Discussion of Session:
Rethinking the Resilience of Defined Contribution Plans

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Reshaping Retirement Security:
Lessons from the Global Financial Crisis

* Views presented do not necessarily represent the views of the Investment Company Institute or its members.
Non-Scientific Summary of Views of 401(k) Plan Investor Behavior

• Are too conservatively invested (circa late 1990s)
• Are too aggressively invested (circa late 2000s)
• Do not trade enough (inertia)
• Don’t know how to trade (chase returns)
How Should a 401(k) Participant Behave?

• Let me see your utility function and I’ll tell you

**Generally**

• Fixed asset allocation?

• 100 minus your age?

• Inflation-indexed securities?

• Compare inverse-price-earnings ratio to Treasury yield?

**In Response to a Shock**

• Stay the course?

• Rebalance?

• Reassess?
Risk Aversion & The Assumption of Risk
Example with Logarithmic Utility
Three Approaches to the Question

- **Wray**: Examine behavior of plans and participants in the wake of the crisis

- **Tang, Mitchell, & Utkus**: Examine trading behavior of 401(k) participants before and during a crisis

- **Chai, Maurer, Rogalla, & Mitchell**: Model how rational individuals should behave in response to a crisis
The DC System Passes the Stress Test

• Defense of the system
  ▪ Plan sponsors
  ▪ Plan participant behavior

• Suggestions
Trading in 401(k) Plans

• Findings
  ▪ React more negatively to market volatility
  ▪ Switch from momentum to contrarian
  ▪ Important effect of report month

• Comments/Suggestions
  ▪ Decision to trade
  ▪ Decision to increase equity exposure or decrease equity exposure
  ▪ More descriptive analysis
  ▪ Sensitivity tests; alternative measures; additional questions
Lifecycle Impacts of the Financial Crisis

**Summary**
- Solves lifecycle model with stochastic stock market and labor market shocks
- Illustrates optimal behavior for base case, crisis, “triple whammy” & “double fortune”
- Predictions premised on optimal behavior by rational individuals
- Some short term predictions consistent with observed behavior

**Question/Comments**
- Hump-shaped wages
- Social Security specification
Social Security Benefits are Primary Resource for a Large Portion of Retirees

CBO estimates of first year benefits relative to average indexed earnings by household lifetime earnings, 1940s birth cohort, percent

<table>
<thead>
<tr>
<th>Lifetime Earnings Quintile</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowest</td>
<td>71</td>
</tr>
<tr>
<td>Second</td>
<td>50</td>
</tr>
<tr>
<td>Middle</td>
<td>43</td>
</tr>
<tr>
<td>Fourth</td>
<td>38</td>
</tr>
<tr>
<td>Highest</td>
<td>31</td>
</tr>
</tbody>
</table>

Summary

• “What Does the Market Crash Mean for the Ability of 401(k) Plans to Provide Retirement Income?” (NTJ September 2009)
  ▪ Risk in 401(k) plans needs to be put into context of other household resources
  ▪ All else equal, lower earners are less exposed to 401(k) risks because Social Security is bulk of retirement income
  ▪ For moderate income worker (earning $35K & $55K at age 40), one more year of work more than offsets most simulated shocks to retirement income

• Portfolio allocation is not the biggest risk for most individuals

• How to structure retirement & who to bear the risk?