

Do Mutual Funds Trade Differently at Home and Abroad?

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What They Do

- Study changes in mutual fund equity holdings 1998-2007 using huge international sample from Thomson Reuters
 - **10,828** mutual funds spread across **32** home countries
 - **7,498** mutual funds hold equity outside their home countries
 - **46** host countries (when investing abroad)
- **Broad question:** Do MFs follow different investment strategies at home and abroad?
- **Specific question:** Do MFs use contrarian strategies at home and momentum strategies abroad?
- **No.** Robust evidence MFs follow strategy of momentum buys and contrarian sales at home and abroad... but also that strategies respond to trading conditions → **NICE!**

What They Estimate – Part 1

T3-4: For each home and host country, estimate two regressions:

$$(1) Y_{ijt} = \alpha_0 + \alpha_1 \text{Return}_{ij,t-1} + d_t + \varepsilon_{it}$$

$$(2) Y_{ijt} = \beta_0 + \beta_1 \text{Return}_{ij,t-1}^B(Y_{ijt} > 0) + \beta_2 \text{Return}_{ij,t-1}^S(Y_{ijt} < 0) + d_t + \varepsilon_{it}$$

Estimate:	α_1	β_1	β_2
Host = Abroad	0.008	0.096	-0.078
Home	0.009	0.120	-0.104

$\beta_1 > 0 \rightarrow$ more likely to buy winners

$\beta_2 < 0 \rightarrow$ more likely to sell winners

$\alpha_1 \approx 0 \rightarrow$ no simple linear relation between trading and lagged returns

Because these country-level estimates drive the rest of their analysis, I'm going to spend most of my time on them...

What Should We Predict?

- **Starting point:** “Investors have more information about their own local stocks than do foreign investors and have less information about foreign stocks than do foreign investors. Hence investors rationally behave like momentum investors when trading stocks abroad, but act as contrarians when trading local stocks.”
- Seems more reasonable description of retail investors
- MFs can acquire information before investing abroad **or** outsource portfolio management to a foreigner (Cashman & Deli '09) → **extent of asymmetric information endogenous**
- If MFs are (relatively) informed at home and abroad → **expect them to use same (contrarian) trading strategy at home and abroad?**
- Although authors view MFs as a “relatively homogeneous group of institutional investors” their cross-country studies exploit variation in size and age of MF industries → **not all MFs created equal**
- Investors may profit from riding bubbles (Brunnermeier & Nagel '04)

Trading at Home

Authors ask how information asymmetry impacts institutional trading from macro perspective. My discussion takes micro perspective, with focus on robustness and extensions.

Consider estimating (2) for US mutual funds investing in US stocks.

$$(2) Y_{ijt} = \beta_0 + \beta_1 \text{Return}_{ij,t-1}^B(Y_{ijt} > 0) + \beta_2 \text{Return}_{ij,t-1}^S(Y_{ijt} < 0) + d_t + \varepsilon_{it}$$

Measures impact of stock returns on quantities bought and sold, but only within samples of stocks actually bought and sold → I'd like to see R^B and R^S measured relative to average return on all stocks

Ignores cases where there is no change in holdings, but these cases are rare (< 2%) because stock holdings measured relative to float

- When MF experiences net inflows (outflows), holdings go up (down)
- Measuring stock holdings as a fraction of fund assets would identify changes in holdings unrelated to flows

Trading at Home (cont.)

Because authors pool all MFs trading at home, they estimate β_1 and β_2 for average MF trading at home → explicitly ignore within-country variation in investors sophistication and manager incentives that I study → **reasonable in this context.**

If the authors use holdings to measure abnormal performance, do they find that MFs based in some countries persistently outperform MFs based in other countries, when both MFs are trading at home.

- Return gap may be reasonable measure of skill in international context. It is defined as difference between before-fee return implied by fund's lagged holdings and fund's actual before-fee return.

“Typically more foreign funds than domestic funds in our sample” → Should the optimal trading strategy at home depend on the number of foreign (or skilled foreign) MFs that you are trading against?

- Authors relate development of home MF industry to trading at home and development of host MF industry to trading abroad. Could they take into account average skill of MF from each country → **different paper?**

Trading Abroad

Mutual funds that invest abroad have varying degrees of flexibility

- MFs restricted to single country → choose stocks that maximize MF objective function
- MFs restricted to broader geographic regions → choose countries then choose stocks within these countries

Again, the authors condition on which stocks are actually bought and sold. However, the decision not to buy any of the stocks available in a country (or to offer funds that invest in that country) should reflect differences in asymmetric information → another margin to study.

In these specifications, authors pool all foreign MFs. Do Finnish MFs trading in Sweden face same degree of asymmetric information as US MFs, Japanese MFs, or Australian MFs? Will depend, in part, on sophistication of home MF industries.

Home versus Abroad

Throughout the paper, the authors compare trading of German stocks by German MFs to trading of German stocks by non-German MFs

- Again, it might be interesting to distinguish trading by MFs from countries with more or less developed MF industries, or with higher or lower average performance

To more directly answer the question “do MFs trade differently at home and abroad”, I would also compare trading of German stocks by German MFs to trading of non-German stocks by German MFs

- Cleanest comparison would hold mutual fund family constant (or include family-by-time FEs) and compare sensitivity of buys and sells in home and foreign markets to lagged returns.
- For example, studying DekaFonds in Germany should hold constant both MF skill and investor sophistication.

What Else They Estimate – Part 2

T5-8: Regress β_1 and β_2 on time-invariant, country-level characteristics to test how momentum buying and contrarian selling strategies respond to differences in the trading environment

- Country-level characteristics tend to have good explanatory power for β_1 and β_2
- I'd like to see the same set of characteristics in T5 (buys) and T6 (sales). This would allow authors to test prediction that characteristic should only matter for sales, for example.

T9: Pooled multiple-country regressions of changes in equity holdings on lagged returns and lagged return interactions related to market state, extreme returns, July-December, and capital gains

- I'd like to see estimates on the non-interaction terms.
- In some specifications, I'd also like to see a fuller set of interactions, to see whether interactions only matter in directions predicted. For example, include $\{R^B \times \text{Winner}, R^B, R^B \times \text{Loser}, R^S \times \text{Winner}, R^S, R^S \times \text{Loser}\}$ instead of $\{R^B \times \text{Winner}, R^B, R^S, R^S \times \text{Loser}\}$.
- Whereas T8 equally-weights each country, T9 puts more weight on countries with more observations.

What Else They Estimate – Part 3

T10: Pooled multiple-country regressions of firm-level stock returns on lagged fund-level buys and sells and lots of interactions with {home vs. abroad} and country-level characteristics

- Very intriguing result that trades by home MFs predict future returns...
- ... but I am shocked that the model can explain 34.4% of the variation in future firm-level stock returns! How much of this is coming from time FEs? From country characteristics?
- Do they have the right specification? If 50 US funds trade Nokia in first half of 2000, Nokia's return in the second half of 2000 is repeated 50 times as the dependent variable. I'd like to see data aggregated to {country of stock, country of fund} level and standard errors clustered simultaneously on both countries.
- Are the results driven by flow-induced price pressure (Dong Lou '10)?
 - Funds lucky enough to have invested in winning stocks receive additional flows, which they reinvest in their past winners, pushing up prices.
- **Falsification test:** If you restrict your sample to index funds, what do you find in terms of return predictability? (In earlier specifications, should find $\beta_1 = \beta_2 = 0$.)

Conclusion

- Paper is ambitious and interesting.
- I believe their main results about momentum buys and contrarian sales and was pleasantly surprised at how well they are able to explain cross-country differences in β_1 and β_2 (although the number of hypotheses they test is a bit overwhelming).
- I like that their model to predict future returns includes interactions involving both home and host country characteristics. If their ability to predict future returns proves robust, the paper should receive lots of attention from academics and practitioners.