
1. **Best Practices for Retirement Income Planning**
   - Dr. Wade Pfau
   - May 7, 2019
   - www.RetirementResearcher.com
   - Wade Pfau, Ph.D., CFA
   - RICP Curriculum Director

2. **AGENDA**
   - RETIREMENT: Is It Really Different?
   - RETIREMENT RISKS
   - STRATEGIES FOR SUCCESS
     - Theory Behind the 4% Rule
     - Two Schools of Thought on Retirement
     - Risk Pooling vs. Risk Premium
     - Product Allocation with Investments and Insurance

3. **Financial Services Review, 1991**
   - “Professor Mandell, editor of Financial Services Review, invited me to contribute an article related to financial research for the individual for the first issue of this journal. Since the subject is not my specialty, it was uncharacteristically risky of me to have accepted the invitation. But an evening of reflection convinced me that there were clear differences in the central features of investment for institutions and investment for individuals, that these differences suggest differences in desirable research methodology, and that a note on these differences may be of value.”
What's Different About Retirement?

• Reduced earnings capacity
• Visible spending constraint
• Heightened investment risk
• Unknown longevity
• Spending shocks
• Compounding inflation
• Declining cognitive abilities

Pre-Retirement vs. Retirement

Key Retirement Risks

Longevity Risk

Macro/Market

- Investment volatility
- Inflation
- Rising costs of living

Unknown Planning Horizon

Inflation

Personal Spending

Health & long-term care

Hi Rider family members

Finance

Planning horizon
Dr. Wade Pfau - Best Practices for Retirement Income Planning

May 7, 2019

---

Longevity Risk

Source: Society of Actuaries, 2012 Individual Annuity Mortality Tables, with projections for 2019

Planning Ages for 65-Year-Olds from the Longevity Illustrator

Source: The Longevity Illustrator, www.longevityillustrator.org

Market Risk: Fixed vs. Random Returns

Wealth Glidepath Over a 30-Year Retirement

For a 6.3% Initial Withdrawal Rate, 50/50 Asset Allocation, Inflation Adjustments Using SBBI Data, 1926-2018 S&P 500 and Intermediate Term Government Bonds

For representation use only, Not for public distribution.
Managing Sequence Risk

- Spend Conservatively
- Spending Flexibility
- Reduce Volatility
  - Build a lifetime spending floor with annuities
- Buffer Assets – Avoid Selling at Losses

Challenges for an Individual Pension Plan

- Asset Returns
  - Pension Managers – Pool returns across generations
  - Households – One whack at the cat
- Longevity Risk
  - Pension Managers – Systemic increases in longevity
  - Households – Idiosyncratic longevity risk

Retirement Goals
Dr. Wade Pfau - Best Practices for Retirement Income Planning

May 7, 2019

Retirement Income Philosophies

<table>
<thead>
<tr>
<th></th>
<th>Probability-Based</th>
<th>Safety-First</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prioritization Among Goals</td>
<td>Focus on overall lifestyle spending goals</td>
<td>Distinguish retirement spending goals between essential needs and discretionary expenses</td>
</tr>
<tr>
<td>Investment Approach</td>
<td>Focus on a total returns investing for the entire financial portfolio to maximize returns for an acceptable level of volatility</td>
<td>Match assets to different goals so that risk levels are compatible. Allows a wider role for holding individual bonds and using income annuities.</td>
</tr>
<tr>
<td>Measuring Retirement Success</td>
<td>Focus on determining an acceptable probability of failure for the overall retirement plan</td>
<td>Seeks to minimize harms in worst-case scenarios by avoiding failure for essential needs</td>
</tr>
<tr>
<td>Safe Withdrawal Rate</td>
<td>The historical record suggests that 4% or 4.5% is about as bad as it gets</td>
<td>Unknown and unknowable. Risky assets are inherently risky and the historical success of a strategy does not provide sufficient confidence</td>
</tr>
</tbody>
</table>

Retirement Optimization Plan

GOALS
- Longevity
- Lifestyle
- Legacy
- Liquidity

ASSETS
- Reliable Income
- Diversified Portfolio
- Reserves

LIABILITIES
- Essential Expenses
- Discretionary Expenses
- Legacy
- Contingencies

Sources of Investment Spending

- Principal
- Interest, Dividends
- Capital Gains
  (Risk Premium)
Sources of Annuity Payments

Income Sources for Income Annuity
Assumptions:
65-Year Old Female, $1 million
Bond Ladder Planning Age: 100
1% fixed real yield curve

Probability of Success: Funding Real $45,616

Source: Own calculations with 100,000 Monte Carlo simulations for stock and bond portfolios. Bonds earn a fixed real return of 1%. Stocks earn an arithmetic average real return of 7% with a 3% annual volatility.
THANK YOU!
ANY QUESTIONS?

wade@retirementresearcher.com
@WadePfau (Twitter)
www.RetirementResearcher.com