

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

Santosh Anagol    Hugh Kim

Wharton

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# Overview

- Why do high fee investment products persist?
- For example, actively managed mutual funds or high-fee index mutual funds
- Two explanations have been studied:
  - ① High fee funds offer some unobservable benefits to investors
  - ② Fees are hidden such that competition does not lower them to competitive levels
    - ★ Gabaix and Laibson (2009), Carlin (2009)
- Optimal regulatory policy depends on balance between these explanations

# Literature to Distinguish Explanations

- Laboratory Experiments on Effects of Disclosure Policies
  - ▶ Beshears et. al. (2009) effects of “Summary Prospectus”
  - ▶ Choi et. al. (2009) index fund puzzle
    - ★ “Cheat sheets” do not change fund selection
- Natural Experiments
  - ▶ Duarte and Hastings (2010) effects of creating simple indexed fee for choices in Mexico’s privatized social security system
  - ▶ Our paper
- Advantages
  - ▶ Large economic magnitude, national level policy
  - ▶ Looks at both firm and consumer responses jointly

# Household Savings in India

- Mutual Funds in India

- ▶ 10 million mutual fund investors in India vs. 50 million in U.S.
- ▶ Total assets \$90 billion in 2009 vs. \$9.6 trillion in U.S.
- ▶ 7.8% of Indian household assets in 2008
- ▶ 57% of mutual fund sales through brokers

- Why Indian mutual fund market?

- ▶ Policy relevant source of variation in fee regulation
- ▶ Millions of potential investors coming online

# Description of Funds

- Open-End Funds
  - ▶ Redemption available at end of each trading day
- Closed-End Funds
  - ▶ Really limited liquidity funds
  - ▶ Redemption available for 1 - 3 days at end of month
  - ▶ Typically not traded on exchanges

# Evaluate Two Disclosure Policy Changes

- 1 Regime 1 (prior to April 4, 2006):
  - ▶ Level playing field for open and closed-end funds in terms of fee regulation
- 2 Regime 2 (April 5, 2006 - January 31, 2008):
  - ▶ Closed-end funds can charge initial issue expenses, open-end can charge entry load
  - ▶ Only difference is that initial issue expenses can be amortized, whereas entry loads cannot
  - ▶ Assume that initial issue expenses are less salient to investors (Barber and Odean 2005)
- 3 Regime 3 (February 1, 2008 - present):
  - ▶ Both closed-end and open-end can only charge entry loads
- 4 Main prediction: closed-end fund popularity will increase during Regime 2

**Table:** Maximum Fees of Mutual Funds Under Three Regimes

Type of Fund:	Regime 1		Regime 2		Regime 3	
	Open	Closed	Open	Closed	Open	Closed
Initial Issue Expenses (%)	6	6	0	6	0	0
Entry Loads (%)	6	6	6	0	6	6
Expense Ratios (%)	2.5	2.5	2.5	2.5	2.5	2.5

# New Fund Offers

- Both open and closed funds heavily marketed
- One to two month period where fund takes in initial corpus of money
- Open-end fund closes for one month after new fund offer period and then re-opens
- Closed-end funds do not take in new money after new fund offer period



# Example of New Fund Offer Marketing



**SIZE  
MATTERS**

Sundaram BNP Paribas  
- Select Thematic Funds -

**PSU OPPORTUNITIES**  
Investing in the BIG story !  
*An Open-End Equity Fund*

**NEW FUND OFFER**  
Closes 23rd Dec. '09

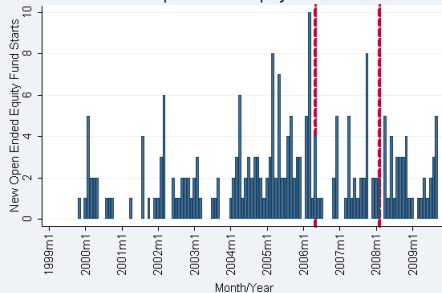
The advertisement features a large sumo wrestler in a blue mawashi and yellow gumpo, leaning forward on a construction site with rebar and scaffolding. The background is a blue sky with white clouds. The text is arranged in a clean, professional layout on the right side of the image.

# Data

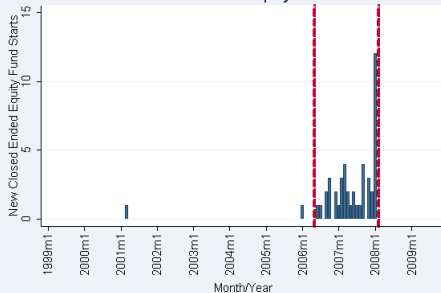
- The Association of Mutual Funds in India (AMFI) monthly fund-type flows data
- Number of new funds by type of fund (closed vs. open, equity vs. debt)
- Flows by type of fund (closed vs. open, equity vs. debt)
- No individual fund level data

# Main Results: Shrouded Fees Lead to More Closed-end Fund Starts

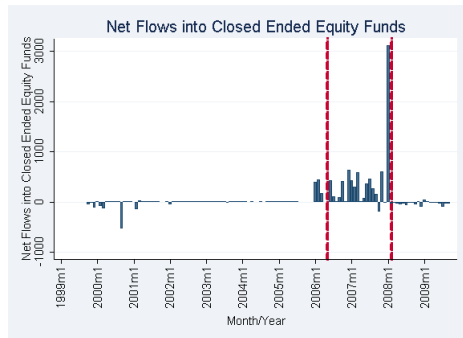
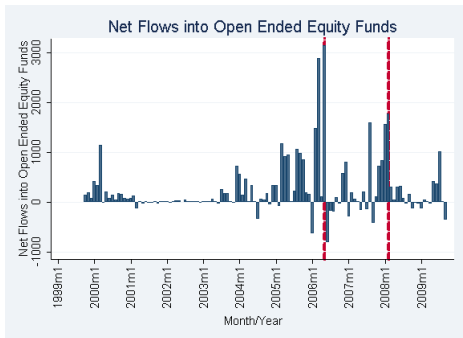
New Open Ended Equity Fund Starts



New Closed Ended Equity Fund Starts



# Main Results: Shrouded Fees Lead to More Closed-end Fund Net Flows



# Effect of Closed-End Fund Shrouding of Fees: Regression Specification

$$S_{it} = \beta_0 + \beta_1 R2_{it} * \text{Closed}_i + \gamma X_{it} + \epsilon_{it}$$

- Each observation is a type of fund  $i \in \{\text{Closed, Open}\}$  in month\*year  $t$
- $S_{it}$  is the # of funds started or net flows (in 2009 millions US\$) of fund type  $i$  in month\*year  $t$
- $R2_{it}$  is a dummy variable for Regime 2
- $\text{Closed}_i$  is a dummy for closed-end funds
- $X_{it}$  includes controls: time trend, 1-month lagged market return, 3-month lagged market return, Regime 2 dummy, Regime 3 dummy, Closed dummy, Closed\*Regime 3 dummy
- Prediction:
- $\beta_1 > 0$ : closed-end funds large starts/flows when shrouded fee is allowed

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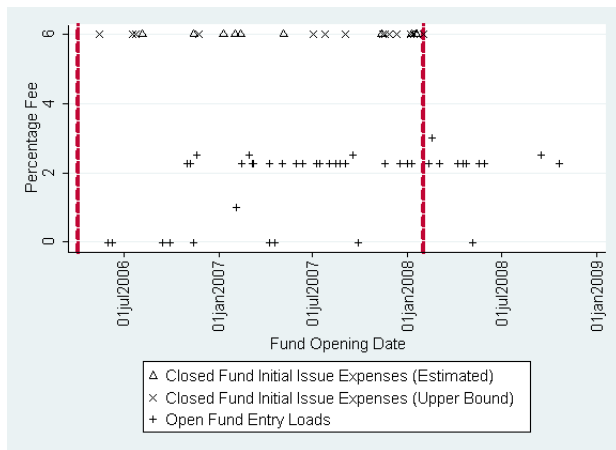
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**Table:** OLS Effect of Closed-End Fund Shrouding of Fees

Dep Var = Sample =	Starts		Net Flows (Millions 2009 \$U.S.)	
	Full (1)	Trimmed (2)	Full (3)	Trimmed (4)
Closed*Regime 2	2.01*** [0.70]	3.55*** [0.81]	221.2 [217.0]	437.0* [251.6]
Month-Year Trend	0.03*** [0.01]	0.10** [0.04]	4.9*** [1.8]	21.9* [13.0]
Sensex 1 Month Lag Return	-0.41 [1.66]	0.09 [2.47]	-1492.3*** [525.8]	-2282.1*** [863.4]
Sensex 3 Month Lag Return	-0.87 [0.65]	-2.27** [0.98]	401.5** [171.9]	285.5 [340.3]
Regime 2 Dummy	-1.24** [0.62]	-3.72*** [1.16]	-115.9 [211.4]	-649.5 [433.4]
Regime 3 Dummy	-1.54** [0.68]	-5.62*** [1.97]	-353.3* [201.3]	-1267.5 [674.6]
Closed Dummy	-1.78*** [0.22]	-3.32*** [0.49]	-223.1*** [52.1]	-439.0*** [151.8]
Closed*Regime 3	-0.37 [0.40]	1.17* [0.62]	-22.8 [122.1]	193.1 [202.6]
Constant	-0.845*** [.255]	-2.89** [2.35]	-38.0 [51.6]	-904.0 [796.6]
Adjusted R-Squared	0.30	0.35	0.1	0.2
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. Dollar values in Columns (3) and (4) are in 2009 millions of \$U.S. 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.

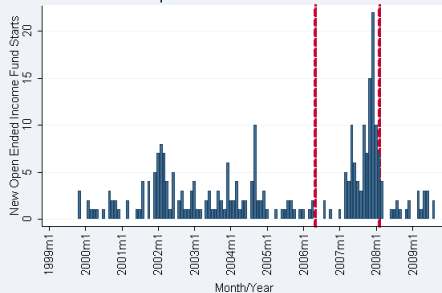
# How Much Higher Were Initial Issue Expenses vs. Entry Loads?



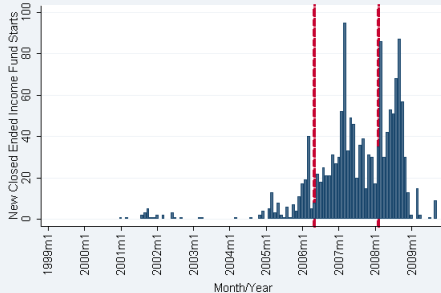


# Income Funds Started

New Open Ended Income Fund Starts

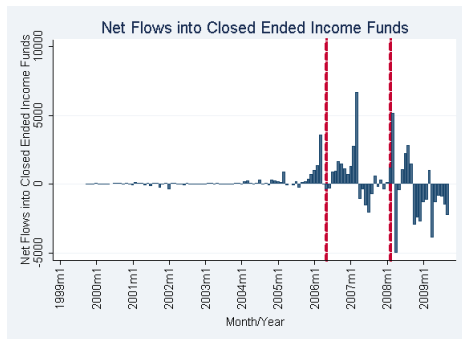
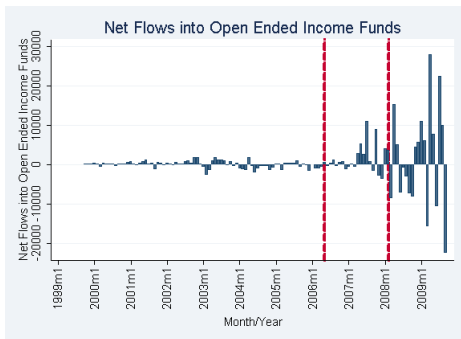


New Closed Ended Income Fund Starts



- Result does not hold clearly for income funds
- Consistent with corporate investors not being affect by fee difference

# Income Fund Net Flows



- Result does not hold clearly for income funds
- Consistent with corporate investors not being affect by fee difference

# Do Closed-End Funds Perform Better?

- 1 CAPM : Regression of each fund's excess return on market's excess return.
  - ▶ Used 6 month yield of India Treasury bill as risk-free rate.
- 2 Market Risk-adjusted Return in India Stock Market
  - ▶ Constructed 6 market mimicking portfolios (2: size, 3: book-to-market) as in Fama and French (1992, 1993).
  - ▶ Used 'FactSet' data for India Stock Market (2004~2010)
  - ▶ SMB(small minus big)
    - 1 Sort firms according to market capitalization on each January.
    - 2 Calculate value-weighted return for each portfolio.
  - ▶ HML(high minus low)
    - 1 Sort firms according book-to-market value of previous fiscal year. (India Fiscal year ends on March).
    - 2 Use market value on December of previous year in order to reflect relevant accounting information.

**Table:** Performance Comparison of Closed-End and Open-End Funds

	Closed-End Funds	Open-End Funds	Difference	p-value
Monthly Raw Returns	0.0053	0.0117	-0.0064	0.0800
Monthly BSE Adjusted Return	-0.0039	0.0000	-0.0039	0.2369
1-Factor Alpha	-0.0048	0.0028	-0.0076	0.0100
3-Factor Alpha	-0.0077	0.0012	-0.0089	0.0030

# Alternative Explanation: Rational Discounting

- Estimate discount rate necessary to equate open-ended entry load with present value of closed-end initial issue expenses

$$\text{Open Fund Entry Load} = \frac{\text{Total Closed End Initial Issue Expenses} (1 - (1 + i_d)^{-\{\# \text{ Trading Days Paid Over}\}})}{\# \text{ Trading Days Paid Over} i_d}$$

- Solve for  $i_d$  (daily discount rate)
- For three year closed-end fund:
- Need annual discount rate greater than 224 percent per year to prefer closed-end fund because fees are taken later

# Conclusion

- Mutual fund industry responds to transparency policy by strongly favoring more "shrouded" fees via closed-end funds
- Back of the envelope calculation suggests \$500 million (U.S) in extra fees paid to closed-end funds over this period for no higher return performance
- The policy of forcing all fees into entry loads had large effects, different result than Beshears et. al. (2009) and Choi et. al. (2009) where cheat sheets, Summary Prospectus, did not have major effects, similar to results in Duarte and Hastings (2010)
- Unclear whether policy improved welfare, however, as many investors may have switched to life insurance products with high, shrouded, fees