

The investment technology of foreign and domestic institutional investors in an emerging market

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July 19, 2013

What is the role of foreign investors?

- The international finance literature has documented many problems : home bias, herding, sudden stops, etc.
- At the same time, foreign investors fund the CAD, and contribute to domestic financial system development.
- Strong evidence of home bias: E.g. in India only a few hundred firms get foreign investment.
- That begs the question: Do foreign investors choose firms that different from those that domestic investors choose?
- Do these firms perform better?
- This is a question about the investment technology of foreign investors in an emerging market.

Part I

Data description

What do we observe

- Listed companies from 2001 to 2011.
- Share of promoter ownership and various firm characteristics from CMIE Prowess database.
- Foreign and domestic institutional ownership (FII and DII).
- For example, in 2011, out of 3122 firms in the dataset 700 firms had some FII investment, while 900 had DII investment. The rest had no institutional investors.

FII and DII choose different kinds of firms

Tobit models with HC, clustered standard errors

	FII	t	DII	t
Insider holding	-0.13	-7.16	-0.02	-1.74
Log mktcap	7.14	30.01	3.88	22.05
Turnover ratio	0.39	1.14	-1.36	-5.48
Yield	-0.29	-3.25	-0.09	-1.36
Domestic beta	3.39	4.61	-0.49	-0.97
Global beta	0.74	1.77	-0.17	-0.51
Total Risk	-4.92	-2.80	-0.43	-0.35
Export to sales	0.01	1.11	-0.01	-0.81
Age	-0.11	-5.72	0.16	9.39
Is public sector	-6.00	-2.76	10.32	4.52
Tangibility	-0.03	-2.94	0.08	9.06
Low R and D	-0.33	-0.59	1.74	3.43
High R and D	0.99	1.64	-1.55	-2.66

Part II

Questions and methodology

Pre-conceptions versus results

- FIIIs prefer large, young, private firms with low tangible assets.
- DIIIs prefer older, smaller firms with large fixed assets and low R&D.
- Can we conclude from this that the FII choice is better than that of DIIIs? For their investors and/or for the economy?
- No. Our pre-conceptions might be wrong.

Solution: The proof of the pudding lies in looking at the future performance of these firms.

Look not just at stock market returns (“investment technology”) but also at economic outcomes : capital, labour, output, productivity.

Asset allocation vs. security selection

- Suppose an FII has an investment mandate of investing in companies which are bigger than \$1 billion.
- We should evaluate his skill by comparing firms chosen by him against \$1 billion firms not chosen by him.
- Asset allocation : Fama-French factors – size, B/P, β .
- FIIs are very different from domestics on their exposure to these asset pricing factors.
- These are decisions of the ultimate investors.
- The financial intermediary – the fund manager – only gets to exercise skill in security selection.
- We want to compare the *skills in security selection* of foreign institutional vs domestic institutional investors.

Solution: Hold the fund manager accountable for security selection but not for asset allocation.

Establishing a quasi-experimental design

To assess the skill selection of FIIs:

- Drop observations of firms which have both high FII and high DII.
- Identify firms with high FII and low DII.
- Identify similar firms (matched by asset pricing factors) which have neither DII nor FII investment.
- Drop high FII, low DII firms where no good match can be found.
- This will give a clean balanced design.
- Regressions of the form $y_{i,t+k} - y_{i,t} = a_0 + a_1 D + e_{i,t}$ where the growth in y is explained using the dummy variable D which denotes high FII investment.
- Clustered and heteroscedasticity-robust standard errors are reported.

Key insight: Establish a clean quasi-experimental design, and *then* do simple regression. Similar design for high DII, low FII firms.

Variations on the design

- 1 Weight by size so as to not treat all firms as identical
- 2 More extreme definitions: FII above 66th percentile and DII below 33rd percentile.
- 3 Include a fourth asset pricing factor, liquidity.

Part III

Results

How to interpret the results

- The paper shows results on many time horizons: 1 year, 2 years, 3 years out.
- We look *back* also, which gives us insights into how FIIs and DIIs think.
- As an example, in the next slide, we look only at the results three years out.

	Baseline		Size wts		Extreme defn		With liq.	
	FII	DII	FII	DII	FII	DII	FII	DII
Fix. ass.	0.23***	-0.04	0.16*	-0.12*	0.27**	-0.08	0.17**	-0.02
Empl.	0.11	-0.04	-0.01	-0.1	0.03	-0.1*	0.06	-0.04
Sales	0.16*	0.06	0.24**	0.15	0.02	-0.01	0.12	0.04
CD prd.	-0.05	0.08*	0.1	0.24**	-0.22	0.04	-0.05	0.07
LP prd.	0.00	0.01	0.01	0.06**	0.01	0.01	0	0.02*
Price	-0.12	0.18**	-0.11	0.24	-0.38**	0.24**	-0.1	0.18**

- FII: Strong asset growth, some output growth.
- DII: Productivity growth.
- FII: Poor stock market returns.
- DII: Strong stock market returns.

Conclusions

- FIIIs and DIIs often prefer different firm characteristics. But that does not tell us who does a better job at choosing firms.
- They also have a different asset allocation.
- We compare the selection skills of foreign and domestic investors using a quasi-experimental methodology that controls for asset allocation.
- It appears clear that FIIIs do a bad job of picking securities and give their investors poor returns. The firms they pick get high capital growth but do not see productivity grow.
- DIIs do a much better job of choosing companies that give better stock market returns. The firms they choose do not see growth in capital, but witness growth in productivity.

Future work

- Methodology can be applied in all EMs.
- Heterogeneity in outcomes: over time, across certain kinds of firms and market conditions.

Thank you.
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