Summary of the Report:

Measures of Retirement Benefit Adequacy: Which, Why, for Whom, and How Much?

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Project Oversight Group

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The purpose of this study is to provide the basis for estimation of retirement income needs and adequacy. To that end, the researchers have developed a Monte Carlo simulation model of retirement cash flows incorporating a wide variety of risks and uncertainties faced by retirees, including longevity, inflation, investment, health, and long-term care. By varying assumptions, they compare outcomes based on decisions such as expense reduction, mortgage payoff, purchase of annuities and long-term care insurance, delayed and early retirement. They describe and justify the base case assumptions, explain the metrics used for reporting the simulation output, and summarize the alternative scenarios that are simulated. They also provide call-out boxes highlighting practical issues and key findings as well as a list of references that can be a handy source of resources on this topic.

The study describes three different approaches to measuring benefit adequacy from each stakeholder's point of view as well as their limitations:

- Replacement Ratio – this is most often used by employers in not only designing their plans but also in comparing their plans to those of other employers. The study includes a discussion of the Aon /Georgia State Study, which is widely used and recognized in the U.S.

- Minimum Needs Measure – this is generally used by policymakers. The study uses the Elder Economic Security Index to outline national averages for various household types.

- Cash Flow Analysis – a detailed, personalized cash flow forecast is the best way for individuals to prepare for and manage their retirement needs.

There is no one-size-fits-all measure of benefit adequacy and there are many "moving parts". Depending on the stakeholder and the purpose, one approach may be more useful than another - and sometimes the various approaches are better used in combination. For example, a replacement ratio or lump sum accumulation target may be more useful for a younger worker who is just starting to save. A combination of replacement ratios and a minimum needs measure may be better for an employee who has been saving a bit longer, but at too low a rate. A detailed cash flow analysis forecast (perhaps a stochastic one) is more useful for those close to retirement and preparing for decisions on when to retire, how much to annuitize, etc. Individuals need to be aware that attempts to simplify this analysis can be very dangerous for them. In particular, the study emphasizes the danger in planning to averages.

The base case that is presented includes three levels of pre-retirement income and two levels of non-housing wealth for a married couple. Other variables in the simulation include the following (see Table 9):

- Pre-retirement standard of living – either maintain or reduce 15%
- Percent of wealth annuitized – 0%, 25% or 50%
- Time until mortgage payoff – 0, 5 or 10 years
- Retirement age – 66/63, 70/67 or 62/62
- Purchase of LTC insurance – None, both (ages 62/59), female (age 59)

The results include the probability of having and the expected amount of wealth left at death, as well as the number of years income is insufficient and the amount of wealth that would have been sufficient to meet needs.

The results in Table 10 are a key finding and illustrate the wide variation in results. For example, at the $60,000 pre-retirement level of income, the amount of wealth needed at retirement to be sufficient to meet

needs ranges from approximately $170,000 to be 50% confident of having enough to just under $700,000 for a 95% confidence level.

Delaying retirement, if possible, can significantly improve the likelihood of having adequate retirement income. As shown in Table 15, this has the most impact of any of the strategies that were modeled, especially at lower incomes. This, as well as the impact of phased retirement, is an area for a future study.

One rather surprising result shown in Table 12 suggests that annuitization may not make sense in all cases - it likely will benefit the middle income retiree more than the lower income or upper income retiree. Retirees need to be able to respond to financial shocks in addition to ensuring they don't outlive their income, and this can decrease the utility of annuitization in some situations. Because of the unusually low interest rate environment, current rates on annuities are not very attractive. For the simulations, annuity prices were based on an interest rate of 3.80%. An area for further study would be to investigate the risk-mitigating effects of different product types and/or market conditions.

It's important to consider and - to the extent possible - quantify and plan for the potential impact of shocks (such as the need for long term care). Low frequency, high severity risks can result in income inadequacy and derail plans, particularly at lower income levels. This makes it more important to consider ways of mitigating the risk at those income levels. These results are shown in Table 14. Less expensive risk management products are needed to insure against some of the shocks – such as LTC insurance (but that might not be affordable) or deferred annuities to protect against living very long – that leave available funds for other risks. Markets can use this information to tailor their products to better meet needs. In particular, the LTC market needs to be strengthened and combination products should be considered.

It is important to keep Social Security and Medicare strong since they are a critical component of income and protection for many retirees, especially those who are most at risk (see Figure 1). Even so, the overwhelming majority of the next generation of retirees could be facing a significant drop in their standard of living when they retire as a result of the transition from defined benefit to defined contribution plans. This should be a concern for both policymakers and employers. The model does not assume the individuals have any defined benefit plan impact – this would also be an interesting topic for a future study.

Future projects the authors have identified include the following:

- Variations on timing of retirement and phased retirement
- More in-depth exploration of long term care risks and financing alternatives
- More in-depth exploration of health care risks and financing
- Variations on employer-provided retirement plans
- Additional analysis of drawdown and annuitization payout strategies
- Consideration of a wider range of individual characteristics
- The effect of ill-timed risks
- Variations on housing assumptions
- Applications beyond the U.S.