Abstract—The aim of a pension system is to provide consumption smoothing and insurance for pensioners after retirement. However, longevity risk and economic uncertainty raise issues regarding pension fund stability and sustainability. The objective of this paper is to analyze the soundness of Malaysia’s Employees Provident Fund (EPF) in fulfilling the pension system objectives and providing a protection to maintain its members’ standard of living during retirement. This paper provides information on the current state of the pension system in Malaysia, focusing on the EPF, its financial soundness and more generally the economic adequacy of pension’s schemes for pensioners over their retirement.

Keywords—Demographic, Financial Soundness, EPF, Adequacy.

I. INTRODUCTION

Pensions are an essential part of any social security system. As described by [7], pensions are a basic human right for the elderly population. Since the 1980s, pension system reforms have resulted in replacing the existing pay-as-you-go (PAYG) pension system with the contributory defined contribution (DC) pension scheme. According to [21], about 30 developing countries fully or partially replaced existing state pension systems with a private pension system because the older pension systems were unlikely to meet their obligations in providing sustainable and adequate pension benefits during retirement.

Similar to other countries, Malaysia is not spared from dealing with the multifaceted issues surrounding pension schemes. Demographic transition, depicted by decreasing fertility rate and increasing life span, poses a great challenge to Malaysia’s Government in their attempts to overcome the dilemmas of providing decent social security, which can sustain the standard of living of the elderly after retirement. [27] reported that in Malaysia, the population aged over 60 years has increased more than twofold, from 3.32 million in 2000 to 6.475 million in 2015, and is projected to rise to 13.003 million in 2030. Meanwhile, the dependency ratio, which is the ratio between the retired populations to the working population, is expected to increase from 8.4 percent in 2010 to 27.5 percent in 2050. Figure 1 presents a comparison of the dependency ratios for selected Asian countries.

According to Figure 1, most countries show an upward trend in old age dependency. This phenomena lead to a financial burden on the public sector, especially for healthcare. Without having adequate retirement savings, retirees may face financial difficulty for the duration of their retirement. Although the dependency ratio for Malaysia is not as crucial as other countries, it poses a signal for reassessment and gives Malaysia a window of opportunity to decently and sustainably prepare for the social security pension in future. Therefore, reviewing and analyzing the current state and challenges of Malaysia’s pension system is the main concern of this study, before suggesting any reform direction to take place.

In light of these issues, this study attempted to analyze the sustainability and adequacy of EPF. To evaluate the EPF pension system, diagnostic analysis was employed in terms of its financial soundness to meet and provide sustainable and adequate pension system for its members. Then, a suggestion on potential reform was made so as to develop a decent pension system for employees. The paper argues that the EPF failed to provide adequate pension savings for its members.

II. MALAYSIAN PENSION SYSTEM

Malaysia is currently implementing the single-tier pension system for formal private workers. Malaysia’s pension system
was inherited from the British where there are two main elements; namely, a conventional defined benefit (DB) pension scheme for government workers, and a provident fund for formal private workers. DC is the system that fixed the contribution rate, while the benefit of the pension scheme is determined by the contribution from the percentage of the salary and the return is determined from the assets over the accumulation period. The members of this scheme will bear the financial and longevity risks. On the other hand, the DB scheme is where the benefit is defined in advance and the contribution or tax is adjustable so as to balance the predetermined benefits paid to retirees. Longevity and financial risks under this system are borne by the sponsor of the benefits.

The EPF is the world’s first provident fund, introduced by the British under the Providence Fund Ordinance, 1951. It was specifically designed for workers in formal private sectors and is a defined contribution (DC), fully funded scheme, where both employer and employee contribute 11 percent and 12 percent of employees’ salary, respectively. The pension benefits workers, who work for government statutory bodies and local institutions, along with government employees who are off pensionable status, [8]. This scheme provides benefits in the form of income protection to the public servant or his/her dependent(s) upon retirement, disease and/or death [16].

Other pension schemes exist for workers in the Armed Forces Fund (LTAT), Social Security Organization (SOCSO) and Social Pensions. Figure 2 provide an illustration of Malaysia’s pension system.

![Fig. 2 Pension System In Malaysia](source: Adapted from Asher and Bali (2012))

III. LITERATURE REVIEW

Financial soundness is a central issue for any financial system because financial stability impacts the entire economy. The pension system in emerging countries like Malaysia face different challenges compared to developed countries; whereby, developing countries become old nations before becoming rich [23]. Managing developing countries pension schemes poses different issues compared to developed countries.

Maintaining the standard of living of retirees is one of the main objectives of any pension scheme. The replacement rate is widely used to measure pension adequacy providing by measuring the ratio of retirement income to pre-retirement income to give a post-retirement income. According to [23], the standard replacement rate suggested by pension experts is between 66 to 75% and [15] referring to Lee’s study, stated that adequacy replacement benefits is defined as 50% replacement rate of final draw down salary. However, [20] reported that Malaysia’s gross replacement rate was 35.1%, lower than the above suggested rate. This means that the adequacy issue is crucial for the pension system in Malaysia. There are several factors contributing to the inadequacy of the pension system such as lower formal coverage, pre-withdrawal before retirement, no automatic cost of living adjusted and lump sum benefits [19].

Like other Asian countries, the role of family support as an income source for the elderly is important, primarily for informal workers [9], [22]. [22] claimed that Asian citizens have traditionally heavily relied on their children to take care of their material needs in their old age. However, economic change such as urbanization and increased cost of living has destroyed the informal old-age income support for the elderly. Thus, this created a gap where elderly citizens require support which must be fulfilled by a formal pension system.

In tandem with the issue of coverage, adequacy and old-age income support needs to be recognized, this study diagnosed the current state of the EPF to highlight the importance of the pension adequacy for the case of Malaysia. [2] in the book “Pension Systems and Old-Age Income Support in East and Southeast Asia”, analyzed the pension system from five broad areas; namely, coverage, adequacy, equity, administrative efficiency and governance structure. This paper discusses the financial soundness of the EPF which includes coverage, adequacy, sustainability, investment and policy.

IV. ANALYSIS OF THE EPF PENSION SCHEME

This section analyses the current state and challenges faced by EPF in order to highlight the increased viability of the pension system under future uncertainty. [7] asserted that the EPF has dual roles in his research firstly: as a provider of income security for significant numbers of old-age populations, and secondly as a source of long-term investment to fund state-led initiatives. Unlike the Government pension scheme, however, the EPF does not provide benefits for survivors and inflation risks. This segment assessed the EPF’s current performance.

A. Coverage

[3] defined coverage from three perspectives: number of workers enrolled in the pension program, risk covered by the system and adequacy of the pension system to mitigate poverty. The EPF only covers private sectors workers. [2] argued that there were 2.7 million self-employed in Malaysia in 2009 and with no specific scheme targeted for them.

There is a coverage gap in Malaysia primarily in old-age protection. The EPF is the formal system that covers formal private workers. It means that members who works in
informal sector such as farmers and self-employed workers are not mandated to pay contributions into the EPF. Instead, they are encouraged to contribute based on a voluntary basis. As reported by [9] the EPF only covers 52% of total labor force in Malaysia, 10% by public pension fund and 37% of total labor force are without formal coverage. Table I presents membership of Mandatory pension scheme by population and labor force in selected Asia countries.

**TABLE I**

MEMBERSHIP OF MANDATORY PENSION SCHEME BY POPULATION AND LABOR FORCE

<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
<th>Members ('000)</th>
<th>Percentage of population aged 15 to 65</th>
<th>Percentage of labour force</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malaysia</td>
<td>2010</td>
<td>6,400</td>
<td>28.1%</td>
<td>53.5%</td>
</tr>
<tr>
<td>China</td>
<td>2010</td>
<td>268,200</td>
<td>27.7%</td>
<td>33.5%</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>2009</td>
<td>2,921.8</td>
<td>55.4%</td>
<td>78.9%</td>
</tr>
<tr>
<td>Indonesia</td>
<td>2010</td>
<td>12,979.5</td>
<td>8.0%</td>
<td>11.0%</td>
</tr>
<tr>
<td>Philippines</td>
<td>2011</td>
<td>10,163</td>
<td>17.5%</td>
<td>26.3%</td>
</tr>
<tr>
<td>Singapore</td>
<td>2012</td>
<td>1,790</td>
<td>64.0%</td>
<td>84.0%</td>
</tr>
<tr>
<td>Thailand</td>
<td>2009</td>
<td>8,537.5</td>
<td>17.7%</td>
<td>22.5%</td>
</tr>
<tr>
<td>Vietnam</td>
<td>2010</td>
<td>10,585.5</td>
<td>17.3%</td>
<td>20.7%</td>
</tr>
<tr>
<td>India</td>
<td>2006</td>
<td>44,404</td>
<td>6.4%</td>
<td>10.3%</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>2006</td>
<td>2,032</td>
<td>14.9%</td>
<td>24.1%</td>
</tr>
</tbody>
</table>

Source: Pension at a Glance Asia/Pacific 2013

**B. Adequacy**

[4] asserted that inadequate savings was one of the major obstacles to establish a decent pension system, and stressed that the level of pension savings is a more important issue than the type of pension scheme. Thus, having an adequate pension system should be the central issue among policy makers so as to ensure the current pension system can maintain an adequate standard of living for the population after retirement.

[10] through its annual report in 2014, highlighted that about 68% percent of all members aged 54 years old had savings of less than RM50,000 (approx. USD 14,305)¹. Table 2 shows the saving ranges for EPF members.

**TABLE II**

ACCUMULATED SAVING FOR THE EPF MEMBERS

<table>
<thead>
<tr>
<th>Saving ranges (RM)</th>
<th>Members</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 50,000</td>
<td>164,730</td>
<td>68</td>
</tr>
<tr>
<td>50,001 – 100,000</td>
<td>27,971</td>
<td>12</td>
</tr>
<tr>
<td>100,001 – 200,000</td>
<td>25,846</td>
<td>11</td>
</tr>
<tr>
<td>200,001 – 300,000</td>
<td>10,740</td>
<td>4</td>
</tr>
<tr>
<td>300,001 – 400,000</td>
<td>4,698</td>
<td>2</td>
</tr>
<tr>
<td>400,001 – 500,000</td>
<td>2,610</td>
<td>1</td>
</tr>
<tr>
<td>500,001 – 1,000,000</td>
<td>4,333</td>
<td>2</td>
</tr>
<tr>
<td>&gt; 1,000,000</td>
<td>1,627</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>242,555</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: EPF Annual Report 2014

¹ Exchange Rate stated by Central Bank of Malaysia dated 31 December 2014 (RM1 = USD 0.2861)

EPF, as calculated by [20] was 35.1% which is lower than average replacement rate for East Asia/pacific (44%), South Asia (42%) and OECD in the region (42%).

According to the EPF 2014 Annual Report, on average, each member who retires at the age of 55 will receive RM180, 152. This means that each retired member will receive about RM750.63 per month until 75 years of age and they will be living in poverty (poverty income is average monthly income of less than RM760 for peninsular Malaysia, RM1, 050 in Sabah and RM950 in Sarawak)².

It is clearly apparent that the EPF is failing to provide adequate income for their contributors. This is supported by a survey conducted by [17] in 3 major cities of Malaysia, Singapore and Philippines on the financial protection of the elderly. He found that about 66.8% believed that the EPF accumulated fund is inadequate for their retirement consumption. There are several factors that contributed to the inadequate savings such as increased life expectancy and very low average household income [24], pre-retirement withdrawal and low investment return [16].

**C. Sustainability**

[3] referred to financial sustainability in the pension system to matching long-term assets with liabilities. Population ageing and declining mortality rate affect the current sustainability of the existing pension system. [18] found that longevity risk increases the fiscal burden of the pension system when this phenomenon increases the numbers who will receive pension benefits; at the same time, reducing the number of contributors. Thus, this will affect sustainability in the long run.

For the case of EPF, investing too much savings accumulation in the MGS leads to lower generation return, thus, it will affect the end of saving accumulation. Another reason that would make the EPF unsustainable is pre-retirement provision of up to 30 percent of total savings. Therefore, these two reasons indirectly affect the adequacy of pension savings for contributors during their retirement period. This was supported by [6] in his PhD thesis who asserted that the EPF is currently incapable of meeting its primary responsibility to ensure the financial security of its members in their old age.

**D. Investment and Policies**

As mentioned in the previous section, the EPF is a mandatory scheme for private workers and contributions to the EPF is 23% of the salary (with employee and employer share 11% and 12%, respectively). The benefit of the EPF is not promised, and is reliant on contributions and returns of investments during the accumulation phase. Thus, the investment policy is crucial where it contributes to the EPF adequacy. [3] asserted that the duration of investment, net real return and other costs accounts for the majority of pension performance.

Under the EPF Act, the fund is permitted to invest in only approved investments such as Malaysia Government...
Security (MGS), debenture loan, money market instrument, equity and property. In an attempt to protect members’ savings in the long term, the EPF is required to allocate at least 70% in MGS from its investments; at the same time, it was restricted from investing more than 25% in equity. However, under the EPF act revisions, these statutes have changed. The government allowed for more diversification in their investment strategy when the portion of MGS considerably declined in line with economic growth in the mid-90s, and privatization of certain infrastructures and other services were taken by the government [1], [25]. Thus, the share of MGS dropped from 73.6% in 1991 to 26.5% in 2011. On the other hand, equity allocation increased from 2.1% to 35.6% for the same periods. Table 3 presents the asset allocations of the EPF investment from 2007 to 2011.

Asset allocation strategy plays a vital role in generating adequate returns on investment. It is supported by [1] when he highlighted that 90% of investment performance is explained by asset allocation, while active investment management contributes to the remaining 10 percent. Investment diversification by the EPF may generate higher return, but it is subject to the economic environment [16] asserted that the decision of reducing MGS has led to the reduction in the dividend rate during 1995 to 2001. The main reason of this reduction was the collapse of the stock market during the Asian financial crisis in 1997, and investments were channeled to finance government projects or bail out inefficient government developments during the financial crisis.

Looking at the trend for the year 2007-2011, EPF (on average) invested 65% in fixed income (MGS, loans and bonds), 28.9% in equities, 5.3% in money market instrument and 0.5% in property. Higher concentration on fixed income instrument was in-line with the EPF’s philosophy to protect members’ saving retirement funds. However, [11] compared the average return of EPF’s investments and unit trust returns to find that the latter generated good returns across all categories of funds. Meanwhile, for the EPF asset allocation, the equity fund contributed the highest average return of 58.97%, bond funds of 21.56% and money market instrument of 10.22% from 2001-2009. Since investment performance and return are essential for retirement adequacy, investment policy of the EPF leaves us with several questions which require answers, such as the best portfolio allocation of pension funds, international diversification opportunities and investment strategies that reflect each age group.

<table>
<thead>
<tr>
<th>Year</th>
<th>Type of Investment</th>
<th>MGS (%)</th>
<th>Loans and Bonds (%)</th>
<th>Equities (%)</th>
<th>MDM (%)</th>
<th>Property (%)</th>
<th>Total Investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>RM Billion</td>
<td>112.9</td>
<td>30.6</td>
<td>66.3</td>
<td>19.3</td>
<td>0.77</td>
<td>315.0</td>
</tr>
<tr>
<td>2008</td>
<td>RM Billion</td>
<td>110.6</td>
<td>35.9</td>
<td>87.9</td>
<td>19.0</td>
<td>1.6</td>
<td>342.0</td>
</tr>
<tr>
<td>2009</td>
<td>RM Billion</td>
<td>114.1</td>
<td>35.9</td>
<td>100.4</td>
<td>23.2</td>
<td>1.6</td>
<td>371.3</td>
</tr>
<tr>
<td>2010</td>
<td>RM Billion</td>
<td>118.5</td>
<td>35.9</td>
<td>113.2</td>
<td>23.2</td>
<td>1.9</td>
<td>440.5</td>
</tr>
<tr>
<td>2011</td>
<td>RM Billion</td>
<td>124.6</td>
<td>34.2</td>
<td>167.2</td>
<td>14.5</td>
<td>1.82</td>
<td>469.21</td>
</tr>
</tbody>
</table>

Source: EPF Annual Report 2012

E. Suggested Methodologies for the Evaluation of the Soundness of the Pension System

In an attempt to evaluate the overall performance of the pension system, Melbourne Mercer Global Pension Index (MMGPI) suggested that a sound pension system must deliver good benefits, in a sustainable manner with a high level of integrity. MMGPI has put adequacy as a most important criterion for any retirement income system followed by sustainability and adequacy. Figure 3 depicts their pension index criteria.

V. CONCLUSION

Pension coverage for formal workers in Malaysia is provided by the EPF which is governed under the Minister of Finance. Population transition has posed a serious issue for pension sustainability and adequacy of the Malaysian EPF.

The analysis of this paper indicated that adequacy becomes a major problem for the EPF, as it is unable to provide adequate savings for members due to lower investment returns and pre-withdrawal provisions. This means that the majority of EPF members, without other income sources, will live in poverty after their retirement. Moreover, there is a gap of coverage in the EPF where this
scheme is only compulsory for formal workers and voluntary for informal sectors, such as self-employed and agricultural sectors. Informal sources of income generated from extended family are playing a vital role for the elderly. However, with the advance of economic development and urbanization this source of income has been halted. This clearly indicates a signal that the formal pension system must fill this gap left by the withdrawal of family income support in the future.

In light of the above scenarios, government attention is required to overcome the existing problem of the pension system. Since Malaysia is expected to become an old age nation by the year 2030 [24], there is still a window of opportunity for the government to reform its pension system to enable retirees to live on an adequate income. Investment performance and adequacy issues should be a central concern for the government and hasten to design of a pension system because without such the sustainability and financial soundness of the EPF will fail to live up to the expectations of a pension scheme which provides access to an adequate retirement income.

Studying this issues begins to provide us with an understanding of Malaysia’s pension system and its importance for researchers in addressing the issues facing an adequate retirement scheme. Abundant descriptive studies were provided and suggestions given to develop a decent pension system. To coincide with these problems, however, we believe that an empirical study is important to measure the cost-benefits from any suggested reform for Malaysia’s pension system; especially in addressing investment performance and adequacy issues.

REFERENCES


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