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Unexploited Gains from International Diversification?

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Discussion of “Unexploited Gains from
International Diversification?”
by Didier, Rigobon and Schmukler

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Puzzle in international macroeconomics/finance:

- Why don't international investors diversify their equity holdings more across countries?
- A puzzle given there exists the potential to realize unexploited gains from trade according to predictions from theoretical models of international risk sharing.
- It maybe not be *possible* for agents to behave as standard models predict (e.g., transactions costs), or *desirable* (e.g., existence of other assets in the economy, such as human capital, to hedge against) \implies “unexploited gains” depend on the underlying model of the economy.

What this Paper Does

It asks an interesting, though slightly less ambitious question than above:

- Given portfolios of shares available in a given family of mutual funds, does a manager behave optimally by maximizing over the mean-variance frontier?

Answer: NO

⇒ Why not? How large are the potential gains?

- Information costs cannot explain behaviour
- Potential gains are large (either higher return or lower volatility)

- The authors assemble an impressive dataset:
 - U.S. mutual funds' holdings across the world
 - 8,547 fund-year portfolio observations between 1991-2005
 - 505 fund families and 361 funds
 - 722,885 daily return observations for 36 families and 371 funds
- Allows authors to explore diversification both across and within families of funds \implies clever strategy to try and identify importance of information costs

The Stylized Fact: Mutual Funds do not Diversify Sufficiently

A thorough exploration of U.S. mutual fund data, but:

- How do patterns compare to aggregate holdings of the U.S.? Can be answered with IMF CPIS data
- How do patterns compare to other countries and studies (e.g., Hau and Rey, 2008 AER P&P)?
- How important are mutual fund holdings relative to total assets in the U.S.? Can get a rough estimate from FRB Household Flow of Funds
- How do patterns look across sectors (Brooks and Del Negro, 2002)?
- Breaking down value-based measures (e.g., total value of fund) over the time series into changes of holdings, asset prices and exchange rates may yield some interesting information to help with interpretation (e.g., portfolio rebalancing)

What Explains the Portfolio Patterns I?

- Strategy: regress number of funds' holdings on funds characteristics and several fixed effects \implies family fixed effect explains almost 50% of fit
- Interesting: family fixed effects knocks out fund size and fund expenses while fund fixed effects do not. Why?
- The use of within-family variation to argue against information costs is neat, but can other variables be used as a check?
 - Measure of average distance to countries for a given fund
 - Fund offices in foreign countries if such data exist
 - Helpful to compare with gravity literature on portfolio holdings at aggregate level

What Explains the Portfolio Patterns II?

- How do regression results look using a value-based dependent variable?
 - Is there a reason why *number* of holdings vs. *value* of holdings is the preferred measure for these regressions?
 - A measure based on the “extensive margin” or “specialization” of a fund could be created
 - Might give insight on mechanisms at work (e.g., impact on change in value of holdings over time)
- Picky:
 - How do results look with balanced panel over fund-time dimension?
 - How are standard errors treated? Clustered at family level? Issue of autocorrelation in number of holdings?
 - Use of a non-linear model (e.g., count) for number of holdings?

Simulations of Gains from Diversification I

Large potential gains along mean-variance frontier, but unclear on how to interpret:

- Simulations have rebalancing every day. Doesn't this imply potentially high transactions costs?
⇒ Maybe transactions costs wipe out potential gains?
Related to why index funds beat actively managed funds
- Quite different results given samples of rates used. Trade-off in span over time or over funds
 - Which metric should we “prefer”?
 - Is there a way to quantify potential measurement error from further simulations?

Why are funds not behaving optimally?

- Some theory on portfolio size and gains from diversification would be helpful to get a better grasp on quantitative results (Elton and Gruber 1977, Staman 1987)
 - Main point is that adding stocks decrease net returns of shares already held, so diversification gains might not be big enough
- Narrative evidence from fund managers would be interesting
- Potential for principal-agents problems? Mutual fund managers (agents) trading strategies may not be optimal for fund holders (principals)
- What is relationship to home bias given Global funds include a large component of the U.S.?

- An impressive dataset and a wealth of information provided thus far
- Raises many interesting questions to consider going forward
- More work to better understand the potential gains from diversification
- Some more structure/theory could help potentially