

# Investment choices of foreign and domestic institutional investors

Ila Patnaik    Ajay Shah

NIPFP

September 30, 2008

# Outline

- 1 Motivation
- 2 Data
- 3 Results
- 4 Sensitivity tests
- 5 Conclusions

# Understanding foreign investors

- When emerging markets open up to capital flows, understanding foreign investors becomes important.
- One element: Understanding their portfolio choices.  
*Are foreign investors different? Do they buy shares of different kinds of firms?*

# Understanding foreign investors

- When emerging markets open up to capital flows, understanding foreign investors becomes important.
- One element: Understanding their portfolio choices.  
*Are foreign investors different? Do they buy shares of different kinds of firms?*
- In recent years, the finance literature has emphasised the unique features of *institutional* investors:
  - 1 Consequences of the principal-agent problem;
  - 2 Aspects of behaviour induced by regulation;
  - 3 Requirements for certain kinds of liquidity-motivated transactions.
- To identify unique features of *foreign* investors, we compare foreign institutional investors versus domestic institutional investors.

# Two kinds of datasets

**Observe a sample of investors** Many papers are based on observation of the global portfolio of a small set of institutional investors. E.g. Ferreira and Matos, JFE, 2008.

**Observe the ownership of firms** Some papers are based on comprehensively observing the ownership structure of all the firms of a country. E.g. Dahlquist, JFE, 2001.

# International evidence

- Foreign and domestic investors have largely similar preferences.
- Both prefer large liquid firms.
- Foreign investors have a preference for cross-listed firms.
- Evidence is mainly from developed countries.

# India is one of the few countries with good data

- Comprehensively observe data about ownership structure
- CMIE database - all other aspects of firms visible in a unified database.
- Only a handful of countries appear to have such a research opportunity: Sweden, Japan, Taiwan, Korea, Finland.
- We observe unbalanced panel data: from 847 firms in 2001 to 1546 firms in 2007.

# Main findings

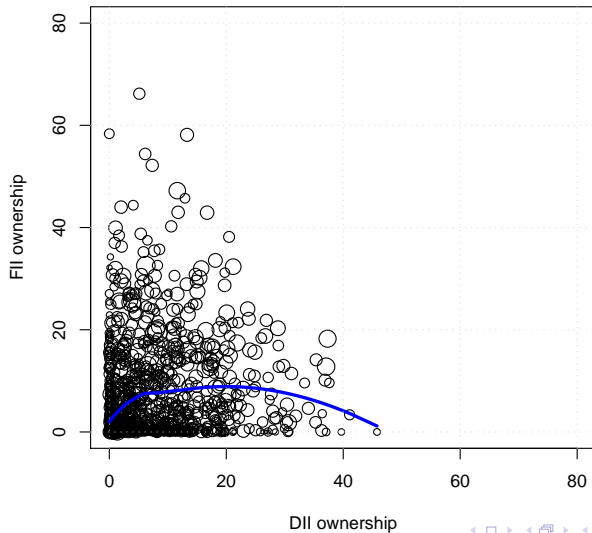
- Foreign institutional investors are substantially unlike domestic institutional investors
- Foreign investors prefer:
  - ▶ more liquid
  - ▶ younger
  - ▶ private
  - ▶ firms with global visibility.
- Domestic investors prefer less liquid, older firms with bigger fixed assets and more leverage.
- Differs from the result often seen in the literature, where domestic and foreign institutional investors are much alike.
- FII and DII are playing different roles in Indian finance.



## A lot of zeros

Year	Number of firms			Market capitalisation (Bln. USD)
	Total	Non-zero FII	Non-zero DII	
2001	847	323	768	108.5
2002	857	274	755	122.7
2003	897	251	772	118.9
2004	1015	372	845	253.0
2005	1252	556	1000	353.5
2006	1400	739	1100	641.6
2007	1546	844	1216	756.1

# Are FIIs and DIIs alike?



# Tobit modelling

Since there are many zeros,

$$y^* = \beta'X + u \quad u \sim N(0, \sigma^2) \quad (1)$$

$$y = \begin{cases} 0 & \text{if } y^* \leq 0 \\ y^* & \text{if } y^* > 0 \end{cases} \quad (2)$$

HC standard errors; year fixed effects.

# Explaining FII and DII ownership

	FII ownership		DII ownership	
	Estimate	z value	Estimate	z value
Year fixed effect	Present		Present	
log(MKTCAP)	3.4697	48.06	1.7255	31.95
TR	0.0004	2.29	-0.0005	-2.96
Returns	0.0000	1.51	-0.0001	-1.10
Leverage	0.0027	0.23	0.0339	3.37
Promoter share	-0.1572	-24.01	-0.1815	-30.11
Exports to sales	0.0086	2.49	-0.0130	-4.52
Age	-0.0494	-10.37	0.1011	22.34
NPM	0.0017	9.73	-0.0008	-4.74
PSU dummy	-4.6937	-3.96	1.0425	0.81
Tangibility	-0.0180	-6.18	0.0349	11.71
Capital intensity	-1.9971	-2.66	-4.5083	-6.49
Book to market	0.1100	2.72	0.1289	2.19

# Key findings

- Both foreign and domestic institutional investors like large firms. The preference of foreign investors is stronger.
- Foreign investors prefer:
  - ▶ more liquid
  - ▶ younger
  - ▶ private
  - ▶ firms with global visibility
- Domestic investors prefer older firms with bigger fixed assets, more leverage and less liquidity.

# Sensitivity tests

- 1 Alternative measures of size : log mktcap, log gross value added, log total assets, log sales.
- 2 Alternative measures of operating performance: net profit margin, return on assets, return on equity.
- 3 Alternative measures of valuation: book to market, earnings by price, dividend yield
- 4 Model specification: Introduce industry fixed effects.
- 5 Observations weighted by firm market capitalisation.

# Size

Size measure	FII ownership		DII ownership	
	Estimate	z value	Estimate	z value
Log market capitalisation	3.47	48.06	1.73	31.95
Log gross value added	3.94	42.70	2.38	35.36
Log total assets	4.00	42.53	2.43	36.11
Log sales	3.39	37.19	2.23	33.63

Both FIIs and DIIs like large firms. FIIs like them more.

## Sensitivity tests II

- We do sensitivity tests using alternative measures of operating performance such as return on assets and return on equity. We find that FIIIs either like better operating performance or are indifferent to it. DIIIs either dislike better performance or are indifferent to it.
- But when we test for alternative measures of valuation we find that the result we got for book to market does not hold up.



# Model specification

- We add 14 major industry dummies.
- The key results do not change.

## Weighted by market capitalisation

	Estimate	z value	Estimate	z value
Liquidity	0.0004	13.81	-0.0004	-17.65
Returns	0.0001	19.12	-0.0000	-8.41
Leverage	-0.0023	-0.64	0.0365	12.23
Promoter share	-0.1883	-157.58	-0.1928	-159.13
Exports to sales	0.0088	12.82	-0.0158	-25.12
Tangibility	-0.0266	-43.62	0.0303	45.91
Age	-0.0621	-66.40	0.0999	108.08
PSU dummy	-4.7420	-31.51	0.8014	4.84
Capital intensity	-1.0867	-7.99	-2.5696	-18.79
log(MKTCAP)	3.4803	290.53	1.5923	137.65
NPM	0.0016	72.62	-0.0007	-33.47
Book to market	0.0804	5.90	0.1863	8.58

We do all the sensitivity tests mentioned above and our key results do not change.

# Summary

	FII	DII
Size	++	+
Liquidity	+	-
Leverage		+
Exports to sales	+	-
Age	-	+
PSU	-	
Tangible assets	-	+

FII and DII finance different kinds of firms.

## Continuing work...

- Collecting and matching data for cross-listing by Indian firms.
- Analysing choices of different categories of DIIs - mutual funds, insurance companies.

Thank you.