WEB APPENDIX

The Impact of Shrouded Fees: Evidence from a Natural Experiment in the Indian Mutual Funds Market

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A Overview of Indian Mutual Fund Industry

The first government-run mutual funds were established in India in 1963, but the sector was not opened to private firms until 1993. Indian mutual fund assets under management in 2009 were equal to approximately U.S. $ 90 billion.[1] Though only 1/100th the size of the U.S. mutual fund industry (which as of 2008 had U.S. $ 9.6 trillion in assets),[2] Indian assets under management have a real growth rate more than double that of the growth rate of assets under management in the United States (12 % average annual real growth in assets under management in the Indian mutual fund industry since 1997, versus 5.3% real average annual growth in the U.S.).[3] Mutual funds comprised 3.7 percent of household assets in 2005-2006 and 7.8 percent in 2007-2008 (?). There are approximately 10 million mutual fund investors in India, about one-fifth the number of investors in the United States (?).

[1] The India Rupee / U.S. dollar exchange rate taken from finance.yahoo.com on Monday, October 26, 2009.

[2] These data come from the 2009 Investment Company Fact Book which is produced by the Investment Company Institute (the trade association of mutual funds and other asset management companies in the United States). We include mutual funds and closed-end funds for comparability with the Indian data.

[3] Growth rates of assets under management calculated from monthly reports of the Association Mutual Funds in India monthly reports.

B Text of Fee Reforms

The relevant part of the circular read defining the transition from Regime 1 to Regime 2 stated:

> I. Rationalisation of Initial Issue Expenses
>
> a. The initial issue expenses will be permitted for closed-end schemes only.
>
> b. Open ended scheme should meet the sales, marketing and other such expenses connected with sales and distribution of schemes from the entry load and not through initial issue expenses.
>
> c. Since closed-end schemes are allowed to charge initial issue expenses, they shall not charge entry load.
>
> d. In close-ended schemes where initial issue expenses are amortised, for an investor exiting the scheme before amortisation is completed, AMC [Asset Management Company] shall redeem the units only after recovering the balance proportionate unamortised issue expenses.
>
> e. Conversion of a closed-end scheme or interval scheme to open-end scheme/ or issuance of new units should be done only after the balance unamortised amount has been fully recovered from the scheme.

The SEBI announcement that caused the change from Regime 2 to Regime 3 stated:

> Currently closed-end schemes are permitted to charge initial issue expenses and not charge entry load. In order to bring more transparency and clarity to the investors in terms of the expenses charged to them in closed-end schemes, SEBI Board in a recent meeting decided as under:
>
> (1) Henceforth, there will be no provision of charging initial issue expense and amortization of the same.
>
> (2) All mutual fund schemes shall now meet sales, marketing and other expenses connected with sales and distribution schemes from the entry load.

This circular would be applicable to all mutual fund schemes launched after the date of the circular.

C Examples of How Amortization Policy Changed Between Regimes 1 and 2

An important feature of Regime 1 was that funds could amortize the fees collected as initial issue expenses. Suppose a fund raised 1000 rupees during the new fund offer period and charged six percent as initial issue expenses. The fund company would then have the right to take 60 rupees out of the fund as initial issue expenses over the first three years of the fund. Note that this was true for both open and closed-end funds, i.e. the initial issue expense percentage rate only applied to the amount of money raised during this initial offer period. It did not apply to money that later entered an open-end fund after the initial offering period. Typically funds would take these initial issue expenses out of the fund spread over the first three years of the fund as a way to artificially inflate the net asset value that was reported to investors. During Regime 1, there was also an important re-distributional feature of the amortization policy. Suppose after 1 year an investor took 500 rupees out of the fund. In Regime 1, this investor would only pay 10 rupees in initial issue expenses.[4] If a second investor purchased shares from that initial investor and waited two more years until the fund was automatically converted to an open-end fund, he would have to pay the remaining 40 rupees in initial issue expenses. Thus the amortization policy in Regime 1 allowed mutual funds to charge initial issue fees in a way that made long-term investors cross-subsidize short-term investors.[5] Nevertheless, for this paper, the key conclusion to note is that, in Regime 1, both closed-end and open-end funds were allowed to amortize in this manner.

As described above, during Regime 1, both open and closed end funds could allow investors who exited their funds early to avoid paying their full proportion of the initial

[4]The total initial issue expenses due on 1,000 Rs. is 60 Rs over three years, so withdrawing 500 Rs. after one year yields an initial issue expense of 10 Rs.

[5]This interpretation is common in the Indian media primarily because of the assumption that initial issue expenses are used to fund marketing of the fund during the new offer period only and not the ongoing expenses of the fund. However, since fund income is fungible another interpretation is that that long term investors pay proportionately more in fees because they receive more years of service.

issue expenses. During Regime 2, a typical closed-end fund would charge 6 percent as initial issue expenses and amortize them daily over the term of the closed end-fund (usually 3 years). Suppose again that a closed-end fund raised 1000 rupees by selling 100 shares and therefore had the right to collect .6 rupees in initial issue expenses per share. By amortizing the expenses, the closed-end fund would collect .2 rupees per each year in expenses, for a total of .6 rupees per share for the life of the closed-end fund. If an investor withdrew 500 rupees from the fund in the first year, this law change states that this investor would still be responsible for paying the full amount of initial issue expenses (30 rupees) that were owed on the shares that they owned. This suggests that there was no easy way for investors to avoid the fees in closed-end funds, making it unlikely that closed-end funds became popular because some investors aimed to avoid fees by exiting these funds soon after the new offer period ended.

D Details on Data

ELSS funds are funds that have a mandatory three year lock-in period. Dividends on ELSS funds are not taxed and when the ELSS fund position is exited the investor pays long-term capital gains taxes. Balanced funds are funds that invest in both equities and debt. Approximately 65 percent of the assets under management in equity, ELSS, and Balanced funds come from retail investors, whereas only 4 percent of assets under management in income funds come from retail investors. These statistics are taken from Table 1 of the Assets Under Management and Folios - Category Wise - Aggregate - As On March 31, 2009 document available at http://www.amfiindia.com/spages/AUMFolioData.pdf. This is primarily because many of these income funds are owned by corporations that use them for cash management purposes. In 1999 tax rates for corporations on holding mutual funds were lowered below tax rates for directly holding securities, so corporations began using short term closed-end mutual funds for cash management purposes (**?**).

We adjusted the raw data for inflation in India using the All Commodities Wholesale Price inflation rate taken from www.indiastat.com (Source: Ministry of Commerce & Industry, Govt. of India.) We then converted the 2009 rupees into 2009 U.S. dollars using the exchange rate of 46.235 rupees/dollar taken from finance.yahoo.in on November 17, 2009.

E Details on Calculations of Actual Initial Issue Expenses Charged

Four of the funds where we found initial issue expenses for did not report the percentage of assets charged, but instead reported the actual rupee amount charged. This section details how we calculated the actual percentage charged. For the Lotus India Mid N Small Cap Fund the fund charged 24.408 million rupees in initial issue expenses, of which 23.546 was charged to investors and .862 million was paid by the scheme. During the period March 17, 2008 through March 31, 2008 the fund had net assets of 387.9 million rupees in assets (this is the earliest available net assets number for the fund. This fund closed its new offer period on February 19, 2008. This gives us an estimated initial issue expense percentage of 6.07 percent charged to the investors.

For the Kotak World Infrastructure Fund, the fund raised 8.16 billion rupees based on the average assets under management in January 2008 after the new fund offer closed on December 22, 2007. The fund charged a total of 576 million rupees in initial issue expenses to investors. This gives us an initial issue expense rate of 7 percent. However, the maximum legal limit of initial issue expenses was six percent, so there may be a calculation error in the reported data. I exclude this fund from calculations in the paper.

The DSP Merrill Lynch Micro-Cap Fund had 3.2 billion rupees in assets under management during its first month of existence. This fund charged 160.52 million rupees in initial issue expenses. This works out to an initial issue expense rate of 5.01 percent.

For the Lotus India Mid Cap Fund we find that the fund had assets under management of 586 million rupees as of April 2007, which is the month its new offer period closed.[6] This fund charged 34.9 million rupees in initial issue expenses to investors in the fund. This gives us an initial issue expense rate of 5.96 percent.

[6]This information comes from the Association of Mutual Funds in India website. Although this fund was started as a closed-end fund it was converted to an open-end fund three years after its inception. On the AMFI website it is listed as always being an open-end fund which we believe is done so the categorization is consistent (although incorrect) over time.

F CAPM Return Calculations

In this appendix, we explain briefly the procedure of constructing the Indian stock market mimicking portfolio as in Fama and French (1992) and Fama and French (1993).

We use nonfinancial firms listed on the Indian Bombay Stock Exchange(BSE) from FactSet Research Systems Inc. [7] Data for stock price, book value and shares outstanding were retrieved for April 2006 through February 2010. We exclude financial firms from the analysis because leverage for nonfinancial firms may imply a different corporate situation from that of financial firms. For constructing the size factor (SMB) and book-to-market ratio factor (HML) in India stock market, we follow closely Fama and French (1992, 1993)'s procedure for market-mimicking portfolio construction.

Market equity (ME) is used to measure a firm's size, which is calculated as the stock price multiplied by shares outstanding. To assess a firm's size, we use market-equity at the end of January at year t. In order to ensure accounting information is reflected in stock price, we match accounting data for fiscal year that ends in calendar year $t-1$ with stock price data for calendar year t. To compute book-to-market ratio, we use firm's market-equity at the end of January at year $t-1$.

At every January, we sort firms into two size categories (Big and Small) and 3 book-to-market categories (High, Median, Low) according to its market equity and book-to-market ratio. Median and 30% /70% percentile are used as break points for size sorting and book-to-market ratio sorting. After assigning one of six categories (B/L, B/M, B/H, S/L, S/M, S/H) to every firm, we calculate monthly return for each firm in each category; we then calculate the value-weighted return of firms' return at each category. Size factor SMB is calculated as a weighted sum of small companies' return minus big companies' return.

$$SMB = \frac{1}{3}[(S/L + S/M + S/H) - (B/L + B/M + B/H)]$$

Book-to-market ratio HML is calculated as a weighted sum of high book-to-market compa-

[7] FactSet covers 97% of the total Indian market capitalization as of June 2009.

nies' return minus low book-to-market companies' return.

$$HML = \frac{1}{2}[(H/S + H/B) - (L/S + L/B)]$$

Note that the data represents a monthly frequency but a company's category may change annually each January.

Table 1: Effect of Closed-End Fund Shrouding of Fees on Fund Starts and Net Flows - Generalized Least Squares

This table presents regressions where the unit of observation is a month x type of fund combination. The dependent variable is either the number of new funds started or the amount of net flows to closed and open-end funds. The Regime 2 dummy takes a value of 1 during the period April 2006 - January 2008 when closed end funds were allowed to charge initial issue expenses in place of entry loads. The Regime 3 dummy takes a value of 1 during the period February 2008 through September 2009. We argue that because initial issue expenses were allowed to amortize, they constituted a "shrouded" fee. The variable lagged relevant return is the one month lagged monthly return of the Sensex index, which is a value-weighted index of the 30 largest firms listed on the Bombay Stock Exchange. Columns (1) and (2) focus on the number of funds started as the dependent variable. Columns (3) and (4) focus on the amount of net flows (inflows minus redemptions) (2009 millions of USD$). Columns (1) and (3) include all month*years available on the AMFI website for a total of 120 month*years for closed-end funds and 120 month*years for open-end funds (for a total sample size of 240). Columns (2) and (4) restrict the sample to the 22 months before Regime 2 and the 20 months after Regime 2 to provide a more similar comparison group to Regime 2. Robust standard errors in brackets. The Month-Year trend is a variable that takes the value of 477 in October of 1999 and increases by one unit for each month. The estimation method is generalized least squares (GLS) with the potential first order auto-regressive errors. The GLS estimator does not produce a useful R-squared statistic, thus it is omitted.

Dep Var =	GLS-Starts		GLS - Net Flows (Millions 2009 $U.S.)	
	(1)	(2)	(3)	(4)
Month-Year Trend	0.02***	0.10**	4.1***	23.4***
	[0.01]	[0.02]	[1.3]	[6.9]
Sensex 1 Month Lag Return	-1.13	-1.20	-1069.7***	-1697.4***
	[1.38]	[2.09]	[367.0]	[590.9]
Sensex 3 Month Lag Return	-0.75	-2.04*	144.6	-51.3
	[0.77]	[1.08]	[194.1]	[309.7]
Regime 2 Dummy	-0.95*	-3.72***	-74.0	-675.0***
	[0.54]	[0.77]	[141.4]	[248.8]
Regime 3 Dummy	-1.05*	-5.66***	-308.3*	-1344.3***
	[0.63]	[1.21]	[162.6]	[367.7]
Closed Dummy	-1.79***	-3.31***	-223.6***	-438.6***
	[0.26]	[0.48]	[67.5]	[157.4]
Closed*Regime 2	2.10***	3.51***	226.0	435.5*
	[0.56]	[0.68]	[143.8]	[222.6]
Closed*Regime 3	-0.43	1.18*	-24.5	193.3
	[0.58]	[0.69]	[149.3]	[228.0]
Constant	-8.01***	-49.47***	-1904.3***	-12143.7***
	[2.81]	[12.93]	[686.7]	[3742.8]
Observations	240	128	240	128
Mean of Dependent Variable	1.13	1.59	150.4	240.0

* Significant at the 10% level. ** Significant at the 5% level. *** Significant at the 1% level.

Table 2: This table presents the exit load structure for all closed-end and open-end funds started during Regime 2.

Year	Month	Fund Type	Fund Name	Exit Load Structure
2008	March	Closed	Birla Sun Life Pure Value Fund	no exit load
2008	March	Closed	HDFC Infrastructure Fund	no exit load
2008	March	Closed	HSBC Small Cap Fund	2% 1st year, 1.5% 2nd year, 1% 3rd year
2008	March	Closed	ICICI Prudential Fusion Fund Series III	no exit load
2008	March	Closed	JM Core 11 Fund Series 1	no exit load
2008	March	Closed	Lotus India Mid N Small Cap Fund	no exit load
2008	March	Closed	Standard Chartered Small Midcap Equity Fund	no exit load
2008	February	Closed	LICMF Infrastructure Fund	no exit load
2008	January	Closed	JM Agri and Infra Fund	no exit load
2008	January	Closed	Kotak Indo World Infrastructure Fund	no exit load
2008	January	Closed	Sundaram BNP Paribas Select Thematic Funds - Energy Opportunities	no exit load
2008	January	Closed	UTI Infrastructure Advantage Fund - I	no exit load
2007	December	Closed	LICMF Top 100 Fund	no exit load
2007	December	Closed	Standard Chartered Fixed Maturity Arbitrage Fund - Series - 1	no exit load
2007	November	Closed	Sahara R.E.A.L. Fund	2.25% 6 months, 1% 1 year
2007	November	Closed	Tata Indo Global Infrastructure Fund	no exit load
2007	November	Closed	Lotus India Infrastructure Fund	no exit load
2007	September	Closed	DBS Chola Infrastructure Fund	1% 1 year, 0.5% 18 months
2007	September	Closed	Escorts Infrastructure Fund	1% 1 year
2007	September	Closed	Kotak Global Emerging Market Fund	no exit load
2007	September	Closed	Principal Long Term Equity Fund 3 year plan Series - II	no exit load
2007	August	Closed	UTI India Lifestyle Fund	no exit load
2007	July	Closed	SBI Infrastructure Fund Series	no exit load
2007	June	Closed	DSP Merrill Lynch Micro Cap Fund	4% 1st year, 3% 2nd year, 2% 3rd year
2007	June	Closed	HDFC Mid-Cap Opportunities Fund	no exit load
2007	May	Closed	Birla Sun Life Longterm Advantage Fund - Series 1	no exit load
2007	April	Closed	ABN AMRO Sustainable Development Fund	no exit load
2007	April	Closed	Lotus India Mid Cap Fund	no exit load
2007	March	Closed	HSBC Unique Opportunities Fund	no exit load

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Year	Month	Fund Type	Fund Name	Exit Load Structure
2007	March	Closed	ICICI Prudential Fusion Fund Series II	no exit load
2007	March	Closed	Kotak Emerging Equity	no exit load
2007	March	Closed	Principal Pnb Long Term Equity Fund Series I	data unavailable
2007	February	Closed	Can Multicap	no exit load
2007	February	Closed	Sundaram BNP Paribas Equity Multiplier	3.5% 1st year, 2.5% 2nd year
2007	February	Closed	Sundaram BNP Paribas Select Small Cap	3% 1st year, 2.5% 2nd year, 2% 3rd year
2007	January	Closed	SBI One India Fund	1% 1st year
2006	December	Closed	LIC India Vision Fund	no exit load
2006	December	Closed	Reliance Long Term Equity Fund	4% 1st year, 3% 2nd year, 2% 3rd year
2006	October	Closed	Birla Long Term Advantage Fund	no exit load
2006	October	Closed	ING Vysya Dynamic Asset Allocation Fund	no exit load
2006	October	Closed	UTI Wealth Builder Fund	2% 6 months, 1% 1 year
2006	September	Closed	ING Vysya CUB	data unavailable
2006	September	Closed	Tata Capital Builder Fund	no exit load
2006	July	Closed	Tata Equity Management Fund	no
2006	June	Closed	Standard Chartered Enterprise Equity Fund	3% 1st year, 2% 2nd year, 1% 3rd year
2008	February	Open	AIG Infrastructure and Economic Reform Fund	1% 1st year
2008	February	Open	Reliance Natural Resources Fund	no exit load
2008	January	Open	Birla Sun Life Special Situation Fund	0.5% 1st year
2008	January	Open	Franklin Asian Equity Fund	0.5% 1st year
2007	October	Open	ABN AMRO China - India Fund	1% 1st year
2007	October	Open	Benchmark Equity and Derivatives Opportunities Fund	data unavailable
2007	October	Open	Birla Sun Life International Equity Fund - Plan A and Plan B	1% 1st year
2007	October	Open	Fidelity India Growth Fund	1% 1st year
2007	October	Open	HDFC Arbitrage Fund	0.5% 30 days
2007	October	Open	ICICI Prudential Indo Asia Equity	no exit load
2007	October	Open	Lotus India Equity Fund	1% 6 months, 0.6% 1 year
2007	July	Open	HSBC Dynamic Fund	no exit load
2007	July	Open	JM Contra Fund	1% 6 months, 2.25% 1 year

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Year	Month	Fund Type	Fund Name	Exit Load Structure
2007	July	Open	Reliance Equity Advantage Fund	1% 6 months, 0.5% 1st year
2007	July	Open	Lotus India Growth Fund	1% 6 months, 0.6% 1st year
2007	July	Open	Franklin India High Growth Companies Fund	0.5% 6 months, 1% 1st year
2007	June	Open	AIG India Equity Fund	1% 1st year
2007	June	Open	JP Morgan India Equity Fund	1% 1st year
2007	May	Open	Fidelity International Opportunities Fund	1% 6months
2007	April	Open	DBS Chola Hedged Equity Fund	0.5% 6months
2007	April	Open	JM Small and Mid Cap Fund	1% 6 months
2007	April	Open	Lotus India Arbitrage Fund	2% 180 days
2007	April	Open	Lotus India Contra Fund	1% 6 months, 0.6% 1st year
2007	April	Open	OptiMix Multi Manager Equity Fund	no exit load
2007	March	Open	Taurus INFRA - TIPS Fund	2% 6 months, 1.5% 1st year
2006	December	Open	Escorts High Yield Equity Scheme	1% 6 months, 0.5% 1 year
2006	December	Open	JM Financial Services Sector Fund	1% 1st year
2006	December	Open	JM Telecom Sector Fund	1% 1st year
2006	December	Open	Prudential ICICI Equity and Derivatives Fund	data unavailable
2006	December	Open	Standard Chartered Arbitrage Fund	0.25% 30 days
2006	November	Open	DSP Merrill Lynch Small and Mid Cap Fund	data unavailable
2006	November	Open	SBI Arbitrage Opportunities Fund	2% 6 months, 1% 1st year
2006	July	Open	JM Arbitrage Advantage Fund	1% 3 months
2006	June	Open	UTI -Spread Fund	.50% 25 days, .75% 6 months
2006	May	Open	ABN AMRO Future Leaders Fund	1.5% 6 months, .75% 1 year
2006	May	Open	Fidelity India Special Situations Fund	1% 6 months
2006	May	Open	Sundaram Rural India Fund	3% 6 months
2006	May	Open	Templeton India Equity Income Fund	0.5% 6 months
2006	April	Open	Sahara Infrastructure Fund	2.25% 6 months, 1% 1 year