

Restructuring the Present-day Retirement Benefit Scheme Based on the Needs of the Aging Filipinos

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Abstract

Retirement Pay Law (R.A. 7641) in the Philippines dictates the minimum mandatory retirement benefit that each employer needs to comply for their qualified employees. This law states that an employee upon reaching the age of 60 with at least five years of service is eligible to a benefit equivalent to "one-half month salary for every year of service." It should be noted that this law was enacted more than two decades ago. Thus, this study aims to revisit the law to examine the effectiveness of its benefits to the aging Filipinos. Moreover, this study will take a look into the current trends of the existing retirement plans in the Philippines and around the world. With this, a new structure, particularly a hybrid plan – with defined benefit and defined contributions features, will be proposed to address the needs of the aging Filipinos.

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Key words: pension, Social Security System, Actuarial Mathematics

1 Introduction

Retirement in the Philippines is often appended to government and financial institutions such as the Social Security System (SSS), Philhealth, Pag-ibig, private banks and insurance companies. Filipinos are not aware that there exists a law, Republic Act No. 7641, which states that every private company should provide retirement payments to their employees once they reach the age of 60 and have rendered at least 5 years of service. This law was signed in July 27, 1992 and is better known as the Retirement Pay Law [4]. This law further stipulates the minimum retirement pay that should be given to eligible employees, which is equivalent to one-half month salary for every year of service, a fraction of at least 6 months being considered as 1 whole year.

The term "one-half month salary" is comprised of the following:

- 15 days' pay
- + 1/12 of the 13th month pay
- + cash equivalent of not more than 5 days of service incentive leave

In total, the one-half month salary is equivalent to 22.5 days' pay, assuming 260 working days in a year. Meanwhile, the benefit under the Retirement Pay Law for companies with 260 working days in a year is equivalent to one month pay. In addition to the Retirement Pay Law, there exists another law that exempts retirement benefits from being subjected to income tax, which is the Republic Act No. 4917. This law was enacted in June 17, 1967 and states that employees retiring at age 50 with at least 10 years of service will receive their

retirement benefit in full and will not be subjected to income tax provided that a formal retirement plan is in place and filed with the Bureau of Internal Revenue [3]. In addition, this law further specifies the additional advantages of establishing a retirement plan for private companies. It states that any contribution made by the company will be considered as tax deductible up to certain limits as stipulated under the law and the interest earnings of the fund will not be subjected to tax as well.

Retirement Pay Law and Republic Act No. 4917 give security to the Filipinos once they retire. However, most of the time retiring Filipinos are not able to sustain a decent lifestyle due to a lot of factors. Based on recent studies, Filipinos are not financially prepared for their retirement which contribute to poorly managed retirement benefit [7]. In addition, some journals pointed out some common mistakes that Filipinos commit in line with the aspect of retirement. Examples of these common mistakes are as follows: reliance on children or relatives, dependence on charity or other government agencies, underestimating after retirement costs and not planning for retirement [8]. With this mindset, it was observed that only 2% of Filipino senior citizens were financially equipped to enjoy their retirement.

Moreover, recent studies pointed out that life expectancy is improving due to medical advancement and improving environment. Using the 2011 Philippine Inter-company Mortality Table as benchmark of life expectancy, we anticipate that a Filipino retiring at age 60 will live for about 24 to 28 years more. In line with this, Filipinos need to manage their asset pool even after retirement in order to assure that their assets will be able to cover their future expenses until death.

The main purpose of this study is to revisit the Retirement Pay Law and check if the minimum mandated benefit is sufficient to sustain the lifestyle of the aging Filipinos. If otherwise, this study will propose different retirement benefit schemes that are presently available and these are defined benefit plans, defined contribution plans and hybrid plans. Retirement benefit schemes that will be proposed would aid to the needs of the aging Filipinos once they retire.

2 Methods

In order to determine if the retirement benefits provided upon age 60 is enough to have a sustainable lifestyle after retirement, the projected retirement benefit is determined. Once this is obtained, the replacement ratios are calculated. This is determined by computing the equivalent monthly or annual pension based on the lump sum benefit upon retirement and derive the equivalent percentage of this computed pension against the final month or annual salary. Replacement ratio is usually set at 70% [1]. Once it is confirmed that the replacement ratio given the benefit under the Retirement Pay Law is below the 70% threshold, this study proposes options that would help to reach the target replacement ratio. Three options are presented in this study: 1) increasing the benefit under defined benefit plan 2) introduce a hybrid plan, which is a defined contribution plan with minimum benefit based on Retirement Pay Law and 3) introduce a hybrid plan, which is a defined benefit plan with voluntary and matching contributions.

This study further explores the most advantageous plan in terms of cost and implementation. The cost is determined using an actuarial cost method, particularly the Projected Unit Credit (PUC) method. Under this method, the Accrued Actuarial Liability (AAL) and annual Normal Cost (NC) are computed in order to have an idea of the annual cost and the first year cost for the employers. The first year cost includes the AAL and the first year NC. As indicated, the actuarial cost method that is used in calculating the AAL and

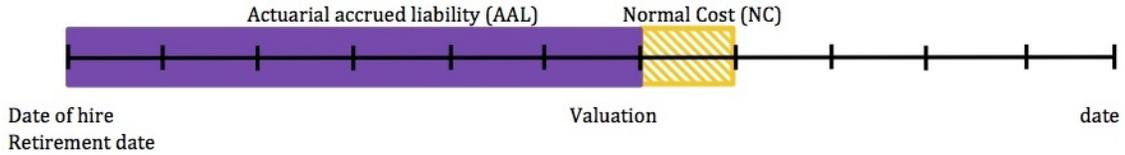


Figure 1: Period covered by the Accrued Actuarial Liability and the Normal Cost.

NC is used for the Projected Unit Credit (PUC) Method [2]. Figure 1 illustrates the period covered by the AAL and the NC.

The Normal Cost (NC) and Actuarial Accrued Liability (AAL) under the PUC method is computed based on the formula below:

$$NC = \frac{B_r \times v^{r-x} \times {}_{r-x}p_x^r}{r - e} \tag{1}$$

$$AAL = NC \times (x - e) \tag{2}$$

where e is the age at date of hire, x is the age as of valuation date, r is the age at retirement, B_r is the projected retirement benefit at retirement, v is the discount factor; $v = 1/(1 + R)$ where R is the interest rate, and ${}_n p_x^r$ is the probability that a life aged x will survive for the next n years considering all decrements (mortality, morbidity and withdrawal).

Subsequently, the projected retirement benefit at age $r = 60$ is used to determine the equivalent annual pension, payable at the beginning of each pension year from the date of retirement, that is paid throughout the lifetime of the retiree starting at retirement date. This annual pension is compared to the equivalent annual pension under the replacement ratio theory. The annual pension is computed based on the formula below:

$$\text{Annual Pension} = B_{60}/a_{60}, \tag{3}$$

where a_{60} is the life annuity starting at age 60. Meanwhile, the projected retirement benefit is computed as follows:

$$B_{60} = S_{60} \times Y_{60} \tag{4}$$

where S_{60} is the final monthly salary at age 60 and Y_{60} is the number of years of service rendered from date of hire until retirement at age sixty (60). With the replacement ratio theory, the annual pension is verified whether it is sufficient or not. Thus, different retirement benefit schemes are introduced to mitigate the insufficiency of the minimum mandated benefit under the Retirement Pay Law.

Based on the prevailing market rates, the economic assumptions and decrement tables used are shown in Table 1 (all values are given per annum).

For the purpose of the study, the projected unit credit (PUC) method is used for consistency with the proposed method to be used by accountants in determining the liability and expense to be recognized under the Philippine Accounting Standard 19 with revisions through 2011 [5]. The other assumptions are as follows: valuation date is January 1, 2015; there are 260 working days in a calendar year; members have no existing retirement plans; and there has been no prior funding.

Table 2 presents information of hypothetical employees used in the study:

Table 1: Assumptions and tables used in the study

| | |
|-------------------------|---|
| Discount rate: | 6% |
| Salary projection rate: | 5% |
| Inflation rate: | 4% |
| Mortality: | 1994 GAM Table |
| Morbidity: | 1952 Disability Study for Period 2 Benefit 5 |
| Withdrawal: | 7.60% (based on Philippine Statistics Authority, 2002-2013 [9]) |

Table 2: Sample employee profiles, assuming all male employees.

| | Entry Level | 1-4 Years Experience | Supervisor | Manager |
|------------------|----------------|-------------------------|------------|---------|
| Age | 21 | 24 | 32 | 38 |
| Years of Service | 0 | 2.5 | 7.5 | 12.5 |
| Monthly Salary* | 16,700 | 25,700 | 50,400 | 74,300 |

*Salaries were based on 2014 Top Average Salary study by Jobstreet[6], given in PHP.

3 Results and Discussion

3.1 Base Scenario

The projected benefit at retirement was computed for each employee profile. The projected benefits are given in Table 3.

Table 3: Projected benefits of hypothetical employees under the base scenario.

| | Entry | 1-4 Years | Supervisor | Manager |
|-------------------------|-----------|-----------|------------|-----------|
| Projected benefit (PHP) | 4,158,861 | 5,805,137 | 7,112,682 | 7,244,896 |

The benefits differed for each employee due to the different profiles that were used. The projection of benefit did not consider any increase in salary due to promotion or other items that may be attributed to differences in the employees. Furthermore, the AAL and NC percentages were also computed in order to capture the cost to the employers attributed to the benefit under the Retirement Pay Law, shown in Table 4.

Table 4: Cost of retirement to the employer under base scenario.

| | Entry | 1-4 Years | Supervisor | Manager |
|-----------------------------------|-----------|-----------|------------|-----------|
| Actuarial Accrued Liability (PHP) | 0 | 26,848 | 176,455 | 465,793 |
| First year cost (%) | 3.28 | 12.19 | 33.07 | 56.42 |
| Normal Cost range (%) | 3.28-7.76 | 3.48-7.86 | 3.89-7.90 | 4.18-7.91 |

It was observed that the annual Normal Cost of the employer ranged from 3.28% to 7.91%. The percentage cost difference per position was not that large and it was credited to the difference in salary, age and years of service. Moreover, the first year cost increased in line with years of service given that the AAL was computed based on the years of service rendered as of valuation date. Thus, it can be observed that the first year cost for managers

with 12.5 years of experience was higher compared with an entry level employee with zero years of experience.

The projected benefit upon retirement in Table 4 was then converted to a life annuity starting at age 60 to compute for the annual pension. The annual pension was then used to determine the replacement ratio to check if it reached the 70% threshold. These are given in Table 5.

Table 5: Replacement ratio calculated from annual pension under base scenario.

| | Entry | 1-4 Years | Supervisor | Manager |
|-----------------------|---------|-----------|------------|---------|
| Annual pension (PHP) | 233,995 | 311,068 | 381,133 | 407,628 |
| Replacement ratio (%) | 18.29 | 18.29 | 16.88 | 16.41 |

It is evident that the benefit under the Retirement Pay Law was way below the 70% target, with a difference equivalent to approximately fifty percent 50%. Thus, different options were presented to recommend a retirement benefit structure based on the current trends in the Philippines to cover the 50% difference. In this study, three (3) benefit schemes were considered.

3.2 Benefit Scheme 1

In order to meet the 70% replacement ratio, the defined benefit needed to be increased. To calculate this increase, the desired projected benefit upon retirement was computed as follows:

$$B_{60} = 0.70 \times 12 \times S_{60} \times \ddot{a}_{60} \quad (5)$$

The resulting benefit and other significant items are given in Table 6.

Table 6: First year and annual Normal Cost under Benefit Scheme 1.

| | Entry | 1-4 Years | Supervisor | Manager |
|------------------------------|-------------|-------------|-------------|-------------|
| Target benefit (PHP) | 15,920,447 | 21,164,459 | 28,092,408 | 30,903,769 |
| New benefit scheme* | 383 | 383 | 415 | 427 |
| First year cost (%) | 12.57 | 46.68 | 137.22 | 240.92 |
| Annual Normal Cost range (%) | 12.57-29.73 | 13.33-30.09 | 16.13-32.79 | 17.83-33.80 |

*% of monthly salary for every year of service.

Based on the results of Benefit Scheme 1, the defined benefit should be increased to around 400% of monthly salary for every year of service. Inevitably, the cost for this would be higher for employers since they would be obliged to provide four times larger than the Retirement Pay Law. Moreover, it should be noted that the first year contribution would reach around 240.92% of annual salary due to addition of the AAL that will be contributed on the first year. It can be observed that the increase in AAL was caused by the past service cost. Past service cost measures the amount that the company needs to additionally accrue to cover the period from the date of hire until the valuation date.

Implementation of this plan is easy since there is no need to provide an additional reporting to be submitted. Also, there is no additional administration needed unlike for defined contribution plans, which requires individual balances of each employees. Moreover, from the perspective of the employee, for this kind of plan, the employer shoulders the

investment risk and additional costs. Cost would also be higher, particularly for tenured employees due to the past service costs attributed to the years of service already rendered.

3.3 Benefit Scheme 2

In this option, Benefit Scheme 1 was converted to a hybrid plan such that the plan is a defined contribution (DC) plan with minimum benefit based on Retirement Pay Law. In order to reach the 70% replacement ratio, the defined contribution rate that was used starting at valuation date is given in Table 7.

Table 7: Defined contribution rate needed for 70% replacement ratio.

| | Entry | 1-4 Years | Supervisor | Manager |
|-------------------------------|-------|-----------|------------|---------|
| Defined contribution rate (%) | 25.79 | 28.36 | 37.95 | 49.75 |

Based on the results for Benefit Scheme 2, employers should regularly contribute 25.79% to 49.75% of monthly salary starting at the valuation date. The annual cost for this was higher since the AAL as of valuation date was considered to be equivalent to zero. This approach did not take advantage of interest earnings, unlike in benefit scheme 1, where the AAL as of valuation date was already considered in the first year cost. Under this type of plan, contributions can be facilitated easily since these have already been defined, although additional administration is required. In addition, this scheme still complies with Retirement Pay Law since it took into consideration the minimum benefit. However, administration of defined contribution plans is quite tedious since it requires setting up and maintaining individual accounts for each employee. Moreover, investment risk is shouldered by the employees.

3.4 Benefit Scheme 3

Under this scheme, Benefit Scheme 1 was converted to a hybrid plan such that the plan was a defined benefit plan based on Retirement Pay Law with voluntary contribution and employer matching. The results are shown in Table 8:

Table 8: Employer and employee contributions under benefit scheme 3.

| | Entry | 1-4 Years | Supervisor | Manager |
|------------------------------------|-------------|-------------|------------|-------------|
| Actuarial Accrued Liability (%) | 0 | 8.71 | 29.18 | 52.24 |
| Defined contribution rate (%) | 19.05 | 20.95 | 28.80 | 38.08 |
| Employee contribution (%) | 9.53 | 10.48 | 14.40 | 19.04 |
| Employer total contribution (%) | 12.81-17.29 | 13.96-18.26 | 18.29-22.3 | 23.22-26.95 |
| Employer 1st year contribution (%) | 12.81 | 22.67 | 47.47 | 75.46 |

Based on the results under this scheme, the annual cost for employers ranged from 12.81% to 26.95%, which was relatively lower compared with the first two benefit schemes. Moreover, first year cost was lower compared to Benefit Scheme 1 even though both schemes considered the AAL as of valuation date. Similar to Benefit Scheme 2, the administration of this type of plan is quite tedious since it also requires setting up individual accounts for each employees. However, employer contributions were lower since the employees also

contributed to the retirement plan. This type of plan actually promotes a mentality of saving for retirement.

4 Conclusion

The current retirement structure of Filipinos is outdated and needs to be updated. In this paper, alternative retirement plans were proposed. Note that that the benefit under Retirement Pay Law did not reach the 70% replacement ratio target. To meet this target, the minimum benefits at retirement were calculated for four sample employee profiles: an entry level position, an employee with up to 4 years work experience, a mid level supervisor and an upper level manager. Three retirement benefit schemes were presented: increasing the benefit by changing the defined benefit formula, a hybrid defined contribution plan and a hybrid defined benefit plan. Based on the results, the first scheme would be easier to facilitate without the need for additional administration. However the costs were quite high for the employer. The second benefit scheme would also be easy to facilitate, but required additional administration and would cost more for the employers, with the employees shouldering the investment risk. The cost under the third benefit scheme would be lower and considered reasonable for employers as compared to the first two schemes since employees would share the cost by voluntarily contributing to the retirement plan. Moreover, this stimulates the mentality of saving for retirement. On the other hand, administration of the third scheme would be more tedious. Nevertheless, the hybrid plan based on a defined benefit is recommended benefit scheme in order to reach the 70% replacement ratio target.

Further studies can be made by considering additional employee profiles that would capture different scenarios, additional options based on the retirement structures around the world, and inclusion of sensitivities and interest rate projections.

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