Heterogeneity in Target-Date Funds and the Pension Protection Act of 2006

Pierluigi Balduzzi and **Jonathan Reuter**
Boston College, Carroll School of Management

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“A conversation about target-date funds is no less than a conversation about *the future of retirement*.”

Herb Kohl, Chairman of the U.S. Senate’s Special Committee on Aging

Why are Target-Date Funds Important?

- Target-Date Funds (TDFs) "were designed to be *simple*, *long-term* investment vehicles for individuals with a specific retirement date in mind." (**Seth Harris**, Deputy Secretary, DOL)
- **Innovation:** TDFs invest primarily in equity when the target date is distant, but automatically reduce exposure to equity as the target date approaches.
- Pension Protection Act of 2006 (PPA) ➔ TDFs can be used as default investment in 401(k) retirement plans.
- **Investment Company Institute:**

	2006	2009
Share of 401(k) plans offering target date funds	**57%**	**77%**
Share of 401(k) participants investing assets in TDFs	**19%**	**33%**

Our Contributions

- We study the evolution of the market for TDFs between 1994 and 2009, and the impact of the passage of PPA.
- We characterize cross-sectional heterogeneity in:
  - fund returns;
  - equity market betas;
  - bond vs. stock allocations, i.e., “glide paths.”
- We explain cross-sectional heterogeneity in monthly returns in terms of systematic, fund-family, and TDF-level effects.

Main Results

1. We find substantial heterogeneity in returns, betas, and allocations. ➔ TDFs are not commodities.
2. The heterogeneity increased sharply after 2006. ➔ Investors in different TDFs with same target date experienced **very** different returns.
3. We link the increased heterogeneity in annual returns after 2006 to new mutual fund families entering the market after the PPA. ➔ New entrants choose to pursue product-differentiation strategy. ➔ Increased disclosure of glide paths may do little to reduce TDF heterogeneity.

The Market at a Glance

- 1994: Wells Fargo introduced the first TDFs.
- 1994–2009:
  - Number of TDFs grows from **5** to **298**.
  - Number of families offering TDFs grows from **one** to **44**.
  - Total Net Assets grows from **$278 million** to **$245 billion**.
- **27** families enter the market between 2006 and 2009.
- Wells Fargo was market leader until 1997, then Fidelity took the lead.
- Fidelity's market share: 88.1% in 2002; 39.6% in 2009
- 2009: **38** families offered TDFs with 2020, 2030, and 2040 target retirement dates.

Cross-sectional Dispersion of Returns

- Consider the 2015-2020 TDFs:
  - 2000-2009: cross-sectional standard deviation of annual returns increases from **0.5%** to **4.4%**.
  - 2007-2008: cross-sectional standard deviation of annual returns increases from **2.0%** to **5.3%**.
  - 2000-2009: range increases from **1.1%** to **23.5%**.
  - 2007-2008: range increases from **7.7%** to **27.3%**.
  - "Across funds" standard deviation is **3.8%** for TDFs vs. **5.0%** for traditional balanced funds vs. **0.6%** for S&P 500 index funds.

Cross-sectional Dispersion of Betas

- In fixed sample of TDFs, glide path implies beta will ***fall*** as target date approaches.
- But, within our growing sample of TDFs, we observe ***upward*** trend in average beta:
  - 2015-2020 TDFs: from **0.61** in 2000 to **0.75** in 2009;
  - 2025-2030 TDFs: from **0.73** to **0.88**;
  - 2035-2040 TDFs: from **0.83** to **0.94**.
- We observe rise in cross-sectional dispersion of betas as well:
  - 2035-2040 TDFs: cross-sectional standard deviation of betas goes from **0.01** in 2000 to **0.07** in 2009; range of estimated betas goes from **0.02** to **0.30**.
  - Most of the variation in betas is driven by *across-fund* variation.

Bond vs. Stock Allocation

- Within fixed sample of funds, glide path implies allocation to cash and bonds will ***increase*** as target date approaches.
  - Documented by Pang and Warshawsky (2009) and Sandhya (2010).
- But, within our growing sample of TDFs, we observe no obvious trend in asset allocation:
  - 2015-2020 TDFs: average allocation to cash and bonds bounces around between **42.5%** in 2000 and **35.3%** in 2009.
- Cross-sectional dispersion in asset allocations is substantial:
  - For example, **16.2%** for 2015-2020 TDFs in 2009
  - Most of the variation in glide paths is driven by across-fund variation.
  - Also documented by Pang and Warshawsky (2009) and Sandhya (2010).
- But there is no obvious time trend in the cross-sectional standard deviation of cash and bond allocations.

Role of New Entrants

- When we use regressions to study cross-sectional dispersion in monthly returns, we find that increased dispersion in 2007, 2008, and 2009 is due to entry by new mutual fund families.
  - Between 2000 and 2009, one-standard deviation in the *fraction of new funds from families entering the market after 2006* increases the standard deviation of monthly returns by **0.20%**.
  - This is **one-third** the "across funds" standard deviation.
  - We find a similar effect when we focus on 2007-2009.
- Our interpretation is that the PPA encouraged entry by mutual fund families, which then had a strong incentive to differentiate their TDFs from established TDFs.
- In other words, by permitting the use of TDFs as defaults, the PPA contributed to the observed heterogeneity in TDF returns.

Policy Implications

Because portfolio theory cannot identify single "optimal" glide path for all TDFs:

1. Widespread adoption of TDFs will not equalize the returns earned by investors defaulted into different 401(k) plans.
   - In fact, TDF managers have recently become more active in changing strategic allocations and making tactical adjustments. (Callan's 2011 survey of TDF managers)
2. Current proposals calling for additional disclosure in TDF offerings may have little impact on TDF heterogeneity.
   - Employees are limited to TDFs offered within their employer's 401(k).
   - Firms can justify decision to default employees into most, if not all, existing TDFs.