

**Discussion of  
“Equity Lending, Investment Restrictions,  
and Fund Performance”**

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# Main Findings

Mutual funds are increasingly willing to lend equity

	1996	2008	Average
Funds allowed to lend	72%	86%	81%
Funds choosing to lend	11%	43%	28%
Total lending income		\$1.5B	

Funds in larger, less focused, lower performing, lower “Active Share” families are more likely to choose to lend equity

Actively managed funds that lend equity underperform by **~5 bp/month**

**Driven by subset that face significant investment restrictions**

Goes away during crisis (10/07 to 12/08), when lending fees spike

Provocative preliminary evidence of information leakage across funds  
(which I'll discuss below)

# Authors' Interpretation

- Investors who borrow equity are smarter than mutual funds who lend equity?
- Not quite.

# Authors' Interpretation

- Investors who borrow equity are smarter than mutual funds who lend equity **and face investment restrictions?**
- **What nefarious behavior explains this pattern?**
- Authors weave a story based on family-level profit maximization:
  - Families offering multiple investment styles use investment restrictions to prevent style drift.
  - $E[\text{benefit of lending income} + \text{less style drift}] > E[\text{cost of lower returns due to holding stocks with low expected returns}]$ .
- I am receptive to arguments that families compete for investors on dimensions other than alpha (e.g, Christoffersen, Evans & Musto (2013), Del Guercio & Reuter (2013), Chalmers and Reuter (2013))
- But, I suspect that investment restrictions proxy for something other than the desire to minimize style drift.

# Incentives (1)

- Equity lending generates two benefits:
  - Receive signals about which stocks may be overvalued → opportunity to sell holdings with the lowest expected returns.
  - If you decide to continue holding a stock despite this signal → lending income provides benefit relative to investors who hold the stock and don't lend it.
  - **Prediction: Everyone should want to lend equity!**
- Countervailing forces:
  - Lending is not the only way to learn which stocks investors want to short (and may reflect demand for votes rather than demand for shorting) → **reduces value of signals obtained by lending.**
  - Only funds that hold stocks people want to borrow can lend their stocks → **demand-side story why funds with lower quality managers are more likely to be observed lending equity.**

# Incentives (2)

- Assume fund *i* just lent 10,000 shares of XYZ:
  - It is not possible to both continue earning lending income and sell the stock being lent → fund *i* faces a choice.
  - However, fund *i* faces weaker incentive to sell XYZ than other funds precisely because it is earning lending income.
  - Also, if fund *i* regularly sells stocks it just lent, it may irritate the equity lender → loss of future lending income and signals.
- **Why not continue lending but share signal with other funds?**
- **Prediction #1:** Families should lend equity held by index funds and mediocre active funds and let their other funds trade on the signals → **plausible form of cross-subsidization.**
- **Prediction #2:** To maximize number of signals, mediocre active funds should overweight stocks with characteristics that equity lenders value → **contributes to underperformance?**

# Incentives (3)

- Do investment restrictions proxy for an aversion to style drift?
  - Perhaps. Despite my prior that retail investors do not care about style drift, we just learned that MFS will not reward managers for picking winners outside of their style.
  - Begs the question: **Is there a correlation between the use of investment restrictions and the sensitivity of flows to style drift?**
- **Regardless, shouldn't a manager who is rewarded from "picking the best of the worst" want to sell stocks that others want to short?**
  - If fund  $i$  sells holdings with lower-than-average expected return, it is more likely to outperform funds with the same style → manager is more likely to receive bonus from MFS.
  - This is especially true when the stocks that fund  $i$  is lending receive a larger weight in the benchmark portfolio.

# Empirical Strategy

- Optimal strategy: Sell stocks that other investors want to borrow.
- **Smart manager:** Lends stock for 1 day and then sells
- **Dumb manager:** Lends stock indefinitely
- **Smarter manager:** Do not hold stock and/or short it
- **Other managers:** Do not hold stock or do not offer to lend it
- Benefit from strategic lending =  $E[R_{\text{Smart}}] - E[R_{\text{Dumb}}]$
- However, authors cannot distinguish between **Smart** and **Dumb**
- Authors measure returns of lenders minus returns of non-lenders
  - $((\alpha)E[R_{\text{Smart}}] + (1-\alpha)E[R_{\text{Dumb}}]) - ((\theta)E[R_{\text{Smarter}}] + (1-\theta)E[R_{\text{Other}}])$
  - When  $(\theta)E[R_{\text{Smarter}}]$  increases, underperformance increases.
  - The easier it is for managers who do not lend to observe short interest, the larger you should expect  $(\theta)E[R_{\text{Smarter}}]$  to be.

# Cross Subsidization

- Paper contains **cool** test for information leakage across funds.
  - The authors limit their sample to managers that manage multiple funds AND are allowed to lend equity in only a subset of funds.
  - They find that funds that are not allowed to lend are more likely to sell stocks that become hard to borrow.
- Of course, the opportunity cost of selling stock is higher when you're earning lending income. **To convince reader information leakage is valuable, it would be nice to document a difference in performance.**
- **I encourage the authors to expand this part of the paper and test for cross-subsidization within families.**
  - What is the coefficient on equity lending when they include family-by-month FEs? Or, better yet, when they include family-by-style-by-month FEs?

# Back of the Envelope Calculation

- How does the aggregate income from equity lending compare to the aggregate underperformance associated with lending equity?
- **Actual Benefit:** Equity lending income was \$1.5 billion in 2008, a year in which lending fees were significantly higher than usual.
- **Estimated Cost:** Between \$7 billion and \$12 billion.
  - Calculated as average number of funds \* average fund size \* average fraction of funds that lend equity \* average monthly underperformance of funds lending equity \* 12.
- This would appear to be a bad trade for mutual fund shareholders.
- Since the equity lending income belongs to the shareholders, this would also appear to be a bad trade for mutual fund families...  
... unless they are using cross-subsidization to exploit significant non-linearities in flow-performance for non-lending funds.

# Other Questions and Quibbles

- Because there is time-series variation in the choice to lend (and in average estimated alphas), authors should include style-by-month FEs in all of their performance regressions.
- Because many variables of interest are measured at family level, standard errors should be clustered on family.
- If equity lending income is used to reduce fund expenses, is it kosher to control for expense ratios in performance regressions?
- Can the authors use NSARs to directly measure the benefit arising from lending income should and then report average lending income as % TNA each year? How big was the spike during the crisis?
- What is the performance difference between mutual funds that choose to lend and mutual funds that choose to short (imperfect proxy for **Smarter**)?

# Conclusion

- **Good news (for Rich):**
  - I'm convinced that equity lending plus investment restrictions is associated with significant underperformance.
  - “Why lend what you can sell?” is a catchy slogan.
- **Bad news:**
  - I'm not convinced that equity lending plus investment restrictions reflect a profit-maximizing aversion to style drift.
  - Managers that don't own overpriced stocks can't lend them → **authors likely uncovered a new proxy for bad managers.**
  - To the extent that equity lending generates valuable information, families may have some funds lend equity so that other funds can trade on signals → **authors should think more seriously about cross-subsidization.**