Institutional Ownership Concentration and Informational Efficiency

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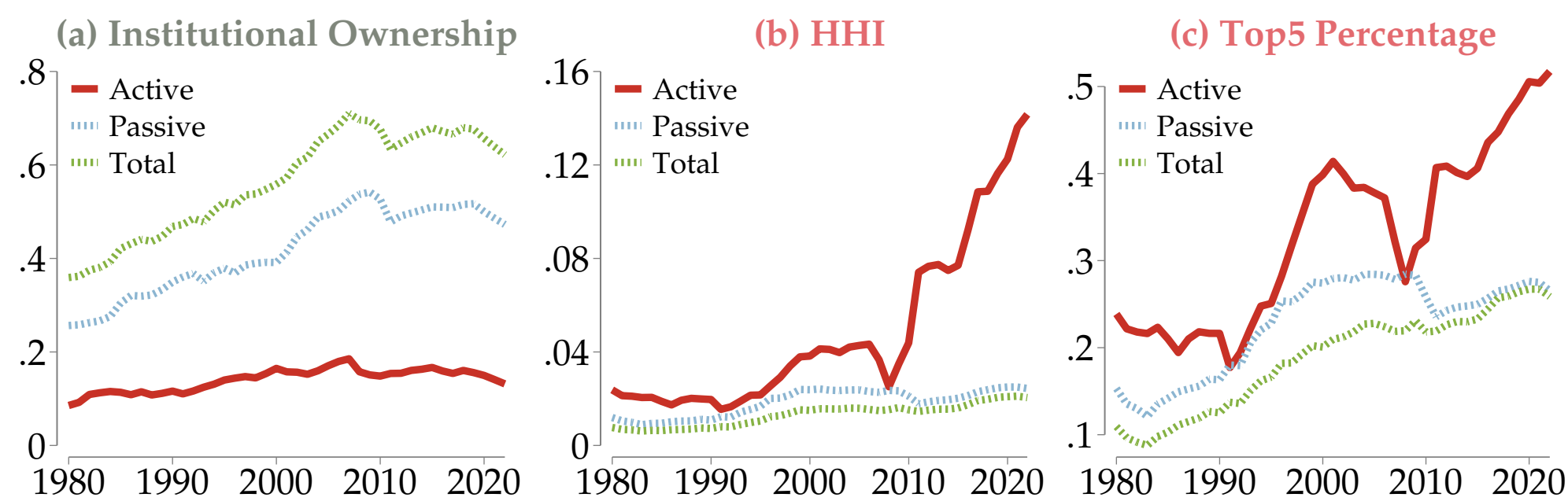
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Full Paper

Motivation

(a) Institutional Ownership — (b) HHI — (c) Top5 Percentage

📈 Stable size but surging concentration among active investors.

Research Question

How does active institutional ownership concentration affect informational efficiency?

Main Findings

Concentration ↗ (Market-level, Firm-level) → Learning Decision / Trading Strategy → Informational Efficiency ↘ (Forecasting Price Efficiency (FPE), Revelatory Price Efficiency (RPE))

- Active institutional ownership concentration harms both forecasting price efficiency (FPE) and revelatory price efficiency (RPE).
- The negative effect holds at both market and firm levels.
- Mechanisms
  - Learning: Small investors specify learning.
  - Trading: Large investors trade conservatively.

Empirical Design

🏷 **FPE:** Predictability of future cash flows from current market prices.

$$\frac{E_{i,t+1}}{A_{i,t}} = a + b\log\left(\frac{M_{i,t}}{A_{i,t}}\right) + c\log\left(\frac{M_{i,t}}{A_{i,t}}\right) \times Concentration_{i,t}$$
$$+ d\,Concentration_{i,t} + e\frac{E_{i,t}}{A_{i,t}} + f\chi_{i,t} + FE_{i,t} + \varepsilon_{i,t+1}$$

- i, t Firm and year
- $\frac{E}{A}$ Earnings scaled by total asset value:
  ① $EBIT$ ② $EBITDA$ ③ NI (Net Income)
- $\log\frac{M}{A}$ Market value scaled by total asset value
- $Concentration$ HHI ($ActHHI$) and top-5 holdings percentage ($ActTop5$) among active institutional investors
- χ Control variables
- FE Firm and Year-Industry fixed effects

🏷 **RPE:** The extent to which prices reveal the information necessary for future investment decisions.

$$\frac{I_{i,t+1}}{K_{i,t}} = a + b\log\left(\frac{M_{i,t}}{A_{i,t}}\right) + c\log\left(\frac{M_{i,t}}{A_{i,t}}\right) \times Concentration_{i,t}$$
$$+ d\,Concentration_{i,t} + e\frac{I_{i,t}}{K_{i,t}} + f\chi_{i,t} + FE_{i,t} + \varepsilon_{i,t+1}$$

- $\frac{I}{K}$ Investment rates:
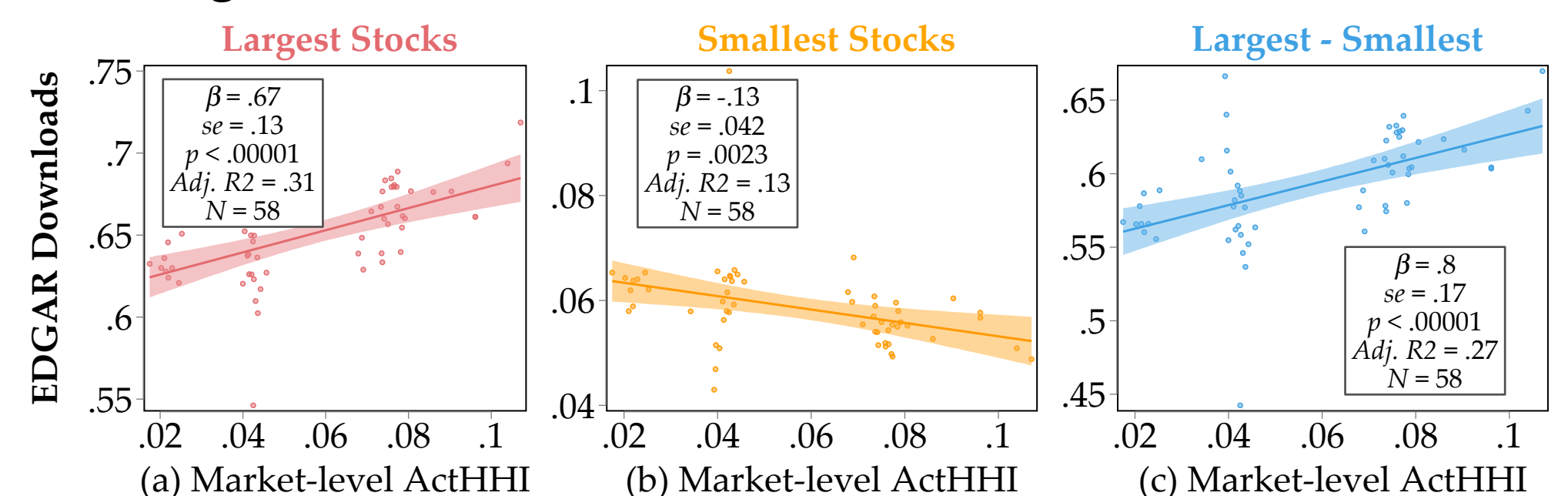 ① $Intangible$ ② $Physical$ ③ $Invest$ ($Intangible + Physical$)

Baseline Result: Negative Effect on FPE & RPE

	(1)	(2)	(3)
Panel A: FPE	$EBIT$	$EBITDA$	NI
$\log(M/A)*ActHHI$	-0.026^{***}	-0.030^{***}	-0.027^{***}
	(0.005)	(0.004)	(0.004)
Panel B: FPE	$EBIT$	$EBITDA$	NI
$\log(M/A)*ActTop5$	-0.033^{***}	-0.040^{***}	-0.029^{***}
	(0.006)	(0.005)	(0.005)
Panel C: RPE	$Intangible$	$Physical$	$Invest$
$\log(M/A)*ActHHI$	-0.022^{***}	-0.023^{***}	-0.044^{***}
	(0.007)	(0.003)	(0.007)
Panel D: RPE	$Intangible$	$Physical$	$Invest$
$\log(M/A)*ActTop5$	-0.027^{***}	-0.024^{***}	-0.050^{***}
	(0.009)	(0.005)	(0.012)

- Concentration (25th → 75th quantile):
  ▼ FPE -24% ▼ RPE -11%
- Robust to:
  - 🗓 3-year prediction horizon
  - 🌐 international sample
  - 🔢 alternative price efficiency measures (PEAD, PIN, variance ratio, informed trading intensity, relative price informativeness)
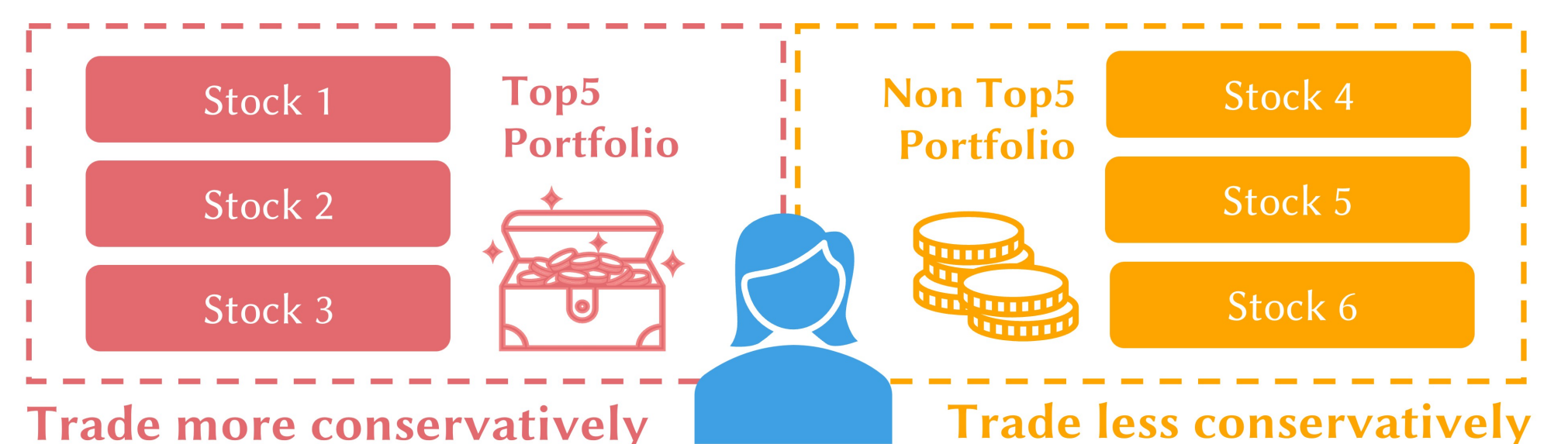
Mechanism 1: Small Investors Specify Learning

Testable Hypothesis: ⇑ learning (EDGAR downloads) in large stocks ⇓ learning in small stocks.

Largest Stocks ($\beta = .67$, $se = .13$, $p < .00001$, $Adj.\ R2 = .31$, $N = 58$) — (a) Market-level ActHHI
Smallest Stocks ($\beta = -.13$, $se = .042$, $p = .0023$, $Adj.\ R2 = .13$, $N = 58$) — (b) Market-level ActHHI
Largest − Smallest ($\beta = .8$, $se = .17$, $p < .00001$, $Adj.\ R2 = .27$, $N = 58$) — (c) Market-level ActHHI

Mechanism 2: Large Investors Trade Conservatively

Testable Hypothesis: Within each investor, position adjustments are smaller in stocks where she is among the top 5 shareholders.

Top5 Portfolio (Stock 1, Stock 2, Stock 3) — Trade more conservatively
Non Top5 Portfolio (Stock 4, Stock 5, Stock 6) — Trade less conservatively

	$Portfolio\ Turnover$
$Top5\ Portfolio\ Dummy$	-0.143^{***}
	(0.004)
Controls	Y
Investor-Quarter FE	Y