

What makes home bias abate? The evolution of foreign ownership of Indian firms

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Abstract

Between 2003 and 2007, the value of shares of Indian companies held by foreigners went up by 13 times. This paper seeks to explain this event. A simple decomposition of changes in the value of foreign shareholding suggests a negative contribution owing to changes in insider shareholding (which actually went up), with the bulk of the change being contributed by the rise in Indian market capitalisation and the rise in foreign ownership as a fraction of outside shareholding. The exploration of foreign ownership as a fraction of outside shareholding shows an important phenomenon of zero-foreign-ownership companies. After controlling for firm characteristics in the context of a Tobit model, year fixed effects prove to be largely stable. This suggests that the reduction in home bias was rooted in altered *firm* characteristics.

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1 Introduction

India's engagement with international equity investment began with a country fund in 1986, followed by the 'foreign institutional investor' framework initiated in 1992. From 1992 till 2001, substantial changes were made to the system of capital controls and to the institutional mechanisms of the equity market.

In March 2003, the market value of shares owned by all foreign investors stood at \$11.5 billion. This was an insignificant number whether compared with the corporate financial structure of local firms, the pool of global equity capital, or the magnitudes seen in Indian macroeconomics.

In March 2007, the market value of shares owned by foreign investors had risen to \$151.3 billion. By this time, it was a more important part of the financing of local firms. With this mass of invested capital, India was significant in the eyes of global financial firms. The capital flows associated with portfolio adjustments, and incremental decision making, on this stock of invested assets had become more important in thinking about Indian macroeconomics.

This event - an increase in the value of foreign ownership of Indian equities of 13 times in 4 years, that involves a halving of home bias - demands explanation. Why did foreign ownership of Indian shares grow so dramatically in a short period? In this paper, we harness a unique firm-level dataset to shed light on this question.

A pessimistic view of foreign capital sees portfolio flows as being driven by a country catching the fancy of global capital. This view emphasises *country* factors. In this perspective, investing in India became fashionable, leading to large capital inflows. Conversely, a significant reversal of capital flows would be expected if India becomes unfashionable.

In a less pessimistic view of foreign capital, this change in foreign ownership reflects changes in India, and could be interpreted as a successful engagement with globalisation. In this paper, we examine the extent to which this rise in foreign ownership of Indian firms can be attributed to changes in firm characteristics.

Three classes of explanations are identified, in understanding a change in the value of foreign ownership of Indian shares. Changes in the Indian market capitalisation could induce a bigger dollar value of foreign ownership, if foreign investors retain erstwhile levels of home bias. Changes in insider control

could modify the space available for foreign investors, as emphasised by Stulz (2005). Finally, the fraction of outside shareholding held by foreigners could change, reflecting characteristics of the country or of the firms.

We offer a simple accounting framework to assess the importance of these three effects which shape the change in the dollar value of foreign ownership of shares. In years where the bulk of the increase in foreign ownership took place, the ‘Stulz effect’ did not contribute to the increase, because insider shareholding actually went up. The bulk of the change was caused by larger market capitalisation of Indian equities, and by a bigger fraction of outside shareholding being purchased by foreigners.

Our exploration has, hence, to be focused on understanding the change in the fraction of outside shareholding of firms that foreigners choose to hold. We approach this using firm-level data. The null hypothesis of foreigners only buying Indian index portfolios is not supported by the data. There is strong heterogeneity in foreign ownership of different companies.

The data shows that many firms have zero foreign ownership. This censoring is modeled using a Tobit model which determines the fraction of outside shareholding that is purchased by foreigners. In this model, three groups of variables matter. These are size variables (total assets, market capitalisation, and market value held by outside shareholders) equity financing variables (turnover ratio interacted with log market capitalisation, recent 12 months return, offshore listing, and outside shareholding) and other firm characteristics (age, capital intensity, asset tangibility, and exporting status).

The most interesting feature of the results lies in the year fixed effects. These measure the year-to-year changes in foreign ownership by year after controlling for firm characteristics. The year dummies are broadly stable across all the five years. This suggests that after controlling for firm characteristics, there are no large country effects left. In other words, it was modified *firm* characteristics that led to a sharp transformation of foreign ownership of Indian firms from 2003 to 2007.

2 Institutional setting

India embarked on a major program of modifying incentives and institutions on the securities markets in the 1990s (Shah and Thomas, 2000; Thomas, 2006). This involved a new securities regulator (SEBI), and a new set of securities trading institutions (NSE, NSCC and NSDL). These institutions

innovated on the market design, introducing all the elements of world class securities infrastructure: demutualisation of the exchange (1993), electronic limit order book market (1994), elimination of entry barriers into intermediation (1994), nationwide access (1994), novation at the clearing corporation (1996), dematerialised settlement (1996), equity derivatives trading (2000-2001) and T+3 and then T+2 rolling settlement (2001, 2002).

This reforms program had a profound impact upon transactions costs. It helped foster IPOs and the growth of market capitalisation, and foreign investment. It also eliminated the rationale for offshore issuance as a mechanism to disintermediate an inefficient domestic market.

In the process of institution building on the securities markets, India harnessed the scale economies associated with a large number of listed companies and a large number of active speculators. The two stock markets in India - NSE and BSE - are ranked 3rd and 5th in the world by the number of transactions. These economies of scale in India were a sharp contrast with the difficulties faced by many small countries in building liquid securities markets.

Through these reforms, the equity market has developed a sophisticated 'ecosystem' comprising:

- A professional private equity and venture capital industry for incubating firms;
- An effective IPO market, where firms go public for the first time;
- A remarkably liquid secondary market;
- Stock market indexes and index funds;
- Equity derivatives based on both index and individual stock underlyings.

3 The evolution of foreign ownership

In this paper, we focus on the period after 2001, a period in which there was stability of capital controls and of the institutional development of the equity market. As Table 1 shows, over the six-year period under examination, dramatic changes took place in foreign ownership of Indian equities. While the Indian equity market capitalisation went up by 7.04 times, the market value of foreign ownership went up by 13.9 times.

Table 1 Expansion of foreign ownership of Indian equities

Parameter	March 2001	March 2007	Rise
	(Billion dollars)		(times)
CMIE COSPI market capitalisation	114.1	803.1	7.04
Foreign ownership	10.9	151.3	13.9

Table 2 Change in home bias against India

	March 2001	March 2007
ICAPM weight of India	0.42	1.53
Actual weight of India	0.04	0.24
Home bias metrics		
1 - (actual/ICAPM)	0.92	0.82
ICAPM /actual	10.38	5.42

Table 2 interprets these changes from a home bias perspective. The share of Indian equity market capitalisation in world equity market capitalisation went up from 0.42% to 1.53% over this period. The actual ownership of Indian equities by foreigners went up from 0.04% to 0.24% of the world portfolio. While the normative share of India in the world portfolio went up by 3.64 times, the actual share of India went up by 6.97 times. As a consequence, home bias against India declined. The ICAPM weight went from being 10.38 times bigger than the actual in March 2001, to being 5.42 times bigger in March 2007.

In March 2007 also, there was a substantial home bias against India. However, home bias had come down by a significant extent over this period.

4 Explaining changes in home bias

It is possible to identify three sources of change in the value of shares owned by foreign investors:

Change in market capitalisation The simplest source of change in the value of shares owned by foreigners lies in the change in the Indian market capitalisation. Table 1 shows a seven-fold rise in the Indian equity market capitalisation over this six year period. The weight of India in the ICAPM portfolio would, then, be inevitably higher.

As a first approximation, we may treat world market capitalisation as

unchanging. In this case, an increase in the value of foreign shareownership would be induced when domestic market capitalisation rises if foreign investors merely maintained their erstwhile levels of home bias.

Change in insider ownership Stulz (2005) has emphasised that insider ownership limits the extent to which home bias can go down. If the ICAPM weight of India is 1.5%, then foreigners should own 97.5% of Indian firms. However, if insiders find it optimal to hold substantial stakes in the firms that they control, then the elimination of home bias is mechanically infeasible. Stulz argues that the elimination of home bias is hence infeasible until the institutional environment of a country enables a shift towards dispersed ownership.

Kho *et al.* (2006) examine the empirical evidence from two points of view. First, using aggregate data, they find that the home bias of US investors declined the most from 1994 to 2004 for countries which (a) had lower insider shareholding in 1994 and (b) had a decline in insider shareholding from 1994 to 2004. Further, using firm-level data for Korea, they document how a sharp reduction in home bias was critically enabled by a class of firms where the insider shareholding declined sharply.

Researchers examining the ownership structure of Indian firms find that a substantial extent of insider shareholding is optimal (Selarka, 2005). This suggests that the issues of optimal insider ownership, and corporate governance, are likely to play an important role in understanding home bias.

Change in fraction of outside shareholding owned by foreigners The third aspect lies in changes in the fraction of outside shareholding that is in the hands of foreigners.¹ This may respond to traditional issues in the home bias literature, including (a) Capital controls, (b) Hedging

¹In order to illustrate the difference between foreign ownership as a fraction of the total as opposed to foreign ownership as a fraction of outside shareholding, we show two Indian software companies, Infosys and Wipro:

	Wipro		Infosys	
	2000	2007	2000	2007
Percent to total	2.33	5.14	28.89	32.55
Percent to outsider shareholding	14.53	32.76	40.78	61.90

Foreign ownership of Infosys (32.55% in 2007) appears enormously bigger than that in Wipro (5.14%). However, when foreign ownership is expressed as a proportion of outside shareholding, the difference between the two firms is smaller (61.89% against 32.76%), since the insider shareholding of Wipro is much larger.

Table 3 Features of Indian firms

Year	For. own. (fraction of outsider)	Insider own. (fraction of total)	Market capn. (Trn. Rs.)	Foreign market capn. (Trn. Rs.)
2001	0.2049	0.4804	4.80	0.51
2002	0.2271	0.5122	5.50	0.61
2003	0.2105	0.5161	5.37	0.55
2004	0.2798	0.5354	11.51	1.49
2005	0.3091	0.5555	16.63	2.28
2006	0.3349	0.5323	29.69	4.65
2007	0.4100	0.5471	35.13	6.52

motives, (c) Informational asymmetries and (d) Behavioural biases.

In order to obtain a quantitative sense of the role played by these three aspects of the problem, we obtain a decomposition of F , the value of foreign ownership of shares in an emerging market. Let

$$F = g(1 - p)M \quad (1)$$

where M is the market capitalisation of the country; p is the insider shareholding and g is the fraction of outsider shareholding that is held by foreigners. Total differentiation yields:

$$\Delta F \approx M(1 - p)\Delta g + g(1 - p)\Delta M - gM\Delta p \quad (2)$$

The first term, $M(1 - p)\Delta g$, can be interpreted as the change in F associated with a change in g holding other things constant. This corresponds to traditional home bias explanations.

The second term, $g(1 - p)\Delta M$, measures the rise in foreign ownership owing to a higher M , holding other sources of home bias unchanged. It reflects foreign investors preserving their ownership of $g(1 - p)$ on a larger M , reflecting ICAPM-style reasoning while ignoring changes in world market capitalisation.

The third term, $-gM\Delta p$, may be termed a ‘Stulz effect’, reflecting the drop in foreign ownership associated with a rise in insider ownership p , while holding other things constant.

This decomposition is not an economic model explaining the dynamics of F . Rather, it represents an attempt at accounting for the changes in F and obtaining a quantitative sense of the importance of the three forces at work.

Table 4 Decomposition of changes in value of foreign ownership

(Billion rupees)					
Year	Components			Discrepancy	ΔF
	Traditional	ICAPM	Stulz		
2002	59	77	-40	-1	97
2003	-43	-13	-4	1	-62
2004	371	799	-62	158	950
2005	217	703	-104	28	788
2006	358	2046	231	269	2366
2007	1193	1011	-213	119	1872

Table 3 summarises facts about Indian firms from this point of view. From March 2001 to March 2007, the overall market capitalisation of Indian firms went up from Rs.4.8 trillion to Rs.35.13 trillion. The value of foreign ownership went up from Rs.0.51 trillion to Rs.6.52 trillion. Foreign ownership rose sharply from 21.05% of the outside shareholding (worth Rs.0.55 trillion) in 2003 to 41% of outside shareholding (worth Rs.6.52 trillion) in 2007.

From 2001 till 2007, the insider ownership went *up* from 48.04% to 54.71%. The Stulz effect was playing against foreign shareholding.² At the same time, the fraction of outside shareholding owned by foreigners went up significantly, from 20.49% to 41.0%. This suggests that the traditional sources of home bias were being alleviated over this period.

Table 4 applies the decomposition of ΔF in equation 2 to interpreting the Indian experience. Because g , p and M undergo large changes, the calculus-based formula is only an approximation. In the table, the three components are shown, as is the discrepancy against the observed ΔF . In 2004, the discrepancy is 11% of ΔF , but apart from that, it attains small values.

As an example, in 2007, F rose by Rs.1872 billion. We decompose this change into three elements. It reflects a decline of Rs.213 billion owing to the Stulz effect, for insider shareholding went *up* in 2007. There was a rise of Rs.1011 billion owing to the rise in the market capitalisation of the Indian equity market. Finally, there was a rise of Rs.1193 billion owing to an increase in the fraction of outside shareholding held by foreigners. Re-expressing the components as percent of ΔF , the contributions were: +64% owing to traditional home bias explanations; +54% owing to ICAPM explanations and

²A decomposition by size (i.e. market capitalisation) shows that insider shareholding went up in all size deciles between 2001 and 2007, except for a slight decline in the bottom, 8th and 9th deciles.

-11% owing to the Stulz effect.

This decomposition shows that ICAPM- and Stulz-style arguments are useful for understanding the time-series of ΔF . However, a good part of the story is not told by these two factors. This lies in the change in the fraction of outside shareholding that is held by foreigners, i.e. the traditional sources of decline in home bias.

5 Fraction of outside shareholding held by foreigners

A key element in understanding the sharp rise in foreign ownership of Indian shares lies in the sharp change in g , the proportion of outside shareholding held by foreigners. This doubled from 21% in 2003 to 41% in 2007. What caused this sharp change?

The simplest H_0 that can be posed is that foreign investors, as a class, are index investors. In this world, foreign investors only do country-picking, and country characteristics are all that shape home bias. Under H_0 , there should be no cross-sectional variation in foreign ownership of Indian firms. This null is strongly rejected by the evidence. Some firms have very high foreign ownership, and a large number of firms have zero foreign ownership. Foreign investors only invest in some firms, and there is large heterogeneity in the fraction of the shares that are bought by foreign investors.

This motivates a quest for an examination of the cross-sectional characteristics of firms, which explains the variation in foreign ownership. The unit of observation in traditional discussions about home bias has been the country. However, understanding why some firms are able to have substantial foreign shareholding while others do not could give us new insights into home bias. Such results can also be useful in doing normative corporate finance, in addressing the question of an Indian firm which seeks to obtain greater foreign shareholding.

5.1 The phenomenon of zero foreign ownership

In the literature, there is evidence of a large number of firms who are unable to internationalise (Claessens and Schmukler, 2006). In our dataset, the median value of foreign ownership is 0%. If we think in terms of $F = g(1-p)M$ at the

Table 5 Counting firms with non-zero foreign ownership

Year	Zero	Nonzero	Total
2001	1359	465	1824
2002	1537	432	1969
2003	1643	421	2064
2004	1510	549	2059
2005	1418	736	2154
2006	1292	949	2241
2007	1297	1087	2384
Sums	10056	4639	14695

firm level, changes in insider shareholding p or market capitalisation M do not affect foreign investment in the country F when $g \approx 0$. In other words, when $g = 0$ in the decomposition of ΔF in equation 2, the ICAPM effect and the Stulz effect cease to operate. Conversely, a reduction in home bias involves two distinct phenomena: Some zero-foreign-ownership firms that transit into non-zero ownership, and an expansion of the foreign ownership of firms with non-zero ownership.

Table 5 counts firms across the years, focusing on how many firms achieved non-zero foreign investment. Summing across years, 10,056 firm-years out of the 14,695 firm-years in the dataset had zero foreign ownership. At the same time, the firms with non-zero foreign ownership accounted for more than 90% of the market capitalisation of the full dataset in all the years, going from a low of 90.2% in 2003 to 96.7% in 2007.

5.2 Modeling foreign ownership

We thus have a dataset where foreign ownership is zero for a large number of firm-years, but achieves significant positive values for roughly one-third of the dataset. A natural modeling strategy for such a censoring mechanism is a Tobit model, as has been done by Claessens and Schmukler (2006). The model is:

$$y^* = \beta' X + u \quad u \sim N(0, \sigma^2) \quad (3)$$

$$y = \begin{cases} 0 & \text{if } y^* \leq 0 \\ y^* & \text{if } y^* > 0 \end{cases} \quad (4)$$

Here X is a vector of firm characteristics which induces a latent variable

Table 6 Rise in foreign ownership across the years

The dataset used in this regression is only the firms where foreign ownership is non-zero. The only explanatory variables are year fixed effects. This shows a rise in foreign ownership from 9.08% in 2003 to 19.04% in 2007. These values differ from those seen in the first column of Table 3 since this is an equally weighted OLS while that table defines foreign ownership as the sum of foreign holdings divided by the sum of outside market value.

Coefficient	Value	t statistic
2001	8.89	10.93
2002	8.73	10.06
2003	9.08	10.13
2004	11.52	15.50
2005	11.75	19.09
2006	14.92	27.40
2007	19.04	37.44

y^* through coefficients β with a normally distributed error. If $y^* > 0$, the observed foreign ownership is y^* , else we observe 0.

The prime phenomenon of interest is the sharp rise in foreign ownership between 2003 and 2007. Table 6 shows an OLS regression, using only firms where foreign ownership is non-zero, using year fixed effects. This suggests a large shift in foreign ownership, from 9.08% on average in 2003 to 19.04% in 2007.

Table 7 shows maximum likelihood estimates of the Tobit model, using sandwich standard errors (Zeileis, 2004, 2006). There are four groups of explanatory variables: Size variables, equity financing variables, other firm characteristics, and year dummies.

Three *size variables* appear to be significant: log market capitalisation (with a nonlinearity modeled using a cubic orthogonal polynomial), the market value of outside shareholding, and total assets (with a nonlinearity modeled using a cubic orthogonal polynomial). All three size measures are correlated. Hence, coefficients on any one of these should be viewed with caution. As an example, the polynomial in log market capitalisation has a negative sign on the cubic term. For large values of log market capitalisation, this is strongly negative. However, firms with a large value for log market capitalisation are likely to also have large values for the other size variables.

Several *equity financing* variables matter. Stock market liquidity enters the equation through the product of the turnover ratio and log market capitalisation. As Figure 2 shows, this matters strongly for values from 0 to 1000, and

Table 7 Tobit model estimates

Parameter	Coefficient	<i>t</i> statistic
<i>Year fixed effects</i>		
2001	-83.067	-6.62
2002	-84.222	-6.71
2003	-85.165	-6.79
2004	-85.192	-6.78
2005	-85.914	-6.84
2006	-86.427	-6.88
2007	-84.023	-6.70
<i>Size variables</i>		
Log market capitalisation		
polynomial 1	-3048.100	-4.79
polynomial 2	256.380	11.48
polynomial 3	-132.020	-6.87
Log outside market cap	23.389	6.72
Total assets		
polynomial 1	2.270	0.06
polynomial 2	-265.650	-10.62
polynomial 3	72.898	3.23
<i>Equity financing variables</i>		
Turnover ratio times log market cap		
polynomial 1	136.190	7.78
polynomial 2	-83.249	-5.02
polynomial 3	62.558	3.97
Last 12 months returns	-0.005	-3.22
Has an offshore listing	13.569	7.76
Outside shareholding		
polynomial 1	-771.210	-5.16
polynomial 2	150.350	2.78
polynomial 3	-133.22	-4.56
<i>Other firm characteristics</i>		
Year of incorporation		
polynomial 1	205.630	12.23
polynomial 2	3.405	0.224
polynomial 3	-67.178	-4.76
Total assets per unit value added	-8.350	-4.60
Gross fixed assets per total assets	-0.002	-3.67
Exports to sales is > 1%	1.797	3.672
Log sigma	2.607	140.79

Figure 1 Response to total assets

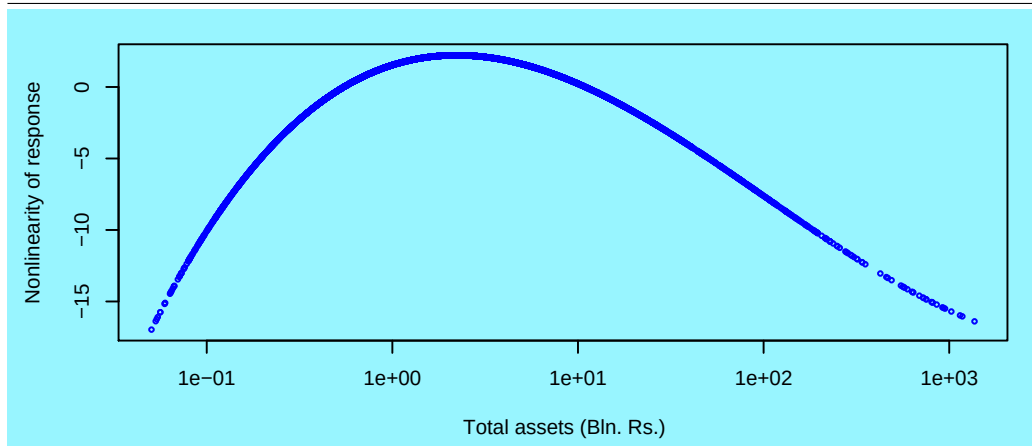


Figure 2 Response to the product of turnover ratio and log market capitalisation

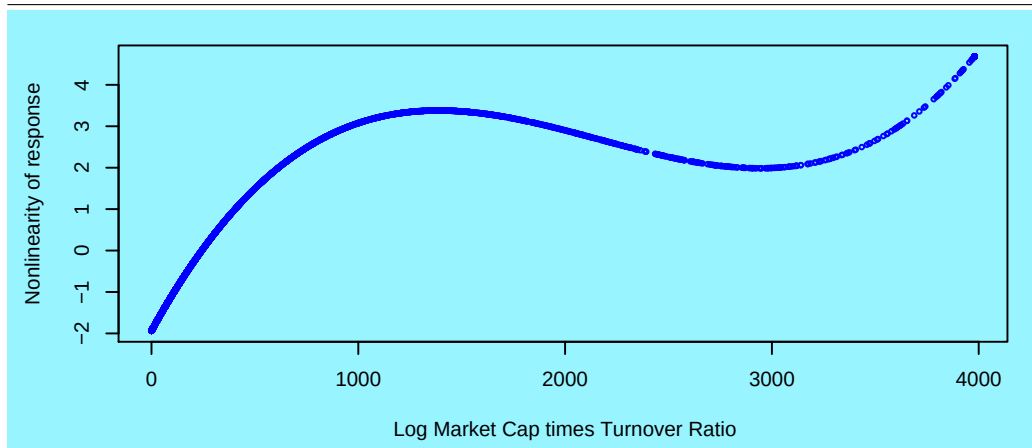
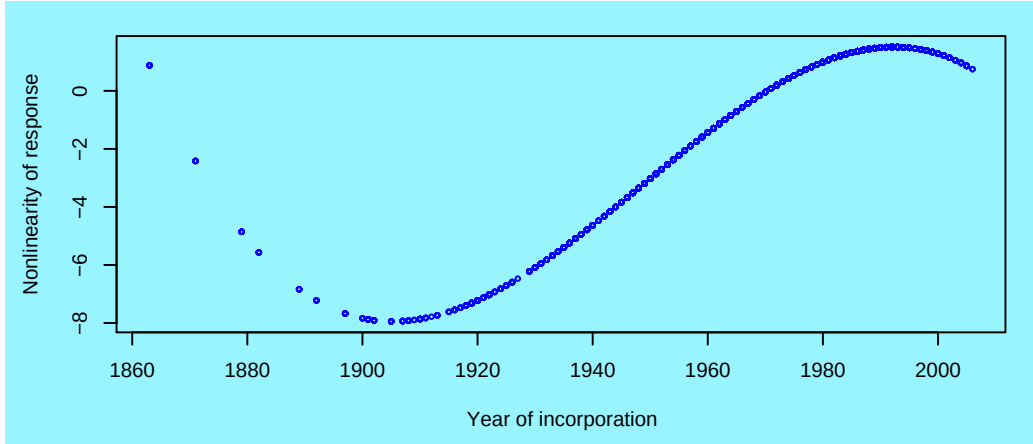


Figure 3 Response to the year of incorporation



then for values beyond 3000. This constitutes one more mechanism through which size variables affect the model. Stock market returns over the last 12 months have a slight negative impact on foreign ownership. An offshore listing - through an ADR or a GDR - adds a strong +13.569% to foreign ownership. Finally, there is a nonlinear relationship with a cubic in outside shareholding. These three coefficients need to be interpreted with care, since log outside market capitalisation is also in the regression.

Other firm characteristics that matter include a nonlinear relationship with the year of incorporation. Figure 3 shows that foreign ownership is large with very old firms, drops to the lowest values for firms incorporated in roughly 1900, and rises sharply with young firms.

Capital intensity, measured by total assets per unit output, hurts foreign investment. Asset tangibility, measured by fixed assets per unit total assets, also hurts foreign investment. Finally, when exports exceed 1% of sales, this adds 1.797 percentage points to foreign ownership.

The most interesting estimates pertain to the *year fixed effects*. These parameters identify the role of country effects after controlling for firm effects. The null model of Table 6 shows how the year dummies behave in the absence of firm characteristics in the model. The Tobit model shows essentially no variation in the year fixed effects.

The two most interesting years in this comparison are 2003 and 2007. Between these two years, foreign ownership rose dramatically. However, $H_0 : f.2003 = f.2007$ cannot be rejected. Using conventional inference, the χ^2 test

statistic has a prob value of 0.1111, and using the sandwich estimator, the prob value is 0.1107.

This suggests that when we seek to explain the large rise in the value of FII ownership of Indian equities from 2003 to 2007, the key factor explaining this change was improvements in the characteristics of Indian firms, in the dimensions of size, liquidity, outside shareholding and the other explanatory variables seen in Table 7.

6 Conclusion

Why did the value of shares owned by foreigners in India rise by roughly 13 times in 4 years? Our examination of the evidence suggests a five-part answer:

1. *A decomposition of changes in F* : A decomposition of changes in F , the value of foreign holdings, suggests that understanding the increased fraction of outside shareholding that is held by foreigners is of essence to understanding the decline in home bias in India over this period.
2. *Stulz effect*: The Stulz (2005) argument suggests that alleviating home bias requires that insiders have to reduce their shareholding. In the events described in this paper, this effect was playing in the opposite direction. Insiders increased their ownership from 2003 to 2007, thus reducing the space available for foreigners.
3. *The phenomenon of zero-foreign-ownership firms*: An examination of outside shareholding held by foreigners uncovers an important phenomenon of zero foreign shareholding in many firms. Not all firms internationalise their shareholding.
4. *A Tobit model*: We model the fraction of outside shareholding that is held by foreigners using a tobit model, where the outcome of an OLS model is censored at 0. This model involves size-related variables, equity-financing variables and other firm characteristics. Nonlinearities of response are prominent in this model.
5. *Firm characteristics, not country characteristics*: After controlling for these firm characteristics, year fixed effects on the OLS equation exhibit little year-to-year fluctuation. The null hypothesis of no difference between the 2003 coefficient and the 2007 coefficient cannot be rejected. This suggests that the surge of foreign investment into India over the

2003-2007 was largely induced by modified firm characteristics, and not a change in sentiment about India as a whole.

This is not to deny the importance of macroeconomic performance. High GDP growth in India from 2002 onwards surely set the stage for high growth of firms. In addition, the revolutionary equity market reforms that were achieved by India helped induce sharp improvements in stock market liquidity. These country characteristics setup the enabling environment in which firms were able to achieve the characteristics required for internationalisation of shareholding. What this model suggests is that patterns of foreign shareholding can be explained by visible *firm* characteristics. Once these firm characteristics are taken into account, it is not necessary to invoke explanations involving India having become more or less attractive to foreign investors.

If firm characteristics had not mattered, if India had been a fad over the 2003-2007 period, then the sharp increase of foreign ownership of Indian firms could be expected to generate a capital reversal when the perception of India among foreign investors changed. From the viewpoint of macroeconomic policy, this is a source of vulnerability, because changes in perception are hard to anticipate or control.

Our analysis, which emphasises firm characteristics, suggests that if the economic environment in India yields inferior levels of size, equity financing and other characteristics of firms, then foreign ownership of Indian firms will decline, giving a reversal of capital flows.

References

- Claessens S, Schmukler S (2006). “International financial integration through equity markets: Which firms from which countries go global?” *Technical report*, World Bank.
- Kho BC, Stulz RM, Warnock FE (2006). “Financial globalisation, governance and the evolution of the home bias.” *Technical Report 220*, BIS.
- Selarka E (2005). “Ownership concentration and firm value: A study from the Indian corporate sector.” *Emerging Markets Finance and Trade*, **41**(6), 83–108.
- Shah A, Thomas S (2000). “David and Goliath: Displacing a primary market.” *Journal of Global Financial Markets*, **1**(1), 14–21.
- Stulz RM (2005). “The limits of financial globalisation.” *Journal of Finance*, **LX**(4), 1595–1638.
- Thomas S (2006). “How the financial sector in India was reformed.” In S Narayan (ed.), “Documenting reforms: Case studies from India,” pp. 171–210. Macmillan India, New Delhi. URL http://www.igidr.ac.in/~susan/PDFDOCS/Thomas2005_financialsectorreforms.pdf.
- Zeileis A (2004). “Econometric Computing with HC and HAC Covariance Matrix Estimators.” *Journal of Statistical Software*, **11**(10), 1–17. URL <http://www.jstatsoft.org/v11/i10/>.
- Zeileis A (2006). “Object-oriented Computation of Sandwich Estimators.” *Journal of Statistical Software*, **16**(9), 1–16. URL <http://www.jstatsoft.org/v16/i09/>.