension benefit. In short, people should prepare more for old-age financial independence by utilizing private pension plans.

Challenges for the Private Pension System: How to Expand Coverage

Historical development of private pension plans

In Japan, DB plans were once the only type of private pension plans available. During the 1990s, however, the prolonged economic downturn and slumping domestic stock market made it increasingly difficult for employers to keep providing DB plans. Companies could no longer bear the cost of underfunded current and future pension obligations. In 2001, the DC Law was enacted, and corporate DC plans and individual DC plans were introduced. At the same time, DB plan reform was implemented to strengthen participants' rights to receive benefits.

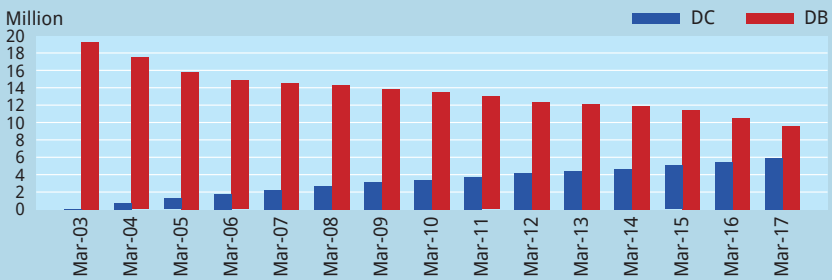
Since their introduction, the number of DC plans and participants has been growing steadily. As of September 2018, more than 32,000 companies have adopted DC plans, which have 6.85 million participants. However, this growth in DC plan participants has not been sufficient to offset the concurrent decline in participants in DB plans. As a result, the overall number of corporate pension plan participants has not grown (Figure 2).

Features of DC plans

Employers do not have to worry about pension underfunding with DC plans. Employees can clearly see their own assets in DC individual accounts, and their account assets are portable when they change employers. Although future pension benefits are no longer guaranteed, the other features of DC plans are valuable for employees. Also, in the extreme situation of a corporate bankruptcy, DC individual account assets are unaffected, and participants need not worry about the pension benefit reduction that could occur with DB plans. Basic features of Japanese corporate DC plans are as shown in Table 2.

Japan's DC plans are in many ways similar to 401(k) plans in the United States. One big difference, however, is the contri-

Figure 2: Number of Participants in Corporate Pension Plans



Source: MHLW, NICMR

Table 2: Basic Features of DC Plans

Employer-employee agreement	Employer and employees must agree to adopt DC plans. A DC plan often replaces part of existing retirement benefits, which could be a DB plan and/or retirement lump sum arrangement.
Automatic enrollment	Basically, all eligible employees become participants. Recently, however, plan features closer to elective deferral are gaining popularity.
Employer contributions first	Employer contributes to the accounts. Employees can contribute as well up to the contribution limit prescribed by DC Law.
Investment education requirement	Employers are required to provide investment education to participants. They typically hire a plan administrator. The plan administrator also selects the investment products for the plan, which are typically bank deposits, insurance products (GICs) and various types of mutual funds.
Investment decision by participants	Participants can choose from the plan's pre-selected products when investing their account assets.
Pension portability	When participants change jobs or leave the job market, they can rollover their DC account assets to corporate or individual DC accounts.
No early withdrawals	There are strict restrictions on withdrawals before 60 years of age. Once participants reach 60, they can withdraw assets in lump sum and/or in installments.

Source: NICMR

bution limit. In short, it is quite low. The annual contribution limit for corporate DC plan is 660,000 yen per participant at most (around USD 6,000). In the case of US 401(k) plan, it is USD 56,000 per participant. This low contribution limit makes it difficult for many Japanese companies to set an optimal contribution rate, knowing that they will not be able to actually contribute the full amount for participants with relatively high salaries. It is often pointed out that the contribution limits need to be raised in order to further expand the adoption of corporate DC plans.

Expanding the eligibility of individual DC plans

As mentioned above, individual DC plans were introduced at the same time as corporate DC plans. Individual DC plans were targeted at self-employed people and company employees without corporate pension plans. However, the share of non-regular employment had risen from 15% in 1984 to 37% in 2017. Employers generally offer neither DB plans nor DC plans to non-regular workers. To make private pension plans available to all private-sector workers, it became increasingly important to expand the eligibility of individual DC plans.

In 2016, the DC Law was revised to expand eligibility for individual DC plans to virtually the entire working population. As of January 2017, company employees with corporate pension plans, government employees, and even non-working spouses have been eligible to join DC plans at their discretion. The number of participants in individual DC plans has more than tripled in the 20 months from 306,000 at the end of 2016 to more than 1 million in August 2018. However, considering the fact that the number of potential participants is more than 60 million, there remains tremendous room for growth in the total number of individual DC plan participants.

Pension Funds and the Capital Markets

Investment management of GPIF

Pension plans are major players in the capital markets. They make long-term diversified investments, which can contribute substantially to the growth of the asset management industry.

Public pension funds tend to be larger than private pension funds in asset size. Japan's Government Pension Investment Fund (GPIF) is the largest pension fund in the world. Its assets under management totaled JPY 161 trillion (around USD 1.5 trillion) at the end of June 2018. Public pension funds in such Asian countries as South Korea, China, Singapore and Malaysia are among the world's top 20 pension funds according to Pensions & Investments.

GPIF's policy asset mix used to be quite conservative, with 67% of assets invested in domestic bonds. However, the rate of return used as the assumption for the public pension funding reviews was as high as 3-4%. An expert committee recommended GPIF enhance portfolio diversification, and in 2014 the policy asset mix was changed to 35% in domestic bonds, 15% in foreign bonds, 25% in domestic stocks, and 25% in foreign stocks. The actual allocation was shifted accordingly (Figure 3). Due to GPIF's size, 76% of its assets are invested passively, but the indexes it employs have become more diverse. It now can also allocate as much as 5% of its assets to investments in alternative assets, such as private equity, real estate and infrastructure.

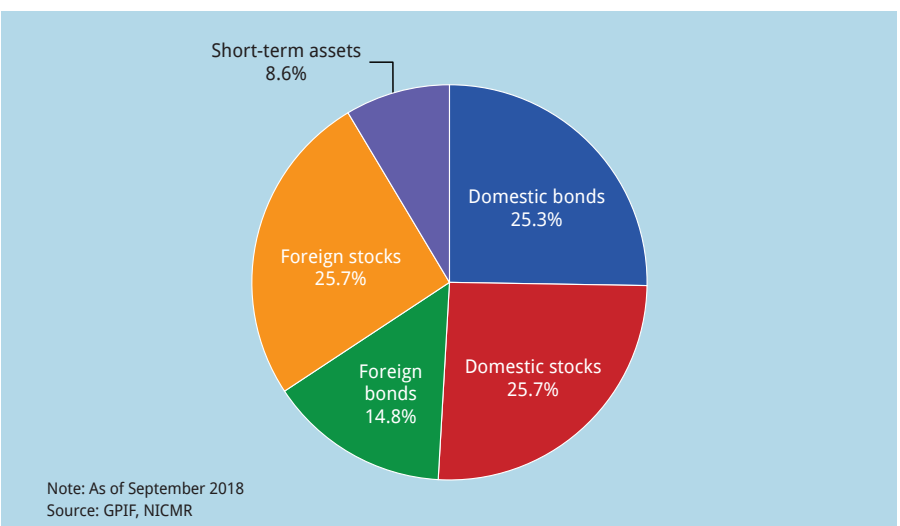
GPIF became a signatory of UN PRI (Principles of Responsible Investment) in September 2015. Being a long-term and mainly passive investor, commitment to ESG investments also makes sense for the GPIF, which describes itself as a "super long-term investor" and "universal owner." Strengthening its governance structure was another important change necessitated by the GPIF's investment portfolio becoming more sophisticated. A governing body with a collegial structure was introduced in October 2017.

DB plan management

Pension fund asset allocation used to be subject to a numerical regulation known as the 5:3:3:2 rule, which required more than 50% of a fund's assets be invested in domestic bonds while limiting allocations to stocks and overseas assets to under 30% each and property investments to under 20%. In addition, pension fund management was restricted to trust banks and insurance companies. In the early 1990s, investment advisory companies were gradually allowed to enter Japan's pension fund management business. The 5:3:3:2 was gradually relaxed and eventually abolished altogether.

Such deregulatory measures led to the diversification of asset managers and investments in Japan. Investment management companies' share of the DB pension fund market has risen from zero to 27%, with insurance companies holding on to a 25% market share and trust banks 48% as of March 2017. In addition, the share of general accounts (insurance products) in pension fund portfolios fell sharply in the late 1990s. DB assets under management totaled 78.7 trillion at the end of March 2018. They are invested in various assets including

Figure 3: Asset Allocation of GPIF



Note: As of September 2018
Source: GPIF, NICMR

both traditional and alternative assets (Figure 4).

DC plan investments and the introduction of the DC default fund arrangement

As shown in Table 2, DC plan participants direct their own individual account asset management. They are offered investment education and opportunities to achieve long-term asset formation consisting of a diversified portfolio of mutual funds.

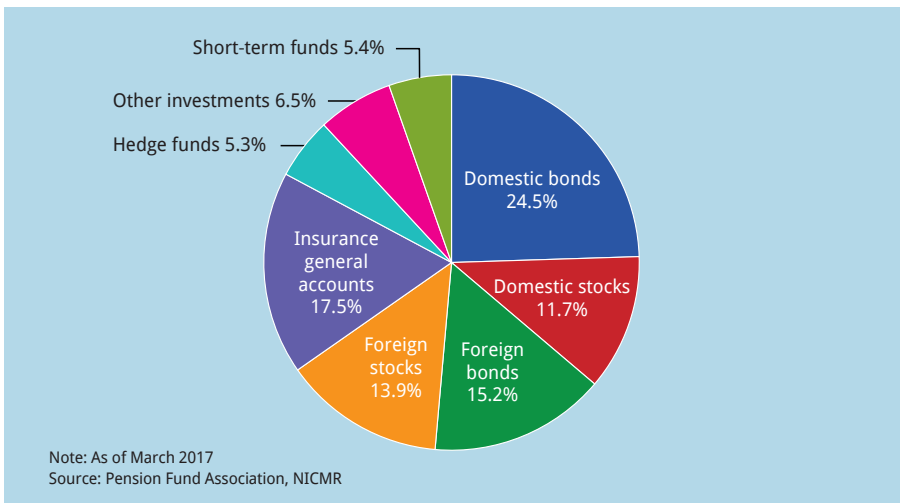
However, the data shows that cash deposits and insurance products account for more than half of the outstanding balance of corporate DC plans, unlike other pension funds (Figure 5). In other words, DC plan participants are heavily weighted toward low-risk, low-return assets.

Measures have been taken to adjust such investment behavior, including enhanced financial education programs, but they have yet to produce any significant change in the aggregate DC asset allocation. Therefore, an amendment to the DC Law in 2016 introduced the "Japanese version of a DC default investment fund." In DC plans, if participants do not specify their investment choice, contributions are allocated to the predesignated default fund, depending on the plan's administrative arrangements. If the default fund is subject to price fluctuations, plan sponsors could take the blame when the value of the default fund falls below the initial invested amount. As a result, such contributions usually were placed in time deposits. The introduction of the default investment product addressed this problem by regarding the plan participants as having instructed the administrator to make the investment as long as certain procedures were followed and conditions were met. Participants can opt out at any time.

One could say that applying the findings from behavioral finance is a global trend in DC plan design. Automatic enrollment is one feature and to default participant investments in such broadly diversified products as balanced mutual funds or target date funds is another. In Japan's case, while investment education and experience in long-term investment via DC plans could play an important role in enhancing the financial literacy of people, it may not be powerful enough to make participants actually take action and additional nudging may be needed.

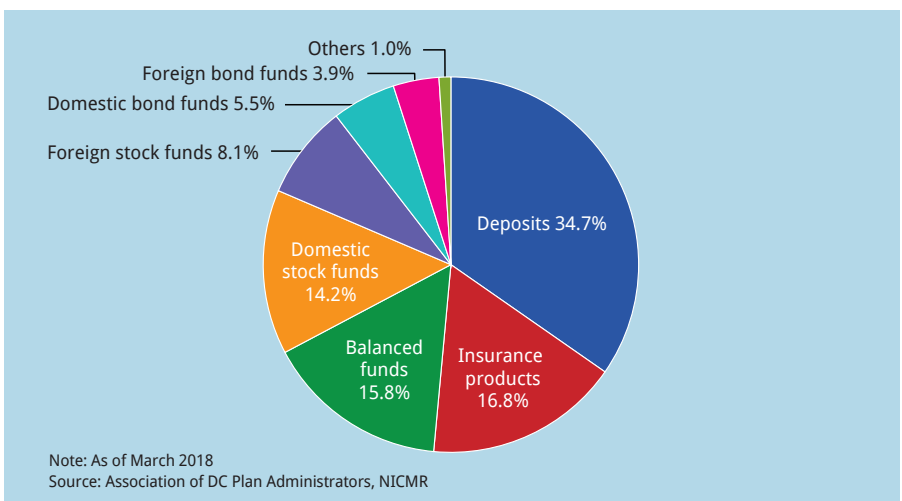
The shift from DB to DC may affect the nature of pension funds as institutional investors to some extent because, in many DC plans, the final investment decision is made by participants rather than investment professionals. However, if the main trend is for DC contributions to be placed in default funds, the bulk of DC assets will end up being managed by default fund managers, who should be as sophisticated and professional as DB plan managers.

Figure 4: Aggregate Asset Allocation of DB Plans



Note: As of March 2017
Source: Pension Fund Association, NICMR

Figure 5: Aggregate Asset Allocation of DC Plans



Note: As of March 2018
Source: Association of DC Plan Administrators, NICMR

Concluding Remarks

The role of the public pension system is to provide a broad, if not universal, coverage. This goal has generally been achieved in Japan. However, Japan is ageing rapidly and it will be increasingly important to clarify the role of public pension system—will it be to provide basic income after retirement or to provide some sort of income replacement. Japanese EPI contains both elements, which could cause confusion about what should be prioritised in discussions about the reform agenda for enhancing system sustainability.

The importance of strengthening private pension plans is shared by many countries. And DC plans rather than DB plans will play a major role. Trickier issues for DC plans include how to enhance coverage and provide support for participants' investment decisions. It seems that defaulting

people into participation in broadly diversified investments is becoming the globally accepted arrangement for resolving these issues.

Pension systems are based on long-term commitments, and system stability is therefore very important. However, when changes are needed, early action is crucial to enabling more people to become better prepared for the changes affecting their old-age pension income. In addition, while pension systems are unique to each country, many common issues exist, such as ageing populations. It is therefore beneficial to monitor pension system–related developments in other countries and learn from other countries' experiences.

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AGUS SUSANTO

BPJS Ketenagakerjaan

Indonesia's Pension in 2018 under BPJS Ketenagakerjaan

Introduction: Social Security Reform in Indonesia

At the end of 2004, the government of Indonesia transformed the structure of the country's social security system by passing Law No. 40/2004 on National Social Security System (Sistem Jaminan Sosial Nasional or SJSN law). The SJSN Law also gave all workers the opportunity to receive pension benefits, which previously was the privilege of civil servants and military personnel only.

Based on the SJSN law, there are five national social security programs:

1. Health benefits, which provide protection against health risks;

2. Work accident benefits (JKK), which provide protection against accidents that occur during or as a result of work, including accidents on the way to and from work, and diseases caused by the working environment;

3. Old-age benefits (JHT), which provide protection against the social and economic risks due to not actively working (retirement, resignation, layoff);

4. Pension benefits, provide guaranteed income in retirement, the amount of money paid each month to participants who have reached retirement age, suffer permanent total disability, or to the heirs of deceased participants; and

5. Death benefits, dedicated to the heirs of participants in the Employment Social Security Administrative Body's program who die in non-work related accidents.

In 2011, Law No. 24 of 2011 on Social Security Administrative Body (Badan Penyelenggara Jaminan Sosial or BPJS law) was passed. The BPJS Law established two administrative bodies that are responsible for the implementation of the national social security programs. BPJS Health (BPJS Kesehatan) manages a health program and BPJS Employment (BPJS Ketenagakerjaan) manages the other four programs (work accident, old-age, pension and death benefits). As mandated by the BPJS Law, PT Askes (Persero), which previously managed health insurance for civil servants, was transformed into BPJS Kesehatan and PT Jamsostek (Persero), which previously managed social security programs for workers in the private sector, was transformed into BPJS Ketenagakerjaan in January 2014. With the establishment of those two administrative bodies, membership in social security programs will be expanded gradually. The pace of expansion is regulated by Presidential Regulation No. 109/2013 on The Gradual Stages of Social Security Program Participation (Peraturan Presiden No. 109/2013 Pentahapan Kepesertaan Jaminan Sosial). In addition, old-age and pension programs for civil servants and military personnel that are currently handled by PT TASPEN and PT ASABRI will be merged with BPJS Ketenagakerjaan by 2029 at the latest.

Since the establishment of BPJS Ketenagakerjaan, some changes have been made in the programs being managed and in membership coverage. Of the four programs managed under BPJS Kentenagakerjaan, three were existing programs (work accident, old-age and death benefits) and the fourth is a new defined-benefit pension program. The existing health program previously managed by PT Jamsostek (Persero) was transferred to BPJS Kesehatan.

In terms of membership, PT Jamsostek (Persero) was focused on benefits for formal sector workers, while BPJS Ketenagakerjaan provides nationwide SJSN employment programs. BPJS Ketenagakerjaan has to cover the entire Indonesian labour force of about 127 million workers.*[1] Considering only wage earning workers, non-wage earning workers and temporary workers in construction projects, the number is reduced to 86.67 million workers; 38.58 million are

formal sector and 48.09 million informal sector workers.

BPJS Ketenagakerjaan is responsible for:

1. Conducting and/or receiving membership registration;
2. Collecting and gathering contributions from participants and employers;
3. Receiving contribution assistance from the government;
4. Managing Social Security Funds comprising Work Accident Fund, Old Age Fund, Pension Fund and Death Fund for the benefit of participants; and
5. Paying benefits and/or financing health services in accordance with the provisions of the social security program.

The social security programs are implemented based on funded social security by participants. Starting in July 2015, BPJS Ketenagakerjaan has managed the pension program.

The discussion in this paper will be limited to the Indonesian pension program managed by BPJS Ketenagakerjaan.

The Current Status of the Pension Program

With the launch of the new pension program in July 2015, all Indonesian workers have the opportunity to join a pension program, while previously, only civil servants and military personnel had such privilege.

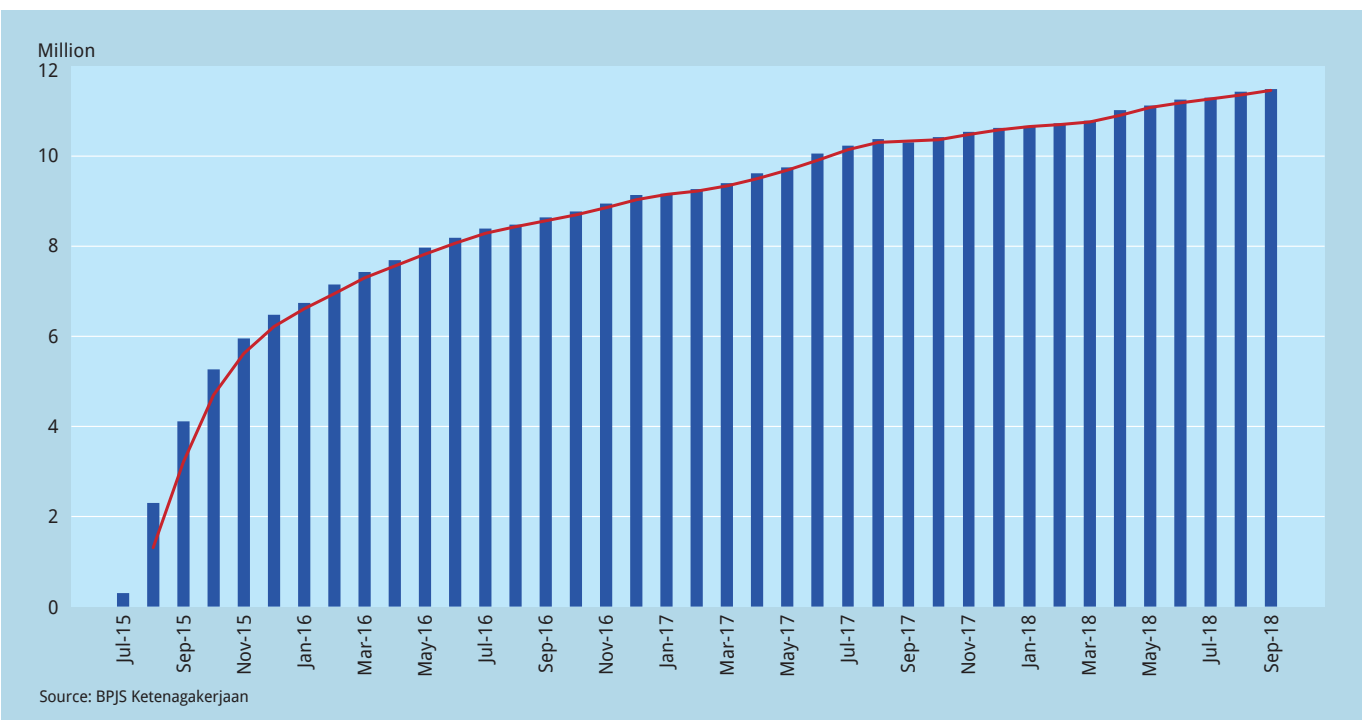
Participation in the national pension program has increased significantly since its inception (Figure 1). The number of active participants in the pension program is about 11.49 million as of September 2018, although this number is still only a small fraction of the entire labour force (13%). According to Presidential Regulation No. 109/2013 on The Gradual Stages of Social Security Program Participation currently only large and medium scale enterprises are obliged to participate; smaller scale enterprises are not yet required to participate. At present, about 90% of workers in large enterprises and about 66% of workers in medium-sized enterprises are covered by the pension program.*[2]

The required rate of contribution to fund the pension program is 3% of a worker's monthly wages with 2% paid by the employer and 1% paid by the employee. In 2015, the maximum wage base on which contributions were required was IDR 7,000,000 which provided a minimum monthly pension benefit of IDR 300,000 and a maximum monthly pension benefit of IDR 3,600,000. In March 2018, the maximum wage base for contributions was increased to IDR 8,094,000 and the minimum and maximum monthly benefits became IDR 331,000 and IDR 3,971,400 respectively. Under the current formula, the replacement rate is about 15% for a worker with 15 years of contributions or 30% with 30 years of contributions. This is lower than the minimum replacement rate recommended by the International Labour Organization (ILO) (at least 40% of previous earnings after 30 years of contributions).

The eligibility conditions and benefits for three types of pensions are as follows:

- Old-age Pension: Workers aged 56 with at least 180 months of contribution. In case a worker has less than 180 months of contributions on retirement, a lump sum benefit will be paid. The retirement age will

Figure 1: The Trend in Pension Program Participation



Source: BPJS Ketenagakerjaan

be raised gradually by one year every three years until it reaches age 65 in 2043. The retirement age will be 57 in 2019;

- Disability Pension: Workers younger than 56 (retirement age), assessed with a total and permanent disability and least one month of contribution with a density rate*[3] of at least 80%. A lump sum is paid if the insured has less than one month of contributions or the density rate is less than 80%; and

- Survivor Pension: Survivors of a deceased worker are entitled to a pension benefit when the insured had at least one year of contributions with a density rate of at least 80%. A lump sum is paid if the insured had less than one month of contributions or the density rate was less than 80%. Eligible survivors include widow(er)s, children, and parents with the benefit amounts as follows:

1. Widow(er): 50% of monthly old age pension,

2. Child: 50% of monthly old age pension or 50% of monthly widow(er)'s pension, and

3. Parent: 20% of monthly old age pension.

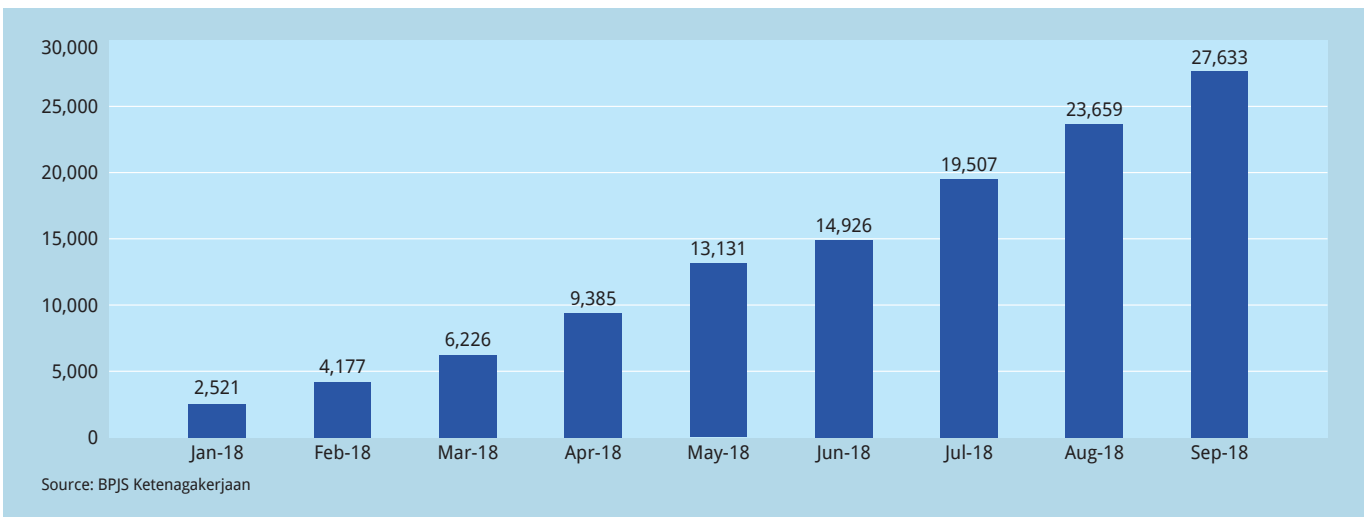
Despite the growth in the number of participants, the increase in the number of lump sum payments, presents a challenge (Figure 2).

The significant increase in the number of lump sum payouts from the pension program means that more and more participants do not receive the optimum benefit from the pension program.

In addition, the number of beneficiaries receiving a disability pension (MPC), a widow (er) survivor pension (MPJD), a child survivor pension (MPA) and a parent survivor pension (MPOT) has been rising from January to September 2018 (Figure 3). In other words, the BPJS Ketenagakerjaan has had to pay out survivor and disability benefits only a short while since the program began.

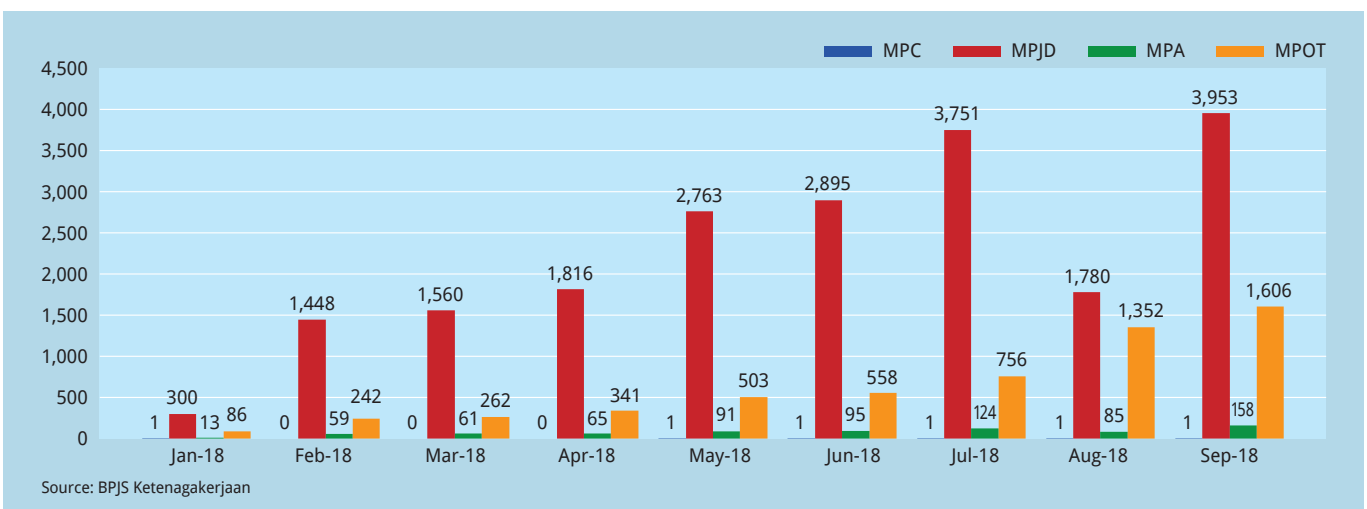
With the current contribution rate of 3% of monthly wages, the BPJS Ketenagakerjaan program will face the following milestones (Figure 4):

Figure 2: Trend in Lump Sum Payouts from the Pension Program



Source: BPJS Ketenagakerjaan

Figure 3: Number of Disability and Survivor Pension Beneficiaries



Source: BPJS Ketenagakerjaan

1. In 2048, benefit payments will exceed contributions;

2. In 2055, benefit payments will exceed the total of contributions and return on investment; and

3. In 2062, program assets will run out.

The program administration will re-evaluate the required contribution rate every three years with consideration of national economic conditions and calculation of the adequacy of actuarial liabilities. The result of the evaluation will be used as a basis for gradually raising the contribution rate toward 8%.

Investment

As of September 2018, the BPJS Ketenagakerjaan's total assets under management reached IDR 343.48 trillion about 10% of which comes from Pension Fund. While investing the funds, strict regulations must be followed. Based on Indonesia Financial Services Authority (POJK No. 1/2016, POJK No. 36/2016 and POJK No. 56/2017), BPJS Ketenagakerjaan must invest a minimum of 50% of Social Security Funds and 30% of its institution assets (i.e. assets owned by BPJS Ketenagakerjaan for daily operation, etc.) in government securities. The management of assets in the Social Security Funds also must comply with Government Regulations of the Republic of Indonesia No. 55/2015 on Asset Management of Social Security Fund (Peraturan Presiden No. 55/2015 Pengelolaan Aset Jaminan Sosial) (Table 1).

Challenges

Many factors can influence efforts to extend pension coverage such as the level of national economic development, political stability, national labour markets, the size of the rural economy and geographic conditions.

Indonesia is the world's largest country comprised solely of islands. The archipelago consists of more than 17 thousand islands, more than two thousand of which are inhabited. Indonesia's population is also highly diverse with more than 500 local languages. This geographic and linguistic diversity clearly illustrates the challenges to extending social security coverage to the entire Indonesian population.

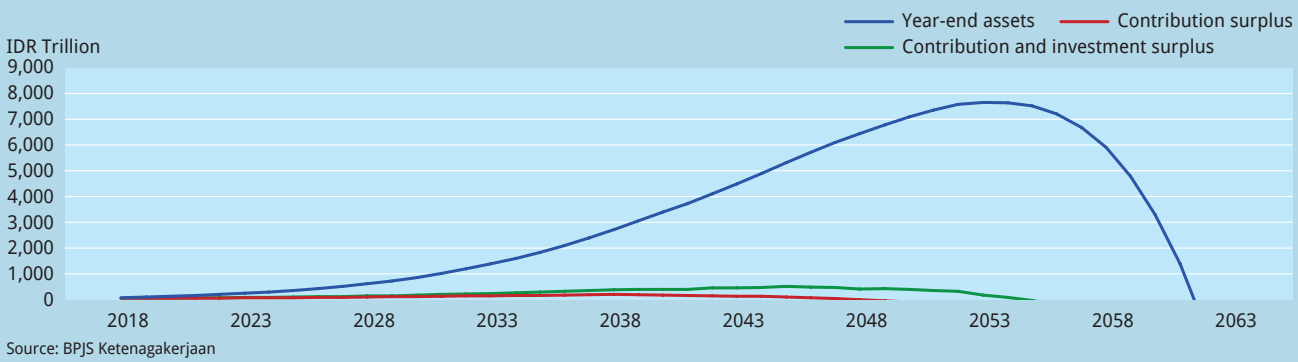
BPJS Ketenagakerjaan has 11 regional offices, 325 branch offices and 5,575 employees to provide social security services. It also collaborates with other institutions, both government and non-government, to provide such services and it also utilises technology to reach as many workers as possible. Many challenges still remain, however, including as follow:

1. Low coverage compared to the size of the labour force;

2. Design of the pension program (contribution, benefit, scheme);

3. Low literacy of workers regarding

Figure 4: Pension Funding Milestones



Source: BPJS Ketenagakerjaan

Table 1: Investment Rules on Peraturan Presiden No. 55/2015 Pengelolaan Aset Jaminan Sosial

Investment Instruments	Maximum Placement
Time deposits, Government bonds, Treasury bonds	100% of total investment fund
Corporate bonds, Equities, Mutual funds, Municipal bonds	50% of total investment fund
Asset-Backed Securities (KIK EBA), Real Estate Investment Trusts (REITs)	20% of total investment fund
Repurchase agreements (repo), Direct investments	5% of total investment fund
Real property	10% of total investment fund

Source: Government of Republic of Indonesia

the importance of social protection;

4. Compliance by employers; and

5. Disharmony in regulations regarding social protection.

Conclusion

The implementation of a pension program must consider the principles of balance and sustainability:

1. Affordability: the benefit has to be designed so that it can be funded by employers and employees;

2. Adequacy: the benefit has to be able to replace a suitable minimum income. Moreover, the amount of the output (benefit) should be in accordance with the amount of input (contribution rate and period); and

3. Sustainability: the financial stability of the pension program must be ensured to guarantee the program's sustainability.

An imbalance in funding may increase the risk of failure of the funding program. Not only the government and BPJS Ketenagakerjaan but also employers and employees' representatives must be proactively involved in deciding the appropriate contribution and benefit parameters while aiming to fulfil the mandate of the SJSN Law.

Considering the remaining challenges, Indonesia needs to continue to strengthen collaboration among governmental and non-governmental bodies in order to deliver adequate welfare to all workers. The utilisation of technology must be optimised to provide the social protection effectively and efficiently.

Notes

*1 National Statistic Agency, February 2018

*2 BPJS Ketenagakerjaan. (2018) "Membership Management Report September 2018"

*3 Density rate is a proportion of actual contribution payment to full amount of contribution for each payment period.

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Agus Susanto

President Director of BPJS Ketenagakerjaan

Agus Susanto has been CEO of BPJS Ketenagakerjaan since February 2016 with his term lasting to 2021. Under his leadership BPJS Ketenagakerjaan has a vision "to be a national pride social security organization, trusted, with good governance and excelling in operations and services".

He was a professional for about 25 years in the capital market and banking industry. He has been closely involved in the development of Indonesia's capital market. He used to be active member in some international capital markets and banking professional associations such as: Indonesia Mutual Fund Managers Association (APRDI), Indonesian Custodian Bank Association (ABKI), Indonesian Trustee Association (AWAI), Indonesia Pension Fund Association (ADPI), and International Securities Services Association (ISSA) in Luxemburg.

Since December 2016, he became head of the Asian Workers' Compensation Forum (AWCF) for the next two years.

He earned a bachelor's degree from Gajah Mada University, Indonesia, as well as an MA in economics. He completed a Global Executive Master of Business Administration from INSEAD Fontainebleau, France. He completed courses in the field of business from MIT Sloan School of Management, USA. Currently, he is pursuing doctoral degree on Public Administration from Brawijaya University, Indonesia.

NURHISHAM HUSSEIN

Employees Provident Fund

The Malaysian Pension System

Background

Malaysia will become an ageing nation in the not very distant future. Based on the latest projections from the Department of Statistics Malaysia (DOSM), the proportion of the population above 60 years old will hit above 15% sometime between 2030 and 2035 (DOSM, 2016a). This evolution in the age profile of the population has come through a number of factors – declining fertility coupled with longer and healthier life spans – and is occurring at a faster rate than heretofore has happened. It is estimated that Malaysia will transition from a population with 7% above the age of 60, to one with 14% above 60 in just 25 years. By contrast, the same transition took the UK 45 years, and the United States 69 years (Kinsella & Gist, 1995).

Given this circumstance, income security for the elderly is a key policy priority. Historically, Malaysians have depended on the family unit as the primary care givers for the elderly, regardless of ethnic background (Chan, 2005). This is slowly breaking down, as internal migration and declining household sizes reduce the ability of children to care for their parents (DOSM, 2010). This places greater pressure on the national health system and social services to pick up the slack, with varying degrees of success. As a result, the provision of retirement income is taking on much greater importance, a trend that will continue as the population ages.

On that basis, the reach and adequacy of the Malaysian pension system is undergoing greater scrutiny. Based on the World Bank's multi-pillar pension model (Holzman & Hinz, 2005), Malaysia has most of the elements required of a pension system, but also has significant gaps. Even within the pillars that have the requisite institutions, there remain challenges in terms of coverage and adequacy that need addressing.

The purpose of this research note is to outline the history and current state of the pension system in Malaysia, including a thumbnail sketch of the institutions involved. The paper will begin with an overview of the demographic situation, followed by a short history of the development of the pension system in Malaysia, and end with some policy options for consideration.

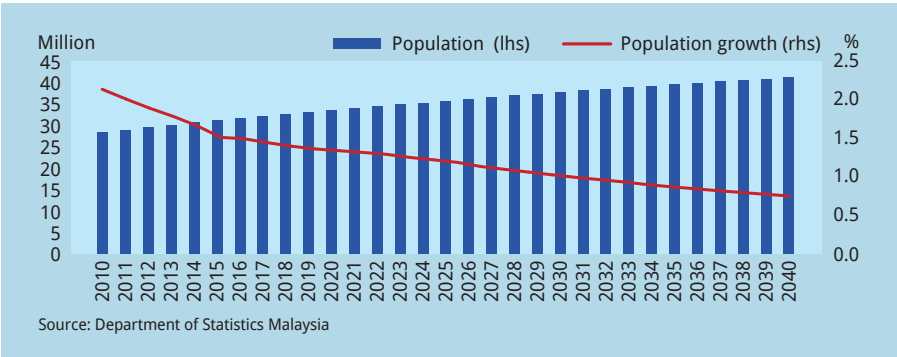
Demographic Changes in Malaysia

Malaysia is undergoing a significant demographic transition. Population growth has dropped from an annual average of 2.5% in the 1970s to 2.0% in the 2000s, while the latest population projections suggest population growth will drop below 1% per year by 2030 and 0.6% by 2040 (DOSM, 2016a) (Figure 1). Sometime in the next two decades thereafter, Malaysia's population is probably going to stop growing entirely.

In the meantime, declining fertility rates and increasing longevity mean an equally significant change in the population age profile. The total fertility rate dropped below the 2.1 replacement level in 2013, while life expectancy at birth has increased from 61.6 and 65.6 in 1970 (for men and women respectively) to 72.5 and 77.4 in 2015 (DOSM, 2016b) (Figure 2). Expectations are that as Malaysia continues to improve on healthcare, life expectancy will continue to improve in line with global trends.

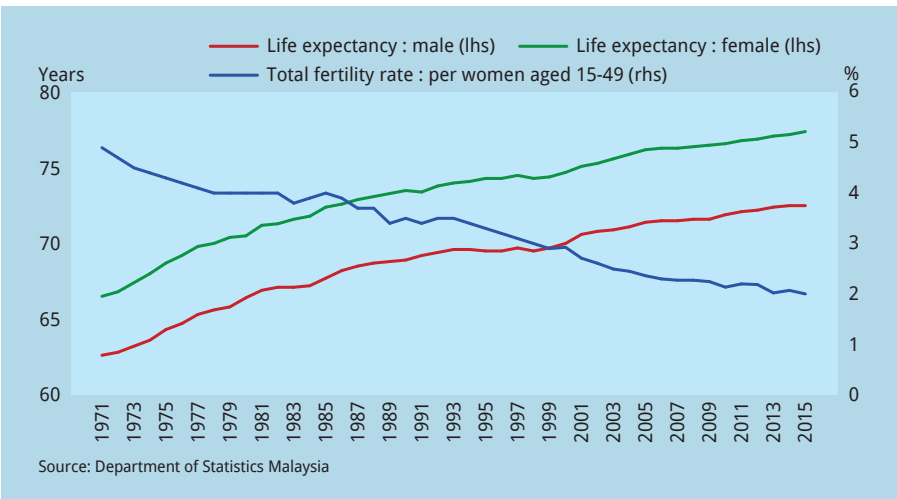
From an economic perspective, Malaysia is still undergoing what is termed the

Figure 1: Projected Population and Population Growth 2010-2040



Source: Department of Statistics Malaysia

Figure 2: Life Expectancy and Total Fertility Rate 1971-2015



Source: Department of Statistics Malaysia

first demographic transition. In a stylised demographic transformation model, better healthcare and living standards translate into increased longevity. This happens concurrently with declining fertility, as declining child mortality reduces the incentive to bear children. The end-result is that a "bulge" has appeared in the Malaysian population age-profile starting with the cohort born in 1980, with a slowly declining youth dependency ratio, and an increasing proportion of the population in the prime working age bracket of 15-65.

Coupled with policies to enhance labour quality (such as education), the first demographic transition is likely to result in faster economic growth per capita, as a larger, better educated population boosts consumption, investment, and productivity while they remain in the workforce.

However, the age cohorts behind this bulge are smaller. As of 2015, the population between the ages of 10 and 14 is already 2.5% smaller than that in the 15-19 age bracket. Similarly, the cohort following (ages five-nine) numbers 5.8% less than the one before, though the youngest age bracket shows a small increase of 3.1% (though it is still smaller than the 10-14 cohort) (DOSM, 2016a).

All things equal, as the first demographic transition will boost economic growth, the second transition (as the size of age cohorts declines) will likely have the opposite effect, though whether this will result in an absolute decline in the population is as yet unknown (van de Kaa, 2002).

The Development of the Pension System in Malaysia

Unlike many developing countries, Malaysia had a head start in providing for income adequacy for retirement, with both public and private sector pension schemes introduced in 1951, even before independence from the United Kingdom in 1957. The Malaysian pension system now has a number of different institutions that fall into five different areas, serving mostly different constituencies:

1. a tax-funded defined benefit (DB) pension scheme for public servants;
2. a defined-contribution (DC) scheme for armed forces personnel;
3. a publicly run, DC retirement scheme for private sector employees;
4. a publicly run social insurance scheme for private sector employees; and
5. a privately run, DC scheme open to all.

In addition, there are government funded welfare benefits that target the poor. While these benefits provide supplementary incomes for the eligible elderly, they are not pensions in the ordinary sense of the term, and thus are not addressed in this paper. While the Malaysian pension system as a whole appears comprehensive, gaps in coverage remain and issues of adequacy have yet to be adequately confronted.

The public service pension system

The public sector system is funded out of general taxation, and is a non-contributory, DB system that pays out up to 60% of last drawn salary for civil service retirees and confers both survivorship benefits and subsidised healthcare for life. There are currently 743,000 pension beneficiaries under the system (KWSP, 2016). The public system was first established for what was then Malaya under the Pensions Ordinance of 1951, which superseded the existing law that was in place for the Federated Malay States*[1] which was first promulgated in 1928. The Pensions Ordinance was eventually replaced by the Pensions Act (1980), which continues to be the main legislation governing the pension system today. Statutory bodies and local authorities were brought into the scheme in 1976 (Lee, 1997), after previously being under a separate scheme that began in 1969.

Various changes have been made to the scheme over the years, the most important of which were changes to the mandatory retirement age, in line with

increasing life expectancy. The mandatory retirement age was originally 55 years in 1951, but was raised to 56 in 2001, to 58 in 2008, and to 60 in 2012. A lump sum gratuity was introduced in 1968, while cash in lieu of leave-not-taken was introduced in 1974. A pension adjustment was also introduced in 1980 (Lee, 1997), so that changes to the public service scheme of service would also apply to current retirees, and not just new ones. This allowed for cost of living adjustments for pensioners, to cater for the impact of inflation.

The key elements of the current scheme include (Jabatan Perkhidmatan Awam, 2018):

1. A monthly service pension calculated as 1/600 x months of service x last drawn salary, subject to a maximum of 60% of the last drawn salary. The maximum pension benefit applies after 30 years of service;

2. A lump sum gratuity equal to 7.5% of last drawn salary multiplied by month of service;

3. A cash award in lieu of leave not taken;

4. A disability pension, for civil servants who are incapacitated in the course of duty, with a maximum benefit of up to 50% of the last drawn salary; and

5. A pension for dependents (including children under 21 and parents) of a civil servant who dies in the course of duty.

Pension rights vest on completing three years of service, and both the gratuity and cash award are exempt from income tax.

To reduce the burden pension payouts placed on government finances, the Pensions Trust Fund was established in 1991 with an initial endowment of RM 500 million, and was later incorporated as the Retirement Fund (Incorporated) or Kumpulan Wang Amanah Pencen (KWAP) in 2007 (KWAP, 2016a). As of September 2016, the fund size stood at RM 126.87 billion (KWAP, 2016b). Nevertheless, the government has yet to draw down the funds managed under KWAP, and all pension benefits are on a Pay-As-You-Go (PAYGO) system, with current taxation funding current retirees. However, the administration of pension benefits was transferred from the Civil Service Department (Jabatan Perkhidmatan Awam) to KWAP in 2017.

The drawbacks of such an arrangement are obvious with an ageing population – pension benefits paid out are increasing much faster than revenue growth, and are an increasing proportion of government expenditure. From 2.7% of operating expenditure in 1977, pensions and gratuities to retirees have increased to 8.7% in 2015; in absolute terms, the increase has been nearly a hundred-fold, relative to an economy that expanded roughly 36-fold (Bank Negara Malaysia (BNM), 2016b) (Figure 3).

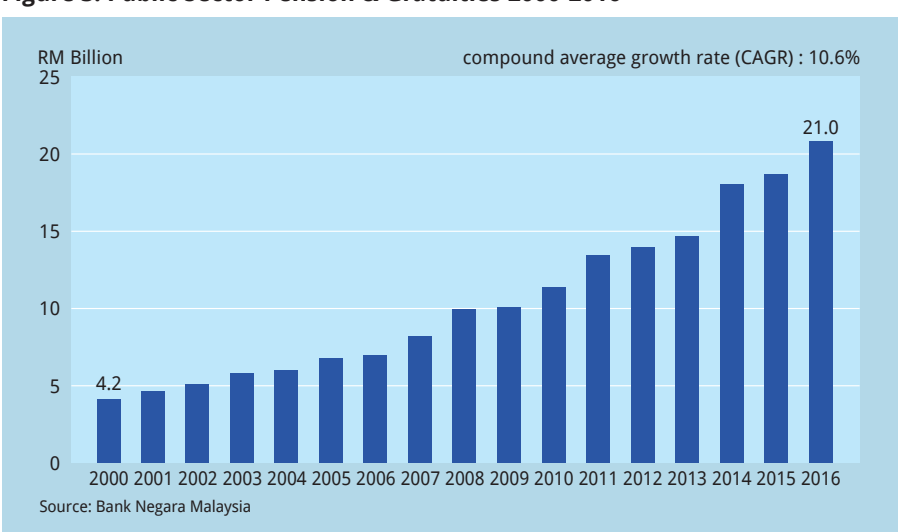
Armed Forces Retirement Fund

In addition to the overall public system, a separate system exists for enlisted armed forces personnel under the Armed Forces Retirement Fund or Lembaga Tabung Angkatan Tentera (LTAT), which was established in 1973. Unlike the DB public sector pension, this is a fully funded DC scheme, with contributions from both members (10% of salary) and the government (15%), although it is possible for members to increase their contributions voluntarily. Dividends are paid out annually from investment income, while a bonus is also awarded comprising free units from LTAT's mutual fund subsidiary. Members are entitled to withdraw their savings (inclusive of dividends and bonus) upon reaching the age of 50, while the government portion is used to fund a monthly pension. While officers also have the right to save through the scheme, it is primarily aimed at enlisted personnel.

The reason for the split between LTAT and the public service is largely due to differences in the scheme of service, and LTAT is correspondingly smaller in terms of the assets it manages (2015: RM 87.8 billion) (LTAT, 2015). Enlistment in the Malaysian armed forces is for a period of between 12 to 21 years with mandatory retirement by age 55, which differs from the much longer period of service available under the public sector scheme of service. Given the relatively short accumulation period, the pension scheme for the armed forces is intended not so much to fully fund retirement (for which it is in most cases inadequate), but as much for providing capital or a financial buffer while the retiree seeks other work.

In recognition of this, LTAT runs training programmes intended for retiring and retired members to prepare them for second careers, an initiative that was begun in 1994.

Figure 3: Public Sector Pension & Gratuities 2000-2016



The private sector pension system

For the private sector, the primary vehicle for retirement saving is the Employee's Provident Fund or Kumpulan Wang Simpanan Pekerja (KWSP), a DC scheme which was established in 1951 and is one of the oldest provident funds in the world. Both employees and employers are required to contribute to the fund, at a statutory minimum rate of 11% and 12% respectively for members earning more than RM 5,000 a month and 11 % and 13% respectively for members earning less. Members are entitled to make a partial withdrawal at age 50 and full withdrawal at the age 55, although mandatory contributions paid in after 55 are sequestered until age 60. Contributions are accepted until the age of 80, while dividends are paid out on savings until the age of 100.

KWSP is among the largest pension

funds in the world, ranking in the top-10 in terms of asset size with RM 730 billion under management at the end of 2016 (KWSP, 2017a). While the primary beneficiaries of the KWSP scheme are those under formal employment and earning a regular wage, the scheme is also open to the self-employed and to foreign workers on a voluntary basis. As of 2017, the fund had more than 14 million members and nearly 7 million active contributors, relative to a total labour force of 15 million.

KWSP has seen many tweaks to its scheme over the years, with the main change being the employee and employer contribution rates. It has in recent times also been used as a policy variable, with the employee contribution rate being temporarily cut to boost disposable income during recessions and economic slowdowns. Initially beginning at 5% for both employees and employers, the contribution rates were progressively raised to 6%/7% in 1975, 9%/11% in 1980, and 10%/11% in 1993, before reaching the current level of 11%/12% in 1996. Since then, only temporary cuts to the employee contribution rate have been made, in 2001-2002 (from 11% to 9%), in 2003-2004 (also from 11% from 9%), in 2009-2010 (from 11% to 8%), and in 2016-2017 (another 3% cut). In all the latter cases, the employee contribution rate reverted to 11%.

Another feature of the scheme is the subdivision of retirement accounts, with a portion set aside for non-retirement purposes such as home purchases and funding for health and education. While this results in some leakage from retirement savings, the rationale is that such funds are either used for alternative wealth accumulation (housing) or for investment in human capital (health and education) which would raise future income.

As a supplement to the KWSP scheme, the government introduced Private Retirement Schemes (PRS) in 2012, supported by tax incentives for Malaysians and their employers who participate. These are private sector administered savings schemes, with eight fund managers offering 56 different products (Private Pension Administator, 2018). In many cases, the products offer life cycle choices in terms of risk exposure and returns, with the ability to switch between different funds offered by particular fund managers. Members can access their savings via lump sum full withdrawals on retirement, with annual pre-retirement withdrawals allowed under a tax penalty. In aggregate, PRS hit 301,279 members in 2017, with funds under management of RM 2.23 billion (Private Pension Administrator, 2018). Given the relatively small numbers, PRS should be considered as a supplement to the KWSP scheme, rather than as an alternative.

Private sector social insurance

In addition to KWSP, workers and employers are also required to contribute to the Social Security Organisation (SOCSO) scheme, which provides benefits in the event of injury or disability. SOCSO was established in 1971, and its rates of contribution are 1.75% for employers and 0.5% for employees under the Employment Injury and Invalidity schemes for those below the age of 60, and 1.25% by employers only, for those above the age of 60 under the Employment Injury scheme (SOCSO, 2017). Both schemes provide multiple benefits to members on injury and invalidity, including the payment of a monthly lifelong pension.

Capital Market Impact

With the three main pension institutions managing cumulative funds in excess of RM 900 billion (as of 2016), equivalent to over 70% of 2016 GDP, they have had a major impact on the growth and development of Malaysian capital markets. KWSP alone currently holds about a quarter of Malaysian government debt securities outstanding, and all three are significant players in the domestic equity market, both in terms of holdings and in terms of supporting domestic liquidity.

However, the role of the pension system within the capital markets has evolved over the years. The Malaysian corporate debt market really only began growing strongly in the 1990s. Also, the interest rate environment has changed significantly over time, from the high inflation, high interest rate environment of the 1970s, to the low inflation, low interest rate environment after the Global Financial Crisis. This has prompted the pension institutions to change their asset allocations over time, from portfolios largely dominated by fixed income assets (particularly government securities) to progressively taking on equities, corporate debt, and most recently alternative investments such as private equity and direct investments in property and infrastructure.

In addition, there have also been moves to diversify away from the Malaysian market, and invest in a wide range of assets overseas. More than a quarter of KWSP's assets under management is now located outside of Malaysia, through both public and private markets. This has been in response to the growth of the funds, which has exceeded the economic growth of the country. Under those circumstances, there is growing concern that the heavy presence of these pension institutions in domestic capital markets is distorting valuations and reducing investment returns, for which there is some empirical evidence. Malaysia's stock market has over the years been valued at a premium over other regional markets, as measured by the price/earnings (P/E) ratio.

Rather unusually for a pension fund, LTAT has been an exception in terms of its asset allocation, with most of its assets tied up with two major listed entities – Boustead Holdings Berhad (a diversified conglomerate with interests in property development, pharmaceuticals, plantations, heavy industries, and trading and industrial) and Affin Holdings (an integrated financial services provider).

In addition to their direct investment impact on capital markets, the Malaysian pension institutions have also helped to support the development of the domestic asset management industry, via mandates given to external fund managers. The proportion however has tended to be on the smaller side relative to international best practice, as most fund management functions are still handled in-house.

Issues and Challenges

These institutions are the main avenue for institutional income support of the aged in Malaysia. Despite their relative size and coverage, substantial challenges remain in terms of ensuring both adequacy and sustainability.

Both DB and DC schemes in Malaysia suffer from adequacy problems. In the public DB system, tying pensions to last drawn salary effectively means that the

rank and file of the civil service could be receiving pensions inadequate to sustain a basic standard of living, even before factoring in inflation. While benefits have been gradually raised over the years, prices of basic necessities have increased at a faster rate than the overall rate of inflation. For example, food prices have increased at a rate one percentage point above the increase in the Consumer Price Index (CPI) (DOSM CPI reports, various) (Figure 4). Even index-linking pensions to the CPI would result in a real decline in income over time. Increasing longevity exacerbates the situation, as pensions based on wages a generation ago have not kept pace with the overall increase in the price level.

The public system also suffers from an unsustainable increase in future government liabilities. While estimates of the current pension asset-liability gap are not publicly available, a full drawdown of KWAP funds would deplete the fund within five-six years (Asia Asset Management, 2016).

Within the private system, as retirement savings are dependent entirely on member and employer contributions, adequacy is an even more pressing issue. Less than 25% of KWSP members reach the minimum basic savings requirement at age 55, which stipulates enough savings to finance monthly income at or above the poverty line for 20 years (currently RM 240,000). About 20% enter retirement with less than RM 10,000 in savings (KWSP, 2016).

Coverage is an even bigger issue for the private sector, as active members (those contributing at least once a year) number around 7 million, compared to an estimated total workforce of 15 million. The most compelling problem here is the informal sector which is not covered by any formal pension scheme, and forms more than a third of the labour force in Malaysia. All told, KWSP estimates only about 3 of every 100 working Malaysians will have a pension and/or savings adequate enough to sustain a comfortable retirement (KWSP, 2017b).

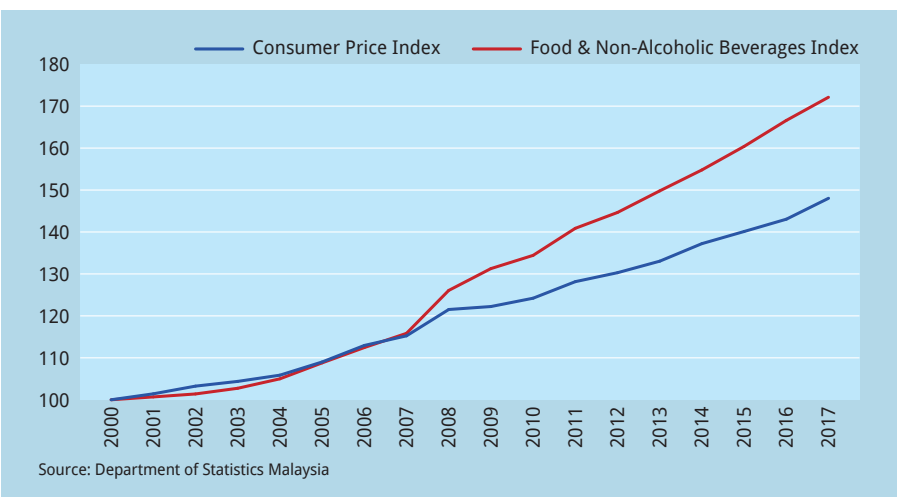
As corroboration, data from Household Income and Expenditure surveys conducted by the DOSM suggest a fifth of low income households (defined as those in the bottom 40% of the income distribution) are led by the elderly (DOSM HIES, various). It is clear that retirement savings are, on aggregate, insufficient to meet the needs of the elderly at the present time, much less into the future. Moreover, in terms of other financial assets, what data is available suggests Malaysian households, regardless of age profile, are highly vulnerable to economic shocks (BNM, 2016a).

One mitigating factor is that some of these households may own assets outside of the formal pension system, particularly in the form of housing. On that score, Malaysians as a whole appear to be relatively well off. Nationally, the rate of home ownership is above 70%, and this rises sharply for retirees (over 90% in the case of those above the age of 60) (DOSM HIES, Various).

Nevertheless, this form of wealth is illiquid and cannot be used to cover daily expenses. One possible retirement strategy is to downgrade housing on retirement, trading in housing equity for cash. However, this strategy assumes an environment of constantly rising house prices, a dangerous assumption in the midst of consecutive near-term demographic transitions. Just as demand for housing rises during the first demographic transition as a larger portion of the population enters the housing market for the first time, demand for monetising housing wealth would ceteris paribus similarly spike during a second demographic transition as the working age population declines, with an obvious negative impact on house prices and thus household wealth.

While empirical evidence for this housing market cycle is ambiguous, it is in theory highly suggestive, and appears to be supported by boom-bust housing cycles in developed economies with high home ownership, such as Japan in the 1980s and the United States in the 2000s.

Figure 4: Consumer Price Index versus Food & Non-Alcoholic Beverages Index 2000-2017 (2000=100)



Source: Department of Statistics Malaysia

Policy Options

Addressing the challenge of income security for the elderly will require a multi-pronged approach. Most potential options will be familiar to practitioners in this field, but they still bear repeating.

For income security, Malaysia needs to follow the example of many other countries in raising its retirement age. Increasing the time spent in the workforce allows for a stronger build up in retirement savings, and given that incomes generally peak around the age of 50 means that every Ringgit earned past this age has a bigger impact on retirement savings. The mandatory retirement age was raised to 60 in 2012, but already needs to be revisited again. By rights, given the continuing increase in life expectancy, the mandatory retirement age should be pegged to that increase, or roughly a one year increase in the retirement age in every four calendar years.

A second option is to look into retaining older workers in the work force, similar to the system practiced in Singapore. Singapore's mandatory retirement age is 62, but its re-employment law stipulates that all workers be offered positions, at reduced pay and responsibilities, up to the age of 67. This regulation has been very successful in retaining older workers, allowing them to not only supplement their retirement savings, but continue to contribute to society at large (Ministry of Manpower, 2017).

Option three is to provide a national basic pension, which Malaysia currently

lacks. Such a pension need not be expensive, and would primarily be intended to supplement other sources of retirement savings or financial assets. For those not actively saving with KWSP or a civil service pension, which describes half the current labour force, such a pension can be augmented to cover at the very least basic living expenses.

Conclusion

Malaysia's transition to an ageing nation will be rapid, and the window of opportunity to prepare for the unique challenges involved is rapidly diminishing. The elderly can become a great resource for economic development, as life expectancy increases and people remain economically and socially active for much longer than before. But to fully embrace the possibilities and potential of an actively aged populace will require careful implementation of the correct policies that address the needs of the elderly, while accommodating the effects they will have on the rest of society.

Notes

*1 The Federated Malay States was a British protectorate comprising only 4 of the 14 states currently within Malaysia.

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EDWIN SHEA PINEDA

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The Philippine Pension System: New Buttresses for the Old Multi-Pillar Architecture

History

Since the 1990s there has been an increased global awareness of the need for both structural as well as parametric*[1] reform of pension systems in various countries, the Philippines included. The World Bank has often been a lead educator starting with the 1994 publication "Averting the Old Age Crisis," (spearheaded by economist Estelle James).*[2] Consequently, a research team from the World Bank was sent to the Philippines to undertake a comprehensive review of its pension institutions culminating in the report cited below.*[3]

This report led to the eventual formation of the Retirement Income Commission, a joint public and private body tasked to undertake major reforms under the administration of President Joseph E. Estrada (1998 to early 2001). Unfortunately, the impeachment and removal of President Estrada also meant that the substantial reform agenda by the commission could not be implemented as originally envisioned.

The commission reviewed the existing pension system and proposed major reforms. The proposed architecture using the well-known multi-pillar framework pioneered by the World Bank for the Philippines has survived albeit in modified and tentative ways. This multi-pillar framework referring to the existing status quo and the new proposed architecture are both presented below (Figure 1 and 2).

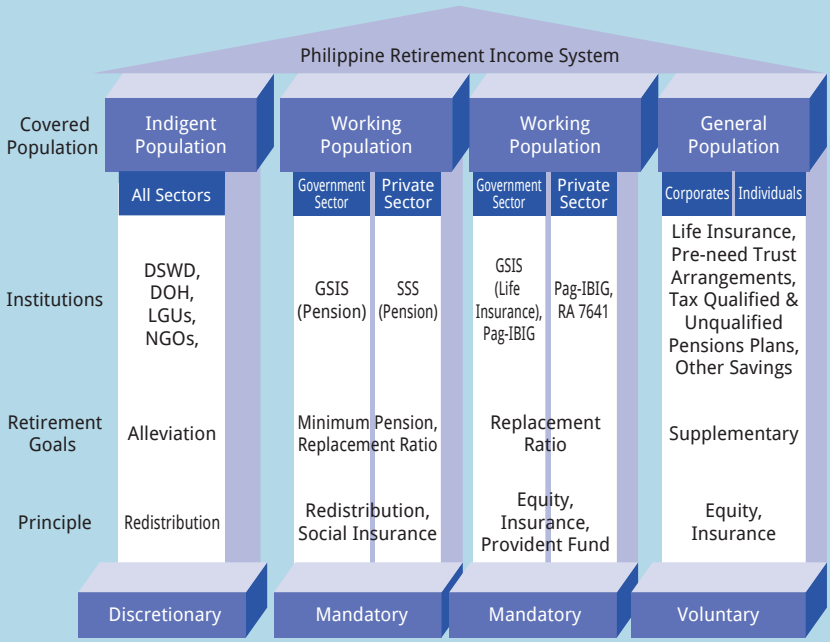
The first pillar of the proposed program is still responsible for some of the redistribution feature that existed in the old system. It is directed towards the welfare improvement of the elderly population (age 60 and above), whose welfare are prioritised in several social security programs, who are considered poor. This is also in line with the government's call to battle against poverty. In the Medium Term Philippine Development Plan (MTPDP) 2004 to 2010, the apportioned social assistance, social protection and safety nets for the older persons were an improvement of the structure and management of centers and institutions that took care of them including full implementation of the Expanded Senior Citizens Act of 2010.*[4]

The proposed reformed second pillar: the defined-benefit (DB)*[5] program is a scaled down version of the current DB programs of Social Security System (SSS) (pension organisation for the private sector) and Government Service Insurance System (GSIS) (pension organisation for the government sector), with the two programs integrated and modified to correct identified weaknesses. The objective of this proposed pillar is to provide only a basic pension under a DB formula. Ideally, the reduced DB program should have been the same for both organisations paving the way for the unification of both into one state organisation.

The proposed reformed third pillar: the enhanced defined-contribution (DC) programs would supply the balance of the average desired replacement ratio. This will absorb the balance of the reduced DB programs in a new form, together with all the existing mandatory programs. The size of the benefit will be determined by the average target replacement rate. Essentially, the third pillar will enlist the participation of private financial institutions inspired by the example of Chile. Thus, the individual contributor will be free to choose and move periodically among accredited pension fund managers and alternative accumulation products, depending on their risk-return preferences at a particular time.

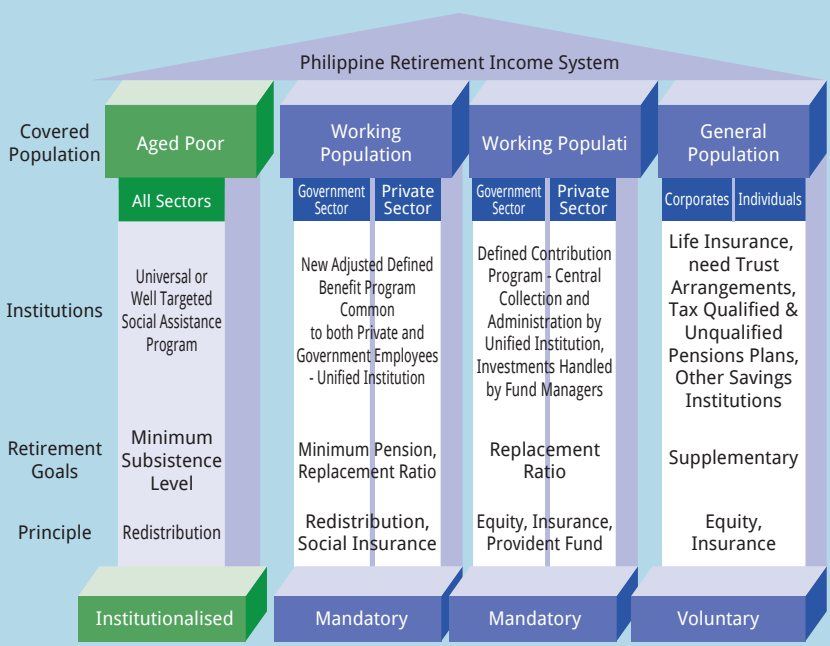
The fourth and last pillar will incorporate the financial instruments provided by the private sector, catering to the people who can afford to do so. This refers to private sector mutual funds, insurance-related investment funds, and trustor-trustee investment arrangements, and a new facility called the Personal Equity and Retirement Account (PERA), which will be elaborated upon later in this paper.

Figure 1: The Status Quo of the Philippine Pension Architecture



Note: (1) A previous institution of the second pillar, namely the Armed Forces of the Philippines-Retirement and Separation Benefit System Inc. (AFP-RSBS), has been declared bankrupt since the turn of the millennium and is therefore excluded from the multi-pillar architecture presented above.
(2) Abbreviations in this Figure are as follows. Department of Social Welfare and Development (DSWD), Department of Health (DOH), Local Government Unit (LGU), Non-Governmental Organisation (NGO), Government Service Insurance System (GSIS), Social Security System (SSS)
(3) Pag-IBIG (Tagalog for Agape) is the housing finance lending institution.
Source: Proceedings and transcripts of the Retirement Income Commission of the Philippines in 1999

Figure 2: Retirement Income Commission Recommendation: New Mandatory Retirement Program



Source: Proceedings and transcripts of the Retirement Income Commission of the Philippines in 1999

The Status Quo of the Two Major Philippine State-Run Institutional Providers

The two principal pension organisations in the Philippines, namely SSS and GSIS, may be described succinctly as publicly-managed, DB organisations inspired directly by the social insurance mandate of the American system as established under U.S. President Franklin D. Roosevelt's New Deal (which in turn was inspired by earlier European models). Like its American model, these institutions are exhibiting the inexorable tendency to move into a problematic pay-as-you-go (PAYG)*[6] mode of financing (Table 1).

Other Components of the Third Pillar: The Retirement Pay Law

In 1993, the Labor Code of the Philippines, specifically Article 287 of Presidential Decree No. 442 dated May of 1974 (President Ferdinand Marcos' Martial Law Regime was in force since 1972), was amended to provide retirement pay to qualified private sector employees in the absence of any retirement plan in the establishment.

This amendment is known as the Republic Act 7641, or the Retirement Pay

Table 1: Actuarial Life Estimates

	SSS 2015 Valuation	GSIS 2015 Valuation
Negative flows in year	2022	Not available
Fund exhausted in year	2032	2049

Source: SSS Annual Report 2017 and GSIS 2016 Annual Report

Law.*[7] This law is the Philippine version of the employer mandate category in pension provision because the burden lies exclusively on employers. The act ensures that any private employee*[8] is able to receive retirement benefits if he satisfies the following conditions: (1) has retired optionally or compulsorily,*[9] and (2) has done at least five years of service to the company.

Once granted, the individual receives one-half month (15 days) base salary for every year of service from his employer plus one-twelfth of the 13th month pay and the cash equivalent of not more than five days service incentive leaves. The law allows employers to use their contribution to the employee's mandatory account in Home Development Mutual Development Fund (HDMF), known colloquially as Pag-IBIG, which is a government housing finance agency provided that any deficiency from the computed retirement benefits due to the employee is paid by the employers.

The Retirement Pay Law and Pag-IBIG Fund constitute major components of the third pillar (both existing and proposed) of the Philippine Pension System, known as the mandatory DC pillar. The law safeguards Filipino employees working in establishments that fail to structure pension benefit schemes. Often, these establishments are small- to medium-scale companies that do not prioritise a competitive package or a competitive human resources brand.

One problem with local corporate practices is that the biggest retirement benefits are rewarded to the most loyal employees, to those who are spared from job cuts brought on by unfavorable business environments, or to those who belong to companies that are able to endure through time.

Since this law does not provide for portability of retirement benefits, the employee who transfers from one company is disadvantaged to receive less benefits than an employee who has worked under a single company in his entire life. The law therefore undermines job mobility and the possibility that employees can be forced to transfer even without their free will and consent.

A New Fourth Pillar Pension Infrastructure

In the late 1990s, a new bill was introduced into the Philippine Congress whose inspiration apparently stems from a combination of the Individual Retirement Account (IRA) and 401(k) programs of U.S. Moreover, it may have also been inspired by the World Bank literature on the voluntary fourth pillar pension provision, and the Chilean individual capitalisation (privatised) pension model. The bill was named "The Personal Equity and Retirement Account (PERA) Act of 2008." The following paragraphs describing this new law draw heavily on written transcripts of the joint Senate and House Committee proceedings dated 31 October 2008 in deliberating the version to be submitted for final approval in both houses.

The PERA account was supposed to be established by an individual and not by the employer, and hence the PERA account is more akin to the IRA (which is also established by the individual) rather than the 401(k) (which is established by the employer). The employee's PERA is owned by the individual. It is distinct from the employer-sponsored retirement or pension plan, if any. Moreover, the PERA account is administered by the regulated entities enumerated in the PERA Act, and not by the employer or its human resources (HR) department or retirement plan committee. Issues like vesting periods, rollovers when the employee changes employers, etc., are not relevant to PERA.

The only participation of the employer is that it may voluntarily contribute to an employee's PERA (Section 6). The employer's contribution, once made, is owned by the employee under his PERA account. This makes the PERA account portable regardless of how many times the employee changes jobs. This was a major objective of the law.

It is for these reasons that the financial vehicle PERA account was proposed, starting in the late 1990s. This instrument was seen as a supplement to the existing DB pension systems SSS and GSIS where individuals can voluntarily contribute additional retirement funds entitling them to favorable tax treatment (income tax deductible up to a certain limit equal to 5% tax exemption (initially proposed by the Department of Finance to be 15%) to encourage private saving for retirement.

However, the lack of political prioritisation of the reform as well as unsettled issues on taxation and regulation, delayed the passage as well as the implementation of the measure, with the PERA bill finally signed by former President Gloria Macapagal-Arroyo on June 2008 (eight years after initial discussions).*[10] Its implementing rules and regulations were released by the Bureau of Internal Revenue (BIR) and the BSP only in July 2015 with the actual implementation commencing in 2016.

Two years after implementation, market appetite on the PERA investment scheme remains limited, leading to the Bangko Sentral ng Pilipinas (BSP) contem-

Table 2: Summary of Second and Third Pillar Pension-Related Tax Rates and Taxable Amounts for the Privately Employed Sector in the Philippines

Private Sector Retirement Programs	Total Rate (%)	Employer Rate (%)	Employee Rate (%)	Maximum Taxable Amount Per Month (PHP)
Social Security System	11.00	7.37	3.63	16,000
Mandated Retirement Pay (1)	2.50	2.50		
Employee's Compensation (2)	1.00	1.00		1,000
Pag-IBIG Fund Cutoff 1	3.00	2.00	1.00	1,500
Pag-IBIG Fund Cutoff 2	4.00	2.00	2.00	Over 1,500
Total Per Party		12.87	4.63-5.63	

Note: Private sector payroll tax rates (SSS and others)
Source: The Services Group (2006)

plating its digitalisation in the next few years in a bid to increase participation among the public.*[11]

How Does the New 2008 PERA Law (Republic Act 9505) Compare with the Older 1993 Retirement Pay Law Amending the 1974 Labor Code?

With equal overall benefits and replacement rates (defined as the ratio between the pension benefits upon retirement and the pre-retirement salary multiplied by the estimated remaining life) for both the PERA account and the retirement pay mandated by Republic Act 7641, the mandatory contribution rate of employer, the voluntary contribution rate of the employee, and the investment yield of fund managers can mathematically be derived in a simulation exercise. See annexed appendix for mathematical derivation.

Three assumptions:

- employee's salary due to own productivity does not grow,
- employee's remaining life after retiring is 20 years, and
- inflation is zero.

Under the above assumptions, mandatory contribution rate of employers can be demonstrated to equal 8.62% of the employee's annual wage/salary. In other words, 8.62% will comply with the old 1993 Retirement Pay Law as well as the new PERA Law in providing the same level of replacement benefits as a percent of the average wage.

Put another way, the individual employee can look forward to seeing future pensions increased by the employer-provided 8.62% of his or her average wage; and may elect to save beyond the benchmark 8.62% in the individual PERA account.

When the assumption of zero salary growth is relaxed, the investment yield net of inflation must compensate the average annual salary growth. This means that PERA investment managers must ensure that they achieve a bare minimum of real returns equal to the average annual salary growth of their clients.

Simulation Exercise on the Hypothetical Merger Between the PERA Law and the Retirement Pay Law Representing the New Fourth Pillar Architecture

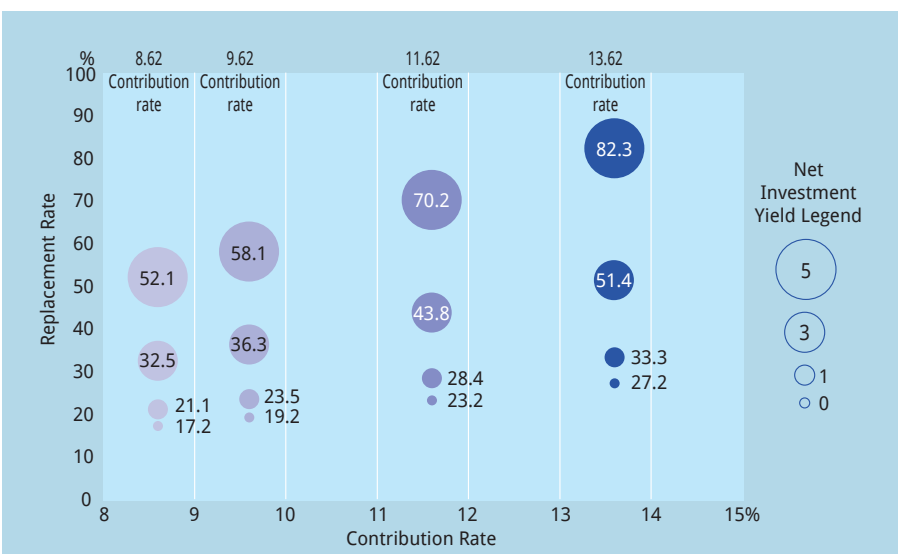
Provided various assumptions, Figure 3 shows some potential replacement rates based on Equations 9 to 12 derived in the Appendix. The size of the bubbles in the Figure 3 corresponds to the performance of the investment managers, i.e., the investment yield net of inflation (the bigger the bubble the better the performance). Employees have the option to contribute beyond the minimum 8.62% contribution rate from employers, consequently yielding increased replacement rates.

The Figure 3 considers the scenario wherein the average salary growth of the employee net of inflation is zero. This assumes that the real wage of the employee is constant throughout. Given the minimum contribution rate from the employers and lackluster performance of the investment manager (that is 0% net investment yield), the PERA account is expected to generate a 17.2% replacement rate of the employee's last salary. This implies that retirement income for the next 20 years is less than a quarter of his or her last annual salary. Note that this replacement rate is equal to the expected replacement rate for an employee with zero salary growth as mandated by the minimum provisions of the Retirement Pay Law, derived by Equations (1) to (9) in the Appendix.

In the case that the employee decides to contribute an additional 1%, this will marginally increase the replacement rate by 2%, still assuming zero net investment yield. On the other hand, should investment managers beat inflation by 1% and considering no contribution from the employee, the replacement rate is expected to increase by 3.8%.

As shown by the simulation, replacement rates are strategically improved when investment managers outperform inflation by 1% compared to employees supplementing their PERA account by 1% In short, greater efficacy, in promoting replacement rates resides in the PERA investment managers' performance compared to increased marginal savings by individual employees.

Figure 3 : Replacement Rates at Different Contribution Rates Assuming Average Salary Growth Rate at 0%



Source: Author's calculations at the University of Asia and the Pacific

Conclusion

It is generally known by many domestic analysts, financial institutions, and international organisations such as the World Bank, that the two principal state-pillars of the Philippine Pension System (the SSS and GSIS) as well smaller auxiliary programs are not sustainable in the long run. The inevitable transition to the problematic PAYG mode of funding may be delayed but only by a decade or so.

Therefore, the alternative voluntary DC, fully funded components of the system need to be reinforced and reinvigorated. This is consistent with global trends that are moving away from unfunded (or partially funded) DB programs toward DC, fully funded programs.

The introduction of the PERA is a positive step in this global trend. However, its reception and market participation have been anemic. There are several reasons for this:

- The PERA Law deals with the voluntary fourth pillar of the system. It is on top of the mandatory first to third pillar taxation. Therefore, it caters primarily to wealthier Filipinos who have enough surplus income and savings to invest in their own future pensions. The middle classes are already dealing with the mandatory payroll taxes of the second and third pillar. The employee's tax burden ranges from 4.63% to 5.63% and the employer's share is 12.87% of prescribed taxable wage limits (Table 2). Thus, they may not have the desire or sufficient surplus income to fund the fourth pillar programs such as PERA.

- It appears that the level of financial literacy and awareness even among the surplus-earning classes of Philippine society is generally substandard and insufficient. The secondary and tertiary educational systems need to incorporate and propagate financial literacy programs in a much greater depth and breadth.

- Investment of pension assets is not sufficiently diversified internationally or even regionally. Therefore, the return-risk ratios are not fully optimised across a larger and more prosperous financial market. This is subject to an on-going research endeavor by the School of Economics of the University of Asia and the Pacific and may be the subject matter of future articles.

- More specifically, the PERA tax rebates currently set at 5% for every PHP 100,000 investment may be too low given the potentially elastic demand for investment products such as mutual funds and unit investment trust funds. Other analysts have also advocated for income tax deductibility of PERA contributions rather than tax rebates as a more efficient savings incentive similar to making life insurance and/or health insurance premiums tax deductible.

- The New PERA and Older Retirement Pay Law are inherently limited in scope to the second to fourth pillar constituents and thus do not answer the needs of a large number of both the aged poor and the younger poor (i.e. newly married young couples and impoverished street children) of Philippine society.

The authors strongly urge that the previously disbanded Retirement Income Commission be reconstituted, re-formed, and once again tasked to formulate a new reform agenda for the Philippine system which it had already started to accomplish when it was regrettably abolished in early 2001. The present Philippine president Rodrigo Roa Duterte is under extreme political pressure from labor groups and left-leaning groups to periodically and unilaterally increase pensions across-the-board via executive orders even when the SSS cannot afford to do so. This has already happened in January 2017 with a PHP 1,000 per person increase and another increase is scheduled in early 2019.*[12] The presence of a re-constituted Retirement Income Commission will hopefully prevent the arbitrary politicisation of pensions such as these. It will also formulate a strategically detailed plan to save and reform the pension system.

Acknowledgement

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Appendix

Mathematical Derivation for the Unification of the Old Retirement Pay Law (RA 7641) of the Third Pillar and the New PERA Law (RA 9505) of the Fourth Pillar of the Philippine Pension Architecture

The following mathematical formulation is taken from an ongoing study by the School of Economics of the University of Asia and the Pacific (UA&P) for the Fund Managers Association of the Philippines (FMAP) and the Trust Officers Association of the Philippines (TOAP).

The Retirement Pay Law mandates companies to provide a retiring employee an amount equal to *22.5t* multiplied by the pre-retirement daily salary of an employee equal to $P_n/261$ where P_n is the pre-retirement annual salary and t is the number of years of service to the company. The pre-retirement daily salary estimate follows the calculation of the National Wage and Productivity Commission.*[13] The benefit given to an employee is thus equal to:

$$\Pi_2 = \frac{22.5 P_n t}{261} \qquad -(1)$$

In the proposed Portable Retirement Pay, the overall benefit that an employee will receive at retirement can be expressed by the equation:

$$\Pi_2 = cP_0[(1+s)^{t-1} + (t-1)(1+i)^{t-1}] \qquad -(2)$$

where, c = contribution rate
P_0 = annual salary at year 0
s = average yearly salary growth

t = total years of work
i = investment yield net of inflation.

In order to have a seamless transition, the cost to employers in the existing Retirement Pay Law, Π_1 and the cost to employers in the proposed Portable Retirement Pay, Π_2 must be the same.

$$\Pi_1 = \Pi_2 \quad \text{- (3)}$$

$$\frac{22.5P_n t}{261} = cP_0[(1+s)^{t-1} + (t-1)(1+i)^{t-1}] \quad \text{- (4)}$$

Under the Retirement Pay Law design, this paper assumes that the employee stays in the company for 40 years and that any net investment yield is claimed by the employer and is not transferred to the employee. For both the Retirement Pay Law and the proposed Portable Retirement Pay, we assume that the employee's salary does not grow, the employee's remaining life after retiring is 20 years, and inflation is zero. We also assume that $P_n=P_0(1+s)^{t-1}$. Equation (4) can thus be modified to:

$$\frac{22.5P_0(1+s)^{t-1}(t)}{261} = cP_0[(1+s)^{t-1} + (t+1)(1+i)^{t-1}] \quad \text{- (5)}$$

$$\frac{22.5P_0(t)}{261} = cP_0(1+t-1) \quad \text{- (6)}$$

$$\frac{22.5P_0(40)}{261} = cP_0(40) \quad \text{- (7)}$$

The contribution rate required for the Portable Retirement Pay to equalise the required benefit in the existing Retirement Pay Law can be expressed as:

$$c = \frac{22.5P_0(40)}{261} \cdot \frac{1}{P_0(40)} \quad \text{- (8)}$$

$$c = \frac{22.5}{261} = 0.0862 \quad \text{- (9)}$$

We factor in the possibility that salaries may increase over time due to inherent improvement of an employee's productivity. In the proposed model, salary growth decreases the replacement rate of the retirement fund. Replacement rate is equal to the benefit received by the employee divided by the required income:

$$r = \frac{\Pi}{P_n l} \quad \text{- (10)}$$

where, r = replacement rate
Π = benefit
$P_n = P_0(1+s)^{t-1}$ = pre-retirementannual salary
l = remaining years

The replacement rate of the Retirement Pay Law, r_1, and the Portable Retirement Pay Law, r_2, are expressed as:

$$r_1 = \frac{\Pi_1}{P_0(1+s)^{t-1}l} = \frac{\frac{22.5P_0(1+s)^{t-1}t}{261}}{P_0(1+s)^{t-1}l} \quad \text{- (11)}$$

$$r_2 = \frac{\Pi_2}{P_0(1+s)^{t-1}l} = \frac{cP_0[(1+s)^{t-1}+(t-1)(1+i)^{t-1}]}{P_0(1+s)^{t-1}l} \quad \text{- (12)}$$

In order to equalise the replacement rates of the existing and the new model, fund managers must be able to meet an investment yield i (net of inflation) equal to the average salary growth s. This can be determined by equating the replacement rates of the Retirement Pay Law and the Portable Retirement Pay.

$$r_1 = r_2 \quad \text{- (13)}$$

$$\frac{\frac{22.5P_0(1+s)^{t-1}t}{261}}{P_0(1+s)^{t-1}l} = \frac{cP_0[(1+s)^{t-1}+(t-1)(1+i)^{t-1}]}{P_0(1+s)^{t-1}l} \quad \text{- (14)}$$

$$(1+s)^{t-1} = (1+i)^{t-1} \quad \text{- (15)}$$

$$s = i \quad \text{- (16)}$$

Notes

*1 Parametric reforms refer to issues like contribution rates, benefit formulas, management systems, and other parameters vs. larger systemic issues like the nature of funding, public or private ownership, etc.

*2 World Bank (1994)

*3 World Bank (1995)

*4 For a complete copy of the law, see https://www.officialgazette.gov.ph/2010/02/15/republic-act-no-9994/.

*5 A DB pension system means that benefits are defined by a formula, whereas, a defined-contribution pension system means that contributions are invested in financial markets and yields a variable investment return. On the other hand, pension systems are either pre-funded (often called fully-funded, partially funded, or just funded) with individual's contributions invested to pay their own future benefits.

*6 The Services Group (2006) succinctly describes these terms as follows: In a PAYG mode of financing, the current retirees are paid from current contributions and each generation depends on the younger generation to pay for their pensions. The US Social Security is a PAYG system. Another example of a PAYG system would be a typical European social security program in which workers make contributions to an agency which has no assets, that uses revenues to pay current pensioners benefits and that promises workers to pay their future pensions funded from future contributions. Thus, PAYG assumes that there is a growing cohort of younger workers that join the system relative to the number of retirees. This demographic state of affairs does not exist anymore for Western Europe, North America, large parts of Asia, which are in radical demographic decline. PAYG is the penultimate state to a pension system's bankruptcy.

*7 The full text of the Retirement Pay Law can be accessed through https://www.ilo.org/dyn/natlex/docs/ELECTRONIC/31980/82364/F669925030/PHL31980.pdf.

*8 Employees of the national government are excluded. Employees of retail, service, and agricultural establishment or those with not more than ten employees are likewise excluded.

*9 Employees who have reached sixty years of age can retire optionally. Upon reaching sixty-five years of age, employees are mandated to retire.

*10 *Arroyo signs savings plan act into law*. Manila: GMA News Online (2008)

*11 Lopez, Melissa Luz (2018)

*12 This initiative by President Duterte has since been incorporated in a proposed new joint senate and house bill increasing minimum pensions with a graduated increase in the level of payroll taxes for both employers and employees. The bill is now in the president's office for approval (or veto) as of January 2019.

*13 The formula can be found in page 47 of the Handbook on Workers' Statutory Monetary Benefits 2018 edition prepared by the Department of Labor and Employment

which can be accessed online through http://bwc.dole.gov.ph/images/Handbook/HandbookonWorkersStatutoryMonetaryBenefits2018Edition.pdf.

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More Savings-Investment Options Needed in Singapore's Retirement Financing System

An Internationally Recognised Model of Retirement Finance

Singapore's retirement financing system is an internationally recognised model of retirement security (Hately & Tan, 2003; Ramesh, 2006). The system is anchored by the Central Provident Fund (CPF), a first-pillar, mandatory savings scheme that covers all employed Singaporean residents. Singapore is the highest ranked Asian country in the Melbourne Mercer Global Pension Index 2018, indicating the country has a sound structure for financing retirement income with many good features, but has some areas for improvement (Mercer, 2018).

Areas for Improvement

Singapore's demographic trajectory reinforces the need for these improvements. Like other developed countries, Singapore is experiencing rapid ageing of its workforce and its population, with one in four Singaporeans projected to be aged 65 years or above by 2030. As recently as 2011, transfers from children still represented the main source of retirement income for Singaporeans aged 55 years or older (Kang et al, 2013).

Save for the introduction in 2016 of a zero-pillar, tax-financed pension for the least well off, Singaporeans rely primarily on a combination of familial transfers and draw-down of their savings to fund their post-retirement consumption. Substantial savings accumulation is undertaken through the build-up of housing equity, in large part funded by withdrawals from the CPF. This creates highly concentrated retirement portfolios where owner-occupied housing represents almost three-quarters of retiree households' net assets, leaving many in an asset-rich, cash-poor situation.

This article will discuss the savings-investment choices available to Singaporeans in planning and preparing to finance their retirement and consider some proposals for expanding the suite of choices in order to enhance Singaporeans' retirement adequacy.

The CPF Default Option: Extremely Low-Risk with Investment Returns Matching a 60:40 Global Equity-Bond Fund

The default, do-nothing returns receivable by CPF members on their accumulated balances arise from the interest payable by the CPF Board on those balances. These quarterly interest payments are made in turn from interest accrued on Special Singapore Government Securities (SSGS), non-tradeable bonds issued by the government. The returns received by CPF members on their balances are extremely low-risk, as Singapore is one of only nine sovereign nations with the highest credit risk ratings from all three major rating agencies (Moody's, Standard & Poor's and Fitch). In April 2018, Moody's re-affirmed its Aaa credit rating for Singapore, assessing the country's economic strength as Very High, institutional and fiscal strength as Very High (+) and event risk as Very Low (Moody's Investor Service, 2018).

Accumulated balances in CPF Ordinary Accounts (OA)*[1] earn the higher of the legislated minimum interest rate of 2.5% per annum or the three-month av-

erage of major local banks' interest rates. Special, Medisave and Retirement Account*[1] balances earn either the current floor interest rate of 4% per annum or the 12-month average yield on 10-year Singapore Government Securities (10YSGS) plus 1%, whichever is higher.

The computed interest rates for the Ordinary, Special, Medisave and Retirement Accounts are presently below the legislated 2.5% minimum or 4% floor interest rates, and have been so since June 1999. From first January 2008 however, an additional 1% of interest is paid on the first SGD 60,000 of a member's combined balances (up to SGD 20,000 on the OA). The additional 1% interest paid on the OA balance is credited into the member's Special Accounts (SA) or Retirement Accounts in order to improve retirement savings accumulation.

Over and above this extra interest on the first SGD 60,000 of combined balances, an additional 1% interest per annum is paid on the first SGD 30,000 of the combined balances of CPF members aged 55 years and over. Hence, these CPF members can earn up to 6% interest per year on their retirement balances.

The risk to the investment returns earned by CPF members on their accumulated balances has been passed onto the Singapore government in exchange for a low-risk, guaranteed return, with the government in turn pooling CPF members' net contributions with its own surplus funds which are then managed by its investment management agencies. Simulation analysis by Gee et al, 2014 showed that the expected default returns earned by CPF members on their balances are broadly equivalent to that from a 60:40 global equities-bond fund, but without the downside risk associated with that portfolio. In other words, CPF members benefit from a financially efficient investment return-risk profile on their accumulated CPF balances.

Housing Equity as a Retirement Nest Egg: Low Downside Risks and High Returns in the Past, but Adequate for the Future?

CPF members have accumulated SGD 376.6 billion in their account balances as at end June 2018 (Central Provident Fund, 2018). Cumulatively, SGD 214.4 billion has been withdrawn under the public and private residential properties schemes (to finance home ownership), underpinning household ownership of residential properties worth SGD 942 billion, representing 43.8% of household assets as at June 2018 (Figure 1). This relatively high percentage of household assets held in an illiquid asset class reflects housing's status as Singaporean society's preferred savings mechanism, but it exposes households to significant illiquidity and concentration risk (Gee et al, 2014, Phang & Helble, 2016). Lacking appropriate alternative avenues for inflation-proofing their savings, Singaporeans continue to be motivated to withdraw from their CPF OA balances to purchase housing, on the assumption that they would continue to enjoy high returns from their housing investments (Lum, S.K. in Soon et al, 2014), therefore exposing households to the vagaries of the property cycle.

Asset-rich, cash-poor

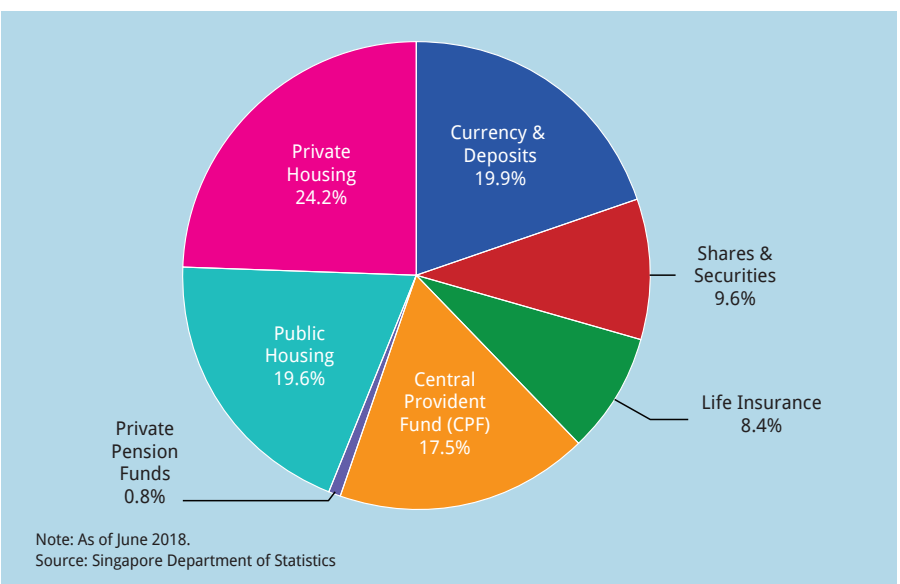
The aggregate picture of household assets likely masks the concentration of housing assets of the median household, as financial assets are more likely to be held by households towards the upper end of the wealth distribution. At the same time, households at or below the median by wealth are likely to have almost 75% of their net assets represented by the home they occupy, particularly those nearing the age of retirement (McCarthy, Mitchell, & Piggott, 2002).

CPF members' use of accumulated OA savings to finance housing has linked the retirement financing system to the property market, and home ownership is seen as another major pillar for retirement security (Ramesh, 2006). Retirees in this system are likely to have accumulated significant housing equity and need not require high income replacement rates on retirement as their housing consumption has already been pre-funded prior to retirement. Research by Chia and Tsui (2012) showed CPF savings were sufficient to generate income replacement rates comparable to Organisation for Economic Co-operation and Development (OECD) countries, on the assumptions that retirees (at the median income level and above) fully annuitise their accumulated CPF savings and that they also make conservative house purchase decisions over their life-course.

Housing and CPF crowds out alternatives

However, these assumptions may not hold for many households, as evidenced by the low share of private pension assets held by households (Figure 1). The crowding out of the private life annuities market by the CPF Life scheme has been noted by Fong et al. (2011), and researchers have noted the propensity of Singaporean households to over-invest in housing (Ramesh, 2006; Lum, 2011; Phang, 2013 amongst others). Although a combination of CPF savings and housing can provide a basic level of income during retirement especially for retiree households below the median income, those with higher consumption expectations run the risk of their accumulated savings being insufficient to generate the income to support their desired post-retirement lifestyles.

Figure 1: Singapore Household Sector Assets



Note: As of June 2018.
Source: Singapore Department of Statistics

CPF Investment Schemes: Does Doing-It-Yourself Beat the Default?

The CPF Investment Schemes (CPFIS) offers members who are prepared to accept higher risk for higher expected returns a range of specified investment options to boost their retirement savings. Under the CPFIS, CPF members can invest their CPF OA and SA savings above the first SGD 20,000 and SGD 40,000 respectively. As at end June 2018, CPF members had withdrawn and invested SGD 17 billion and SGD 5 billion via the CPFIS-OA and CPFIS-SA respectively (Figure 2).

Approved investments under the CPFIS-OA and CPFIS-SA include a range of unit trusts, investment-linked insurance products, annuities, endowment policies, Singapore government bonds, Treasury Bills, exchange-traded and property funds, shares, corporate bonds and gold. CPF SA monies may not be invested in higher risk products or asset classes such as shares, property funds and corporate bonds.

As at end March 2018, there were 88 unit trusts and 168 investment-linked insurance products (ILPs) included under the CPFIS. The average performance of these 256 unit trusts and ILPs over the last three years was 13.1%, lower than the 22.4% total return from the MSCI World equities (USD) index but above the 5.8% total return from the Citigroup World Global Bond index over the same period (Thomson Reuters Lipper, 2018). The returns achieved in these CPFIS-included unit trusts and ILPs also exceeded the default returns on CPF OA and SA balances over the same period (7.7% and 12.5% respectively).

CPFIS performance has been mixed

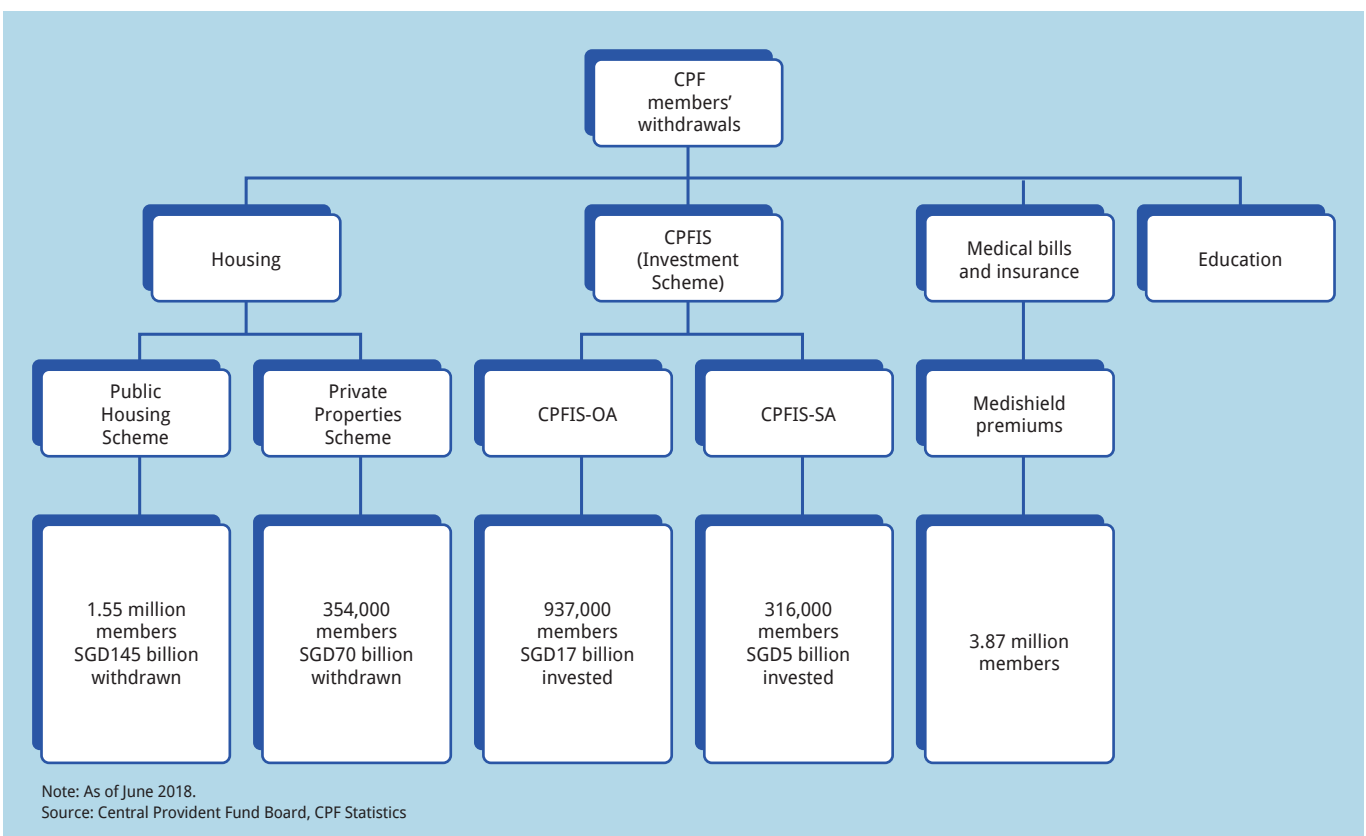
The longer-term performance of CPFIS investors since the inception of the schemes in 1986 has however been mixed. Many CPF members investing their savings in CPFIS have experienced sub-optimal risk-adjusted returns (Koh et al, 2008). Approximately 84% of CPFIS-OA investors who realised their investments in the 12 months to March 2015 would have been financially better off if they had left their savings in their CPF OA to earn the default 2.5% CPF interest rate (CPF Advisory Panel, 2016).

The CPF Advisory Panel convened in 2014 noted that the CPFIS investors' mixed investment return experience might be attributable in part to high costs, as CPFIS products are marketed in the retail channel and do not enjoy economies of scale (CPF Advisory Panel, 2016). Sales commissions of up to 3% are charged, whilst annual fees may be as high as 1.75% for some of the funds. Furthermore, members may lack sufficient investment decision-making proficiency (or lack the appropriate independent advice) to select, monitor and manage their investments in CPFIS products effectively to match their objectives.

Singapore's retirement savings increasingly invested in the default option, though

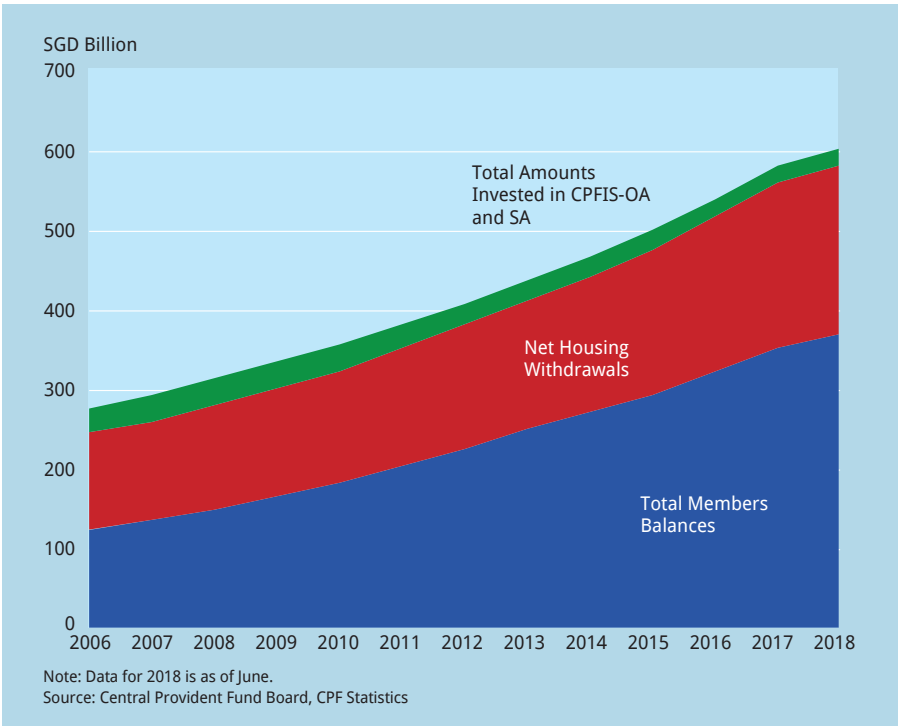
Given both the need to rebalance Singaporean household savings away from housing and the mixed historical investment returns experience of CPFIS investors, it is perhaps unsurprising that the amount of Singapore's retirement savings being withdrawn for investment either

Figure 2: CPF Withdrawals and Investment Schemes



Note: As of June 2018.
Source: Central Provident Fund Board, CPF Statistics

Figure 3: CPF Members' Balances, Amounts Withdrawn and Invested in Housing and CPFIS-OA and SA



Note: Data for 2018 is as of June.
Source: Central Provident Fund Board, CPF Statistics

in housing or via CPFIS has been steadily declining. Figure 3 shows that between 2006 and June 2018, net withdrawals from the CPF under both the Public Housing and the Private Properties Schemes have declined from 99% of CPF members' balances to 57%. The total amounts invested in CPFIS-OA and SA schemes represented 25% of CPF members' remaining balances in December 2006, but this percentage has since dipped to just 6% as at end June 2018. Not only has the relative proportion of Singapore's retirement savings being deployed in CPFIS products declined, but the absolute amount has also dropped from SGD 31.4 billion in 2006 to SGD 22.6 billion at end June 2018.

There is scope for diversification of Singapore's retirement savings. As Figure 1 shows, almost a fifth of household assets (amounting to SGD 430 billion, 96% of nominal GDP in 2017) resides in extremely low-yielding cash and deposits. The high allocation to very low risk asset classes with likely negative real returns such as cash and deposits may counteract the concentration and illiquidity risks inherent in households' housing exposure. This however increases the chance that Singaporean retirees outlive their savings because those savings are not working as hard to generate the requisite returns to preserve real purchasing power over time.

Supplementary Retirement Scheme and Section 5 Schemes: Some Alternatives Already in Place

There are two other existing avenues for voluntary saving either on an individual or collective basis. Since 2001, individuals can voluntarily fund their retirement savings via the Supplementary Retirement Scheme (SRS), a tax-advantaged retirement savings account made via one of three SRS providers. Savings into an SRS account of up to SGD 15,300 per annum for Singaporean citizens and permanent residents (SGD 35,700 per annum for foreigners) can be made and are tax-deductible for both employee and employer contributions to that account. SRS accounts can be used to invest in a range of financial instruments including shares, bonds, fixed deposits, some insurance products, unit trusts and annuities. No taxes are payable on investment returns earned during the accumulation phase.

Withdrawals from SRS accounts are treated as income, and are taxable at the individual's marginal tax rate at the time of withdrawal. Early withdrawals (before the individual has reached the statutory retirement age, currently 62 years or on medical grounds) will attract a 5% penalty in addition. However income taxes are levied only on half the withdrawals made after attaining the statutory retirement age (or retirement on medical grounds), and withdrawals can be spread over a maximum of 10 years to further mitigate the tax liability.

Some tax benefits to these in-place alternatives

Employer-funded pension schemes established under Section 5 of the Income Tax Act (Section 5 plans) are another mechanism for establishing retirement savings. Introduced in 1994, these Section 5 plans are collective savings vehicles that could be used to supplement retirement savings. These plans may be established on either a defined benefit basis (where the final benefits are usually based on the employee's salary and length of service) or defined contribution (where the benefits are dependent on the accumulation of contributions made and the investment returns therefrom). The plans are not subject to any investment restrictions, although the plan trustees are subject to fiduciary duties of care. However, Section 5 plans may only be funded by employer contributions, and employee contributions are not permitted.

Like SRS, Section 5 plans are also tax-advantaged. Employer contributions are tax deductible for the employer, but are not considered a taxable benefit-in-kind for employees. During the accumulation phase of the plans, no tax is levied on investment returns and as with SRS, retirement benefits are taxable in the hands of the employees although the tax may be offset by spreading out withdrawals over up to five years (in contrast to SRS's maximum withdrawal period of 10 years).

Limited appeal of alternative schemes

Both SRS and Section 5 plans are not very well utilised. The main attraction of SRS plans is their tax deferral feature, but the tax benefits may be of lower appeal to younger or lower wage workers who might be subject to low marginal tax rates anyway, and who might prefer additional disposable income in the near-term (for instance to finance their home loans or immediate consumption needs). For Section 5 plans, the critical issue is that employees are not able to contribute to these plans, not even on a voluntary basis.

At the end of 2017, Ministry of Finance data shows 140,695 SRS accounts

have been established with total contributions amounting to SGD 8.15 billion, representing less than 0.7% of household sector financial assets. Furthermore, 34% of the SRS investments were held in very low yielding cash and cash equivalents. Another third is invested in unit trusts and investment-linked insurance products. Kok et al. (2013) estimated that there were only around 20 Section 5 plans in operation in Singapore as of June 2013, and suggested a number of possible methods to make supplementary retirement options a more appealing prospect for employers and employees alike. These included opening up Section 5 plans to employee contributions, amongst other recommendations.

The Lifetime Retirement Investment Scheme: a New Choice Forthcoming

Whilst many CPF members are prepared to accept higher risk for the prospect of higher investment returns from their CPF balances, the CPF Advisory Panel in 2016 noted that "many members were not sufficiently confident of making active investment decisions or navigating the wide range of investment offerings" under the currently established Investment Schemes.

Recognising the limitations of existing savings-investment options in enhancing Singaporeans' retirement security, the CPF Advisory Panel report (CPF Advisory Panel, 2016) proposed some recommendations to review and overhaul the investment options in the CPF. The Panel noted that existing options such as the CPFIS were not designed to meet the needs of CPF members who wish to take on higher investment risk for higher returns, but feel that they lack the financial expertise and/or time and resources to manage their investments actively. The Panel termed these CPF members the "simplify investment choices for me" members.

As such, the Panel recommended that the government:

- review the CPFIS to better target the scheme at knowledgeable CPF members who feel confident of managing their investments on their own, and also have the time to do so; and
- introduce a new investment option better suited to those "simplify investment choices for me" CPF members. This new investment option was to be called the Lifetime Retirement Investment Scheme (LRIS).

Simple, passively managed and low-cost

The LRIS would have the following features:

- The LRIS would provide a small number of well-diversified funds among which CPF members could choose. The funds would not require members to actively rebalance their portfolios and facilitate a long-term investment perspective, for example adopting a life-cycle investment approach.
- The cost of investing in the LRIS would be kept as low as possible to enhance returns. Fees charged by the LRIS funds could be lowered if the savings via LRIS were pooled to purchase investments in bulk to achieve economies of scale.
- Funds offered under the LRIS would be passively managed to further increase cost savings.

Although there has been little more made known about the LRIS since it was first proposed in August 2016, market commentators have lauded the scheme's features and potential simplicity (Ho, 2016 and Fong and Koh, 2018), suggesting the scheme would be an improvement to the current CPFIS. In particular, the LRIS would enable CPF members to invest in life-cycle funds that are passively but professionally managed at low cost that rebalance portfolios dynamically and automatically as CPF members advance in age (Fong and Koh, 2018).

Other Needed Advances in Singapore's Retirement Financing Eco-System

Although the forthcoming introduction of the LRIS should enhance the options available to CPF members to invest their retirement savings, there are a number of other aspects of Singapore's retirement financing system that still need improvement. Possible initiatives to consider:

1. The development of an independent investment advisory eco-system that can tailor appropriate financial plans for each individual wishing to invest their retirement savings. These financial advisors would greatly assist that "simplify investment choices for me" group of Singaporeans identified by the CPF Advisory Panel to structure their retirement savings plans more effectively.
2. The expansion of the supplementary retirement savings options in Singapore following the principles underpinning the LRIS (simple to understand, low-cost, passively but professionally managed schemes that automatically rebalance portfolios of investors on a life-cycle basis).
3. The establishment of retirement schemes that better integrate the three main financial pillars of Singaporeans' retirement security: (a) housing equity, (b) CPF retirement account balances and (c) other financial assets. This will allow Singaporeans to avoid over-concentration of their retirement portfolios especially in illiquid housing assets or low-risk, low-yielding cash and deposits.

With the enhancements suggested above, an already effective retirement financing system might be improved further to provide greater financial security for Singaporeans in retirement. Such improvements will be especially important for younger generations who may not have the benefit of the rapid asset accumulation enjoyed by earlier generations, and also lead to greater breadth and depth in Singapore's capital markets.

Notes

*1 CPF contributions are made into each member's individual account held with the CPF Board. Each member has up to four separate accounts: an Ordinary Account, which may be used for housing, insurance, investment and education; a Special Account, used for financing old-age expenditures and investment in retirement-related financial products; a MediSave Account for hospitalisation expenses and approved medical insurance and a Retirement Ac-

count which is created automatically when a member reaches 55 years of age.

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Christopher's current research focus is on the policy implications of longevity, inter-generational accounts and transfers and the "second demographic dividend". He co-wrote IPS Working Papers No. 24 — The Investment Risks in Singapore's Retirement Financing System, December 2014 and has published several pieces on strengthening old age income support and managing healthcare costs for an ageing population. He is the country team leader for Singapore's National Transfer Accounts project, a framework for understanding the generational economy and how population growth and changing population age structure influence economic growth, gender and generational equity, and public finances.

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The Pension System in Thailand

Introduction

The Thai pension system was introduced during the reign of King Rama VI through the provision of pensions for government officers. This led to the first enactment of Rattanakosin pension provisions in 1901. The Act was amended in 1951 to increase the amount of pension benefits relative to the final salary before retirement. This amendment created a large financial burden to the government and has led to the situation where the salary of government officers was kept low for a long period of time.

As the proportion of Thailand's population over 60 years old is expected to increase from just 5% in 1950 to around 30% in 2035 (United Nations, 2017), the government fiscal budget to support pensions and old-aged expenses is estimated to reach around THB 478 billion in 2035 rising from just THB 246 billion in 2017 (Thansettakij, 2017). Apart from this demographic shift, the structure of the labour market in Thailand is largely composed of workers in the informal sector.*[1] The number of informal workers is around 20.7 million compared to around 16.8 million formal workers (Office of the National Economic and Social Development Board, 2017a). Therefore, the Thai government has been trying to develop and redesign the pension system over the past decades to reduce the financial burden and also to increase the coverage of pension protections to the entire Thai population rather than just focusing on government officers or those that work in the formal sector.

One main mechanism that the Thai government used to reach those goals is the introduction of retirement saving funds. These funds are structured in both defined-benefit (DB) and defined-contribution (DC) formats. There are many types of retirement funds initiated by the government to target different groups in the Thai population. The government expects that this introduction will not only reduce the financial burden but also promote household saving rates and help to develop the capital market.

In order to draw a complete picture of the Thai pension system, this paper will separate and discuss the current pension provisions according to the three-pillar pension system initially introduced by World Bank (1994) in the next section. It will be followed by a discussion of the linkage between the Thai pension system and the development of the capital market. The paper will end with a discussion of the challenges that the Thai government will need to tackle in the next decades.

Overview of Thailand's Pension System

The Thai pension system is complex in many aspects. Different schemes have different pensionable ages, different funding structures and different levels of risk allocation. This paper will separate the current system into two dimensions, namely the target population of each pension scheme and the three-pillar characteristics defined by the World Bank (Table 1).

The columns represent three different types of workers. This paper distinguishes government employees from other workers in the formal sector because they rely on a completely different pension structure. The first pillar on the vertical axis is the pension schemes that have the main objective of protecting households against falling below the poverty line. The second pillar is an occupational pension system provided by employers. The third pillar is a voluntary system that allows workers to increase their retirement savings and receive some tax benefits. The details of each pension provision are discussed below.

Table 1: The Thai Pension System

	Target Population		
	Government officers	Workers in the formal sector	Workers in the informal sector
Pillar I		Old-age allowance	
Pillar II	Old Civil Service Pensions	Section 33 of Social Security Fund	Section 39 and 40 of Social Security Fund
	Government Pension Fund		
Pillar III	Retirement Mutual Fund and pension insurance		
		National Saving Fund	
		Provident Fund	

Source: Author's analysis

Old-age allowance – Pillar I for all

The old-age allowance was introduced in 1992. The main objective of this allowance is to provide retirement income to cover workers who could not participate in other kinds of pension schemes provided by the government. This allowance is unfunded and paid directly from the government fiscal budget. The allowance is paid as a lifetime pension to the entire Thai population (except government employees) regardless of their income and wealth. The pensionable age to receive this allowance is 60 years old. The main reason for excluding government employees is the fact that they already receive adequate lifetime pensions from the Old Civil Service Pensions.

Because the old-age allowance is the pension welfare for all, the amount is low, starting at THB 600 per month for retirees aged 60 – 69 years old. The allowance amount is a step-up function according to the age of retirees, and it will rise to THB 1,000 per month for those over 90 years old. The allowance is also subject to inflation adjustment every 5 to 10 years.*[2]

Even though this allowance is supposed to protect the Thai population against poverty during retirement, the amount of the old-age allowance is still below the official poverty line.*[3] which is THB 2,686 per person per month (Office of the National Economic and Social Development Board, 2017b).

Old Civil Service Pensions – Pillar II for government employees

Old Civil Service Pensions is an unfunded DB pension system. To be eligible to receive a lifetime pension government employees need to have been employed before 1997 and have tenure of more than 25 years. If the period of employment is between 10 and 25 years, retirees will only receive a lump sum at retirement. The calculation of the lifetime pension and the lump sum is shown in Equations (1) and (2).

$$\text{Pension} = (1/50) \times (\text{Final salary}) \times (\text{Years of employment, rounded up}) \quad \text{- (1)}$$

$$\text{Lump sum} = (\text{Final salary}) \times (\text{Years of employment, rounded up}) \quad \text{- (2)}$$

Government employees who were employed after 1997 will automatically be enrolled into a new DC fund called Government Pension Fund. However, they still receive lifetime pensions from the Old Civil Service Pensions but at a lower rate. The new formula is based on the average of the final 60-months of salary instead of the final salary. The employment year for the calculation is also adjusted to be the actual year (with decimal) rather than the calendar year. This new formula reduces the amount of the lifetime pension amount by around 10% compared to the old one.

Based on the assumption of 4% annual salary growth rate and 35 years of employment, the amount of pension per month from the new formula is expected to be around 65% of the final salary. This replacement rate is considered adequate to maintain the same standard of living between before and after retirement (Antolin, 2009).

Government Pension Fund – Pillar II for government employees

Government Pension Fund (GPF) is a DC pension fund set up by the government in 1996. Most people believe that the main reason of setting up this fund was to reduce the financial burden on the government from the Old Civil Service Pensions. However, this is not the case, because when the government changed the formula of the Old Civil Service Pensions, it proposed to fill the gap between the old and the new formula by an additional contribution to the GPF. Actually, the main objective in setting up the fund was to establish some mechanisms to develop the Thai capital market.

Members of the GPF are required to contribute at least 3% of their salary. The maximum contribution rate is set at 15% because the government caps the amount of tax deduction at that rate. Apart from this contribution, the government tops up another 5% which can be separated into 3% as an incentive for savings and 2% as the extra contribution to fill the gap between the new and the old pensions.

Because of those extra contributions, the government initially expected that this new system would provide more benefits to government employees. However, this is not the case in reality since those extra contribution rates are determined based on the assumption that the fund would receive investment returns of around 9% per year.

At the end of 2017, there were 1,028,961 members (GPF, 2017). The fund has five investment policies ranging from a money market fund to a target-date fund. At retirement, retirees can decide whether to keep the amount in the funds and gradually withdraw some portion over time or to take a tax-free lump sum withdrawal all at once. Currently, there is no annuity plan offered to retirees.

Social Security Fund – Pillar II for workers in the formal sector

The Social Security Fund (SSF) was established in 1972. The main purpose of this fund is to provide welfare for all formal workers in Thailand. The benefits include pensions, disability benefits, unemployment benefits, maternity benefits, sickness and death benefits. The fund is set up as a funded DB structure which receives contributions from both employers and employees. The Social Security Office under the Ministry of Labour is the main office that manages the fund and deals with claim management.

Enrollment to the fund is compulsory for every worker employed by companies registered in Thailand. Contribution rates for employers and employees are the same, at 5% of the employee's salary.

The government also contributes another 2.75% to the fund.*[4] However, the maximum salary on which the contribution calculation is based is THB 15,000.

There are three main sections of the Social Security Fund Act that are related to old-aged pensions. Section 33 provides regulation for employees who are currently contributing to the fund. Under this section, pensions will be paid after the age of 55 only to those that have contributed for more than 180 months. The amount of pension is calculated as 20% of the final five-year final salary average. However, the maximum final salary amount for the calculation is only THB 15,000 per month. The accrual rate at 20% will be increased further by 1.5% for each additional year of contribution after the first 180 months, but this accrual rate is capped at 50%. This means that the maximum old-aged pension from Section 33 is equal to THB 7,500 per month. If workers' contribution period is between 12 and 180 months, they will receive a lump sum equal to the total amount of their own contributions plus investment returns during the contribution period.

If workers decide to leave the labour market before the age of 55 and continue contributing to the fund, they will receive pensions based on the calculation under Section 39. This section stipulates that the old-aged pension will be equal to the 20%, which will be increased by 1.5% for additional years of contribution after 180 months, of the maximum salary at THB 4,800 per month.

The other section related to old-aged pensions is Section 40 which allows workers in the informal sector to voluntarily contribute to the fund if they want to receive some welfare benefits. The amount and type of benefits depend on how much they contribute. In order to receive a pension, they need to contribute THB 100 per month for at least 40 months. The government will match the contribution at THB 100 per month. The amount of pension in this option is set at THB 600 per month or more.

Currently, there are around 11.5 million members under Section 33, 1.5 million under Section 39 and 2.6 million under Section 40 (Office of the National Economic and Social Development Board, 2017c). The fund's net asset value (NAV) is now THB 1.7 trillion.

National Saving Fund – Pillar III for anyone except government officers

National Saving Fund (NSF) was recently introduced in 2011 specifically to promote the savings of workers in the informal sector and the unemployed. It is a DC fund that will only pay pensions (not a lump sum).

Because the target group of this fund is low-income workers, the government sets the minimum contribution at just THB 50 per year and the maximum at THB 13,200 per year. The main reasons for the cap on contribution come from the fact that the government will need to match contribution, guarantee a minimum return and guarantee to pay pensions for at least 20 years after the pensionable age.

The matching contribution by the government is capped at 600, 960, and THB 1,200 per year depending on the age of members. However, this matching contribution will no longer be paid if members switched employment from the informal sector into the formal sector. The minimum return of the fund is guaranteed at the average deposit rate on 12-month time deposit accounts offered by the Government Savings Bank, Bank for Agriculture and Agricultural Cooperatives and the five biggest commercial banks in Thailand. This guarantee means that the fund will mostly invest in fixed-income securities because there is no incentive for fund managers to create higher returns.

The pensionable age to receive pensions from the fund is 60. The amount of pension per month is calculated as the total savings amount divided by 240 (12 months × 20 years). If pensioners die before age 80, the remaining outstanding amount will be paid to their heirs. In contrast, if pensioners live longer than 80, the government will continue to support payments until they die.

At the end of 2017, there were around 546,012 members of the fund. The value of the fund was THB 3,589 million (NSF, 2017). The government is currently considering raising the cap on the maximum contribution in order to promote savings among the poor. However, this increase might be accompanied by introducing a limit on the maximum amount of lifetime pension guaranteed by the government.

Provident Fund – Pillar III of voluntary occupational pension

Apart from the mandatory Social Security Fund, employers can voluntarily set up a provident fund (PVD) for their employees. The contributions from both employers and employees are tax deductable. This means that the contribution rate for employees can only be between 2% and 15% of salary. Employers are free to set their contribution rates, but the rate is also capped at 15%.

Pensionable age of the fund is 55. If members retire or would like to take a lump sum before 55 years old, they will not receive any tax privilege. Currently, the government provides tax benefits through three channels, namely, 1) tax deduction of contributions 2) tax exemption on investment returns and 3) tax exemption on receiving a lump sum at retirement.

Because participation in the fund is on a voluntary basis, the coverage of the provident funds is not high. Based on the data from the Securities and Exchange Commission (SEC), there are currently around 387 funds covering three million employees, but the total number of workers in the formal sector is at 16.8 million.

A provident fund can be set up as a single fund where a company hires a fund management team to solely manage the fund for them or a pooled fund where a fund management company offers existing mutual funds to a company. The single fund is popular for large companies because fund committees have flexibility in selecting the asset classes and the number of investment plans offered to their employees.

Nowadays, fund management companies increasingly provide the flexibility for employees to change asset allocations on a weekly or monthly basis. This is known as a DIY plan. This option is offered in both the single fund and the pooled fund formats.

Retirement Mutual Fund and pension insurance – Pillar III for everyone

Retirement Mutual Fund (RMF) is a DC fund through which the government provides a tax incentive to promote savings for retirement among Thai households. The amount of savings through the fund can be used as a tax deduction up to the maximum of 15% of annual salary but not more than THB 500,000 per year. Investment returns from the fund and a lump sum payment at retirement are also tax exempt.

The pensionable age to receive a lump sum from RMF is at 55. The contribution rate needs to be at least 3% of annual salary and not less than THB 5,000 per year. Contributions do not need to be paid on a periodic basis. Households can decide to save any time in a calendar year. However, in order to be eligible for tax privilege, the period of investment in the fund needs to be at least five years before retirement.

Even though RMF provides a lot of tax benefits, households tend not to invest much in these funds because there is another competing fund called "Long Term Equity fund (LTF)" which has the same tax benefits but provides more flexibility in terms of investment periods. Investors in LTF only need to invest for a minimum of seven calendar years rather than until retirement as in the case of RMF. Therefore, the growth rate of the total RMF' NAV has been just 20% per year over the past 10 years compared to 23% for LTF. The current market size of RMF is THB 254 billion while it is THB 397 billion for LTE (Figure 1).

Apart from RMF, the government also promotes savings for retirement through a pension-related insurance policy. If households buy an insurance product that pay pensions during retirement, the premium paid for that product can be used as a tax deduction for as much as THB 200,000 per year. Moreover, the payment of pensions from that product is also exempt from income tax.

The forthcoming mandatory DC fund – Pillar II for workers in the formal sector

Because the establishment of a provident fund is voluntary and not many companies (especially small-and medium-sized companies) provide this fund to their employees, the government is now planning to introduce a new nation-wide DC fund for all workers in the formal sector. If employers do not provide a provident fund, employees will automatically be enrolled into this new fund, called "National Pension Fund (NPF)". The draft bill on the NPF has yet to pass into law. Many aspects are now under debate, such as the structure of the fund management process, the amount of matching contributions from employers and the minimum contribution rates from employees to the fund.

Pension System and the Development of Thailand's Capital Market

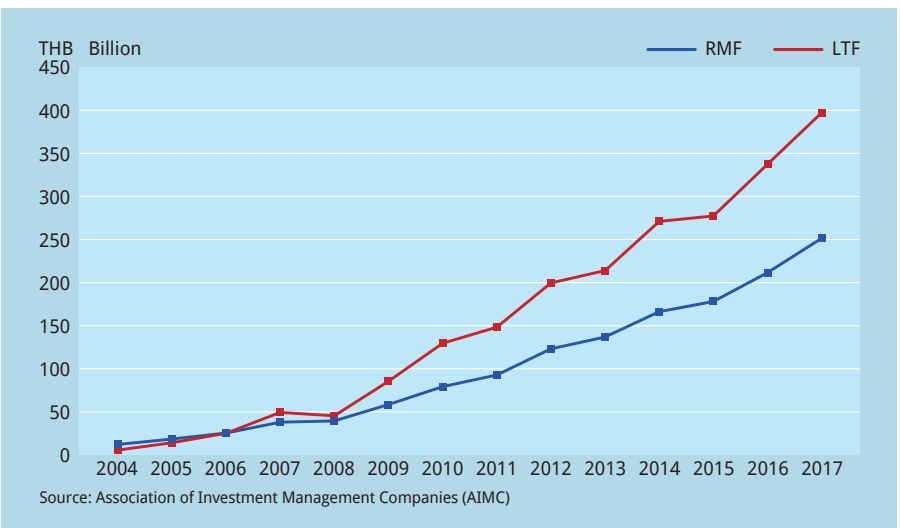
As discussed in the previous section, the Thai government has been trying to promote savings for retirement through DC retirement funds. This policy not only aims to increase financial sustainability but also hopes to develop the Thai capital market.

Based on the data provided by the Association of Investment Management Companies (AIMC), it can be seen that the proportion of households' own savings compared to other savings channels has been declining from 55% of the total GDP in 1992 to just around 47% in 2017 (Figure 2). This proportion is expected to drop further as new pension schemes and tax incentive programs are introduced in the future. The total value of retirement investments which includes RMF, PVD, GPF and SSF increased from only 1.3% of GDP in 1995 to 22.5% in 2017.

Within retirement investments, the value of SSF stands at THB 1.7 trillion (Figure 3). This accounts for 10.7% of total household savings and investments. Since SSF is a mandatory system for every worker in the formal sector in Thailand, it is therefore the biggest fund in retirement investments. Nevertheless, over the past 10 years, RMF has the highest growth of NAV at 5.6 times followed by SSF at 2.2 times and PVD at 1.45 times. The drop in the NAV of the GPF in 2015 resulted from the fact that the government allowed government officers to convert their pension provisions from the new to the old system.

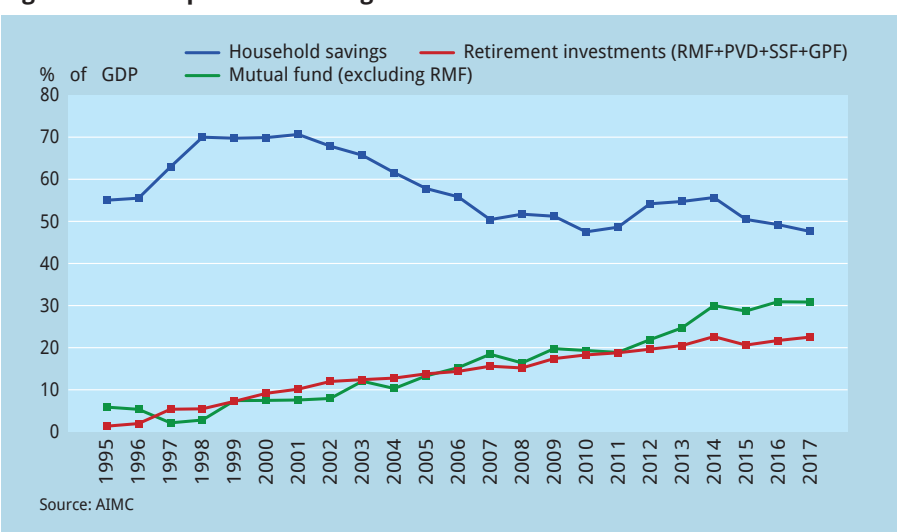
There is a lot of concern nowadays about the financial sustainability of SSF. It has been forecast that SSF would become unsustainable from 2045 onwards (Chanduaywit et al., 2010). Currently, the Social Security Office and the government are in the process of adjusting the benefit for-

Figure 1: Total NAV of RMF and LTF



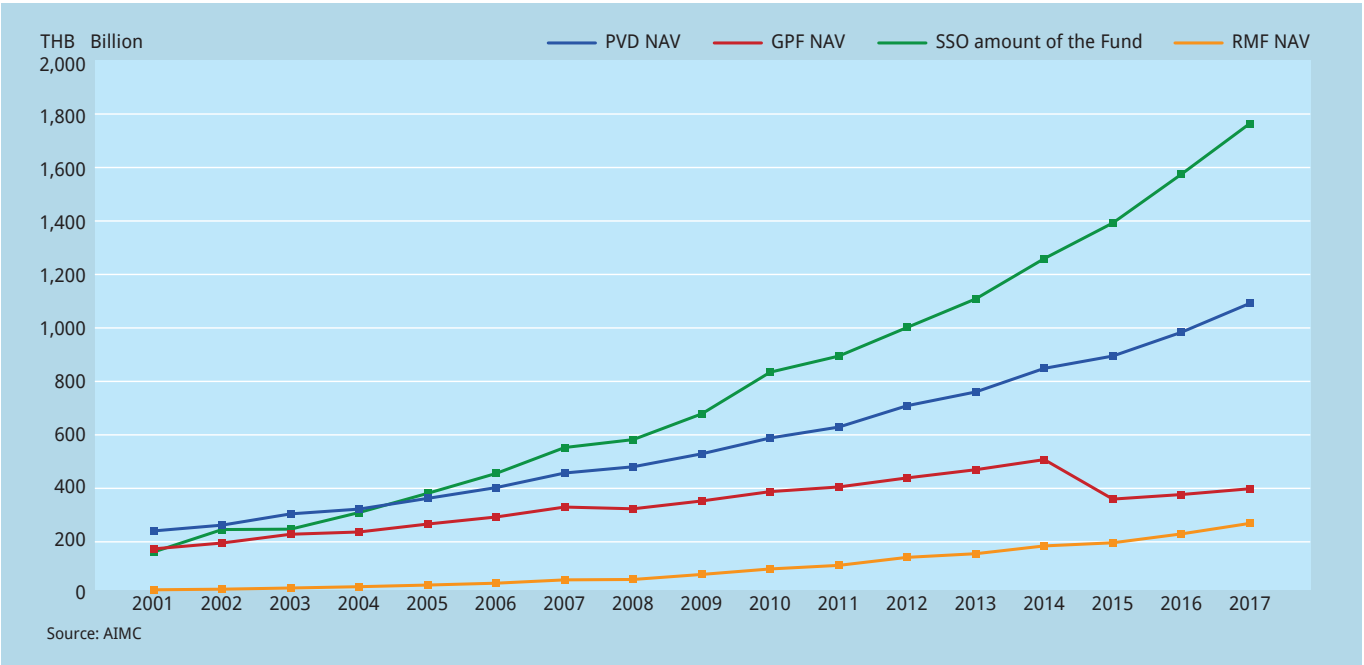
Source: Association of Investment Management Companies (AIMC)

Figure 2: Development of Savings in Thailand



Source: AIMC

Figure 3: Development of Retirement Investments in Thailand



mula by raising the pensionable age and increasing the cap on salary in the calculation of contributions. However, after two full years of the redesign and hearing process, it has not yet been finalised.

In terms of the investment and asset allocation of these retirement funds, SEC sets quantitative restrictions on investments in certain asset classes. The aim of those restrictions is to limit concentration of risk, exposure to liquidity risk and conflicts of interests. Investment limits for GPF, PVD, SSF and RMF are mainly based on four levels, namely, 1) single entity limit, 2) group limit, 3) product limit and 4) concentration limits. PVD also has an extra limit on investment in securities of the fund's sponsor.

In the past, most investment policies of these funds were largely composed of domestic fixed-income securities. Recently, asset allocations of many retirement funds are increasingly expanding to cover investments in alternative asset classes such as commodities, real estate and private equity. Investments in foreign securities are also attracting more attention. For instance, GPF has increased its investment in alternative asset classes of the SAA plan*[5] from 8.1% in 2013 to 12.37% in 2017 (GPF, 2013; GPF, 2017). SSF also has a policy to increase investments in alternative asset classes and foreign securities. The investment in those assets increased from just 4% in 2012 to around 8% in 2016 (SSF, 2012; SSF, 2016).

Some of these retirement funds are also used to promote the development of certain areas of the Thai capital market. In the past, SSF and GPF have been the main investors to promote Thai government bonds. Nowadays, the investment of these funds is used for other strategic purposes such as SSF's investment in infrastructure funds in 2015 (TCIJ, 2015) and GPF's special mandate to invest in Thai companies that have high ESG rating in 2018 (The Nation, 2018).

The Next Challenges and Concluding Remarks

The main challenge of the Thai pension system is related to the coverage and adequacy of pensions for workers in both the formal and informal sectors. With the total number of informal workers at 20.7 million, there are only 4.2 million people who are members of SSF under Section 39 and 40, and 0.5 million who are members of NSF. The coverage rate of provident funds for workers in the formal sector is also low at just 22%, although it has increased from 14% in 2007 based on the data from AIMC.

A typical worker in the informal sector who decides to make contributions under Section 44 of SSF will receive the maximum of THB 2,400 per month plus THB 600 from the old-age allowance. This is quite low compared to the average THB 8,000 to 9,000 per month spending during retirement surveyed by the National Statistics Office.

As the government is trying to shift from a DB pension structure into a DC fund format, another challenge relates to the financial literacy of Thai households. The implementation of DC funds will be successful only if households acquire a certain level of knowledge about financial risk, return, and the importance of savings for retirement. Without an appropriate level of financial literacy, Thai households will only save at the minimum contribution rate and will only invest in an investment policy that may be too conservative and not appropriate in the context of long-term savings for retirement.

Apart from the plan to set up a new compulsory "National Pension Fund" for formal workers and the plan to increase the value of the old-age allowance for informal workers, many organizations such as the Bank of Thailand, the SEC and the Stock Exchange of Thailand have also been arranging events throughout the year to encourage better awareness of savings for retirement among the Thai population. With a wide range of pension

schemes, a task force to increase financial literacy, and a lower reliance on government financing, the Thai pension system is set for a sustainable path to protect Thai households from poverty and financial difficulty during retirement.

Notes

*1 Workers in the informal sector refers to those that have uncertain income, are self-employed or work in the agricultural sector.

*2 In 2018, the government has approved a top-up of THB 100 per month, but this top-up is only offered to population with annual income of less than THB 30,000.

*3 Thailand's poverty line is calculated from expenditures incurred by individual in obtaining food and non-food items necessary for living subsistence.

*4 The contribution rates that are counted as contributions for old-aged pensions are 3% (employer), 3% (employee) and 1% (the government).

*5 SAA stands for Strategic Asset Allocation investment plan which is a default plan for government officers.

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Panel Discussion at the 2015 Forum

Lord Mervyn King at the 2015 Forum

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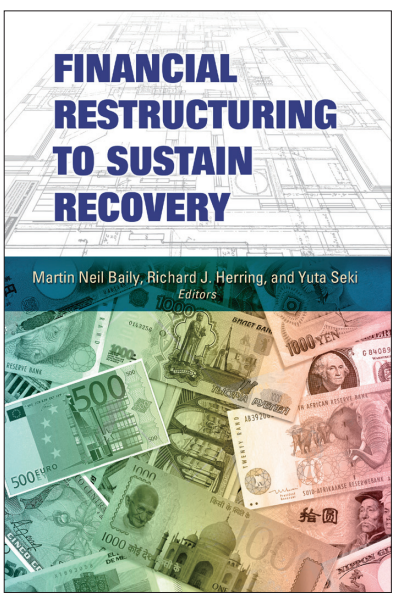

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In Japan, structural changes in the economy and society have rapidly progressed. Population aging is in progress and is having a major impact on economic and social systems. Japan faces a number of challenges, including the need to reform its social security, tax, and public finance systems. As a front-runner of aging society, Japan has to overcome these challenges to develop further.

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