

## Policy Brief Series 2016-1

November 2016

### **Summary**

This paper examines the potential consequences of early withdrawals from the Malaysian Employees Provident Fund on of savings adequacy by studying the impact of house purchase on household lifecycle consumption. The paper proposes a strategic repayment mechanism that replicates the optimum operational behavior of EPF fund in an attempt to examine how early withdrawal policies affect the savings adequacy of Malaysian households. In light of the ongoing debate about the adequacy and nature of saving for retirement, the continued growth of EPF — where pre-retirement cash-outs are more widely available — and the increasing life-expectancy, a better understanding of how early withdrawal policies affect retiree choices is essential to develop a retirement income system that can adequately address the needs of the modern work force and Malaysian economy.

## Methodology

We performed a numerical approximation of the solution functions under optimal conditions (members pay regularly their contributions to EPF fund, all members join workforce and retire in the same age). Subsequently we performed an actuarial evaluation to test the optimal state of the model under six different scenarios: employment periods (18-55 vs. 25-55), retirement periods (55-65 vs. 55-75), real vs. nominal values and asset presence (housing vs. non-housing consumption), annuitization presence (annuity vs. non-annuity) and historical vs actual contribution rates. Finally, we performed a sensitivity analysis to highlight the impact of housing consumption and inflation on retirement savings.

## **Major Findings**

In the context of early withdrawals, our findings suggests notable differences on retirement income. If retirement saving participation and contributions were not to rise among those who exercise their withdrawal rights – as would be expected given the nonbinding nature of repayment – the retirement benefits would not reach the maximum possible level. Withdrawal rights will mainly affect low-income households who cannot easily shift income from alternative sources. In that case, early withdrawals represent unnecessary loss of retirement savings. Besides, the absence of arbitrage opportunities implies the existence a high degree of uncertainty for household consumption at retirement.

The actuarial evaluation findings are consistent with the literature that shows regardless of the nature of pension scheme – public vs. private, pay-as-you-go vs. fully-funded vs. provident fund, collective vs. individual accounts – the basic period pension period spans from 15 to 20 years, given the income replacement target rate of 60 percent. Given Malaysian macroeconomic data, this period for EPF is approximately 18 years.

# Savings Adequacy Assessment: The Case of the Malaysian Employees Provident Fund Members

by Evangelos Koutronas and Noor Azina Ismail

The incorporation of annuitization at retirement leads to excessive accumulation of assets during the working phase. Using the annuity formula with the assumption of investment of the historical EPF rate of 5.95 percent, there is an approximate increase of 71.2 percent in monthly pension income. The annuity paradigm indicates that the annuitization method can prove beneficial. Annuitization decisions though involve important trade-offs and may not be feasible for low-income individuals and those with low financial assets. It is most likely to benefit the middle and upper income retiree with more assets. However, retirees need to be able to respond to financial shocks in addition to ensuring they do not outlive their income.

### **Policy Directions**

The findings highlight the importance of policies that preserve retirement savings and increase savings for non-retirement events. A restrictive policy on early withdrawals therefore will foster the potential retirement income. EPF ought to allow account withdrawals when a member faces an event requiring unusual financial need and should consider imposing a repayment mechanism. Account withdrawals should be repaid back within a reasonable period of time, usually within member's working-life period, making regular payments of principal and interest, often through payroll deduction. In this context, households have to build up other sources of wealth which they can generate income from to address both expected and unexpected contingencies. Household savings would tend to increase because the EPF account is less liquid than private household wealth. As a result, the precautionary saving motive will be strengthened.

#### References

Ando, A. & F. Modigliani (1963). The Life-Cycle Hypothesis of Saving: Aggregate Implications and Tests. American Economic Review 53(1): 55-84.

Diamond, P. A. & J. A. Hausman (1984). "Individual Retirement and Savings Behavior." Journal of Public Economics 23(1-2): 81-114.

Merton, R. C. (1981). On the Role of Social Security as a Means for Efficient Risk Bearing in an Economy where Human Capital is not Tradeable. N.B.E.R. Working Paper, no. 743.

Mitchell, O. S. & J. F. Moore (1998). "Can Americans Afford to Retire? New Evidence on Retirement Saving Adequacy." The Journal of Risk and Insurance 65(3): 371-400.

Romer, P. (1989). Capital Accumulation in the Theory of Long-Run Growth Modern Business Cycle Theory. R. Barro. Cambridge, MA, Harvard University Press: 51-127.