Discussion of:

What do we do with our Pension Money? Recent Evidence from 401(k) Plans

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Outline

1. Data
2. Simple Return/Turnover Correlations – Results & Questions
3. VAR result summary
4. Avenues for new research

The Data

- Big panel data set:
  - Hewitt Associates, LLC data
  - 1.5 million 401(k) participants.
  - Average $68 billion in total assets.
    - The universe of 401(k) plans has $1.8 trillion in assets, and 42 million investors.
  - Time Period: 8/1997-2/2001 ($\approx$ 3.5 years)
- Just 401(k) plans
  - Just large plan sponsors (> 5000 employees)
  - Avg. sponsor offers 10 investment options*
- There are 12 asset classes, but only 6 are analyzed because of the availability of benchmarks.
- Just examines transfers between the 6 asset classes
  - Excludes contributions or outflows
- High frequency (daily) data

Asset Classes

Analyzed:

1. GIC/Cash
2. Bond
3. Balanced
4. Large Equity
5. Medium Equity
6. Small Equity

Not Analyzed:

1. Money Market
2. Lifestyle/Pre-Mix
3. International
4. Emerging Markets
5. Specialty Sector
6. Company Stock

Results

The empirical analysis is dividend into three parts:

1. Return/Turnover Serial/Cross-Correlations
2. VAR analysis
    - Turnover/Return response to Macro-news
3. Variance Decompostion
4. Regime Breaks analysis.

Return/Turnover Serial/Cross-Correlation Results

- Here turnover is defined as the daily signed transfer ($i.e.$, flow), divided by the previous day's balance.

Findings are that:

1. Little serial correlation in flow
   - Longer Horizons? Test power issues?
2. Flows split into two groups:
   (a) GIC & Bond
   (b) Large, Medium and Small Equity.
   - Flows are positively correlated within group, negatively correlated across groups.
   - No big lead/lag effects.
3. Big contemporaneous correlations between returns and flows for all asset classes.
   - Negative contemporaneous correlations between 3 equity class returns and flows into GIC/Bond classes.
   - Suggests segmentation, in that on days when market goes up, investors take their money out of cash and put it into equities

VAR Analysis and Assumptions

- 10 equation, VARs is used as a further test to study the return/flow patterns, and to examine the response to macroeconomic news.
  1. Dependent variables are six turnovers, and four benchmark returns.
  2. exogenous variables are six macroeconomic surprises:
     - Unemployment, Payrolls, CPI, PPI, IP, Consumer Confidence.

Findings:

1. Macro-announcements have a strong effect on returns, but little contemporaneous or lagged effect on flows.
2. Result on long-run effects of turnover shocks on returns seem to be driven by the orthogonalization/ordering choices:
   - Orthogonalization chosen for the VAR analysis is that:

     $$\text{TURNOVER}_t \textit{ causes } \text{RETURNS}_t$$

     $$\text{RETURNS}_t \textit{ don't cause } \text{TURNOVER}_t$$

   - That is, "returns shocks" are orthogonalized with respect to turnover.
3. After the first day, there doesn't appear to be any relation between future returns and turnover.
4. In contrast, future turnover seems related to past (orthogonalized) returns.
   - Large Equity Return $\Rightarrow$ positive GIC & Bond flows in 7-B,D(?)
   - How to reconcile with simple cross-serial correlation results (?)

Signed and Absolute Transfers

- Table 1.A shows the average signed and absolute transfers
  - Here, in millions of dollars – flows all daily.

Asset Class	Daily Bal	Sign'd Xfers	Abs Xfers	Abs/ Bal	Flow Stdev
GIC	12,695	0.86	13.6	0.108%	0.1384
Bond	1,275	0.38	2.6	0.206%	0.2590
Balanced	3,574	-0.53	1.5	0.044%	0.0614
Large Equity	16,990	0.18	8.3	0.049%	0.0657
Med. Equity	3,352	0.67	3.4	0.102%	0.1317
Small Equity	1,102	0.71	2.9	0.269%	0.3575

- The average Daily Signed Transfers, which is the focus of this investigation, are a small fraction of the daily balance (as we would expect).
  - *Question:* Why don't these add up to zero?
  - *Authors mention that 11 of these are positive.(??)*
- There is considerable variation across the asset classes in the ratio of Daily Absolute Transfers to Balance.
- This "Absolute Turnover" is appears strongly related to the time series standard deviation of Signed Turnover (reported in Panel B)

- ***Questions:***
  1. Why is there (relatively) so little activity in the balanced and large equity classes, and so much in the Bond and Small Equity classes?
     - Are aggregates flows into and out of these classes perhaps better indicators of "sentiment"?
  2. How big is the time-series variation in the Absolute Transfers, and what determines this variation?

What Causes Turnover?

- The results in this paper are largely about individuals deciding to move their money from one asset (or asset class) to another.

- Why individuals move their money around is something we don't understand very well, but the effects are big:
  - Lamont and Thaler (2002) document that, for internet spinoffs (like that of Palm/3-Com):

    ...subsidiaries have turnover that is more than five times that of parent turnover, with 37.8 percent of all tradable shares turning over per day. Higher turnover means that subsidiary shareholders have lower holding periods and thus shorter horizons, compared to parent shareholders. UBID non-dealer shareholders, for example, had an average horizon of two trading days, since turnover was more than 100 percent (implying 50 percent turnover excluding dealer trades). (p. 35)

- Also, particularly for the internet spinoffs, we saw the standard relation that high volume was associated with lower returns.

- However, probably the magnitude of the trading volume is too big, and the relationship too strong to explained by traditional liquidity demand models (*e.g.*, Amihud and Mendelson (1986), Vayanos (1998)).

- Stein and Wurgler (2002) have an intriguing new model with an overconfidence basis that might explain such results, and some of the results in this paper.

Other Analyses:

- Own Company Stock.
  - It would be great to analyze the determinants of company stock transfers as a function of recent news events, and own-company stock returns.
- Cultural Effects
  - How do employees within a firm herd on the levels and changes in their allocation choices.