EQUITY, INSIDER TRADING, 
& RESTATEMENTS

RESEARCH SPOTLIGHT

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KEY CONCEPTS

• In theory, executives who hold equity in the companies they manage have greater incentive to increase the economic value of their firms.
  
  (+) Aligns interests of shareholders and executives.
  (+) Provides “pay for performance.”
  (+) Actions that harm shareholders also reduce CEO wealth.

• However, equity ownership might also foster undesirable behaviors.
  
  (-) Manipulation of earnings to artificially increase stock price.
  (-) Use of inside information to gain trading advantage over shareholders.
  (-) Changes in risk tolerance that influence firm decisions.*

Research demonstrates both outcomes: equity holdings encourage greater performance but also lead (in some instances) to agency problems.

* Compensation and risk are discussed separately in the Research Spotlight, “Compensation & Risk”.

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Morck, Shleifer, and Vishny (1988) study the relation between equity ownership and firm value.


Group companies by percent of shares outstanding held by the board of directors, including the CEO.

Find positive correlation between equity ownership and firm value (Tobin’s Q).

But, correlation only holds at low (<5%) and high (>25%) ownership levels.

Conclusion: modest evidence that equity ownership improves performance.

“Increases of Tobin’s Q with ownership reflect the convergence of interests between managers and shareholders.”
McConnell and Servaes (1990) also study the relation between equity ownership and firm value.

Sample: 1,173 companies, 1976; 1,093 companies, 1986.

Find a positive relation between equity ownership and firm value (Tobin’s Q) across a wider array of ownership levels (up to 50%).

Conclusion: equity ownership improves performance.

“We find a significant curvilinear relation between Q and the fraction of common stock owned by corporate insiders... consistent with the hypothesis that corporate value is a function of the structure of equity ownership.”

• Sample: 503 Swedish companies, 908 CEOs, 2000-2007.

• Measure equity ownership in terms of the personal wealth a CEO has invested in the company, not the percent of company owned.
  – CEO owns 3% of the company, on average…
  – But has 45% of personal wealth invested in the company.

• Find that the ratio of CEO ownership to personal wealth is positively correlated with firm performance (ROA).

Conclusion: equity ownership improves performance.
Lilienfeld-Toal and Ruenzi (2014) study the relation between equity ownership and stock-price performance.


Create “portfolios” of companies with high CEO ownership (>10%).

Find that portfolios with high CEO ownership generate annualized abnormal returns of 4% to 10%. Results are stronger for firms where CEO has discretion (measured by founder status, resource availability, and governance).

Conclusion: equity ownership improves performance.

“Owner-CEOs are value increasing [in that] they reduce empire building and run their firms more efficiently.”
• Core and Larcker (2002) examine the impact of target ownership plans on firm performance.

  – Average plan requires CEO to hold 4 times base salary in equity.

• Before plan adoption, CEOs have low stock ownership; firms exhibit below average stock returns.

• Following plan adoption, CEOs increase stock ownership; firms experience significant increase in operating (ROA) and stock-price returns.

Conclusion: target ownership plans improve performance.

“We find that mandatory increases in suboptimal equity ownership are associated with increases in subsequent firm performance.”
EQUITY OWNERSHIP AND FINANCIAL RESTATEMENTS

• Harris and Bromily (2007) examine the relation between equity ownership and financial restatements.

• Sample: 845 companies, 919 restatements, 1997-2002.

• Create matched pairs between restating firms and non-restating firms.

• Find that restatements are more likely to occur at companies with below-average performance (ROA) where CEOs are paid a large portion of compensation in stock options.

Conclusion: equity incentives encourage accounting manipulation.

“Top management incentive compensation and poor organizational performance relative to aspirations increase the likelihood of financial misrepresentation.”
Erickson, Hanlon, and Maydew (2006) also study the relation between equity ownership and financial restatements.


Create matched pairs between restating and non-restating firms and control for factors including corporate governance quality.

Find no relation between equity ownership (either restricted stock or options) and likelihood of restatement.

Conclusion: equity incentives do not encourage accounting manipulation.

“We find no consistent evidence that executive equity incentives are associated with fraud.”
Armstrong, Jagolinzer, and Larcker (2010) study the relation between equity ownership and negative governance outcomes.


Apply more sophisticated statistical testing (propensity score matching).

Find no evidence that equity incentives are associated with accounting restatements, SEC enforcement actions, or shareholder litigation.

Conclusion: equity incentives do not encourage accounting manipulation.

“In contrast to most prior research, we do not find evidence of a possible association between CEO equity incentives and accounting irregularities after matching CEOs on the observable characteristics of their contracting environment.”


Find that:

- The adoption of clawbacks is associated with a reduction in restatements.
- Auditors of firms with clawbacks are less likely to report material weaknesses in controls, charge lower fees, and issue audit reports more quickly.

Conclusion: clawbacks are effective in reducing accounting manipulation.

“Managers have lower incentives to engage in earnings manipulation when they are subject to clawbacks…consistent with real improvements in reporting integrity.”
Lakonishok and Lee (2001) examine whether executives use inside knowledge of firm information to opportunistically trade equity holdings.

- Calculate ratio of net purchases to total insider transactions.
- Include CEO, CFO, board chair, directors, officers, president, and vice presidents.

Find that companies with extensive insider purchases outperform companies with insider selling by 4.8% over subsequent 12-month period.
- However, outperformance due entirely to purchases, not to sales.
- Results most pronounced among small-cap firms.

Conclusion: insiders have modest informational trading advantage.
Seyhun (1986) also examines whether insiders have an informational trading advantage over the market.

Sample: 790 companies, ~60,000 insider transactions, 1975-1981.

Find that

- Insider purchases precede a period of outperformance (4.3% over 300 days).
- Insider sales precede a period of underperformance (2.2% over 300 days).
- Insiders with access to more valuable information (CEO, chairman) have greater trading advantage than other insiders.

Conclusion: insiders have an informational trading advantage.

“This suggests that insiders purchase stock prior to the release of favorable information and sell stock prior to the release of unfavorable information.”
Jagolinzer (2009) examines whether executives manipulate prearranged 10b5-1 trading plans to gain a trading advantage over the market.


Find that
- Insiders who sell through 10b5-1 outperform insiders who sell outside 10b5-1. (3.3% over 6-month period).
- Sales systematically precede periods of underperformance.
- Early termination of plans systematically precede periods of outperformance.

Conclusion: 10b5-1 plans do not prevent trading abuses.

“There is evidence that participants’ sales, on average, generate abnormal trade returns... and that participants terminate sales plans before positive shifts in firm returns.”
HEDGING AND INSIDER TRADING

• Bettis, Bizjak, and Lemmon (2001) study executives’ use of zero-cost collars to hedge the value of their equity holdings.

  – (Study precedes expanded SEC disclosure rules on executive hedging.)

• Find that:
  – Executives hedge approximately 36% of their equity holdings.
  – Number of shares hedged ≈ 10 times the number of shares sold during the period.
  – Hedges are put on in periods of relatively high selling activity by other insiders.
  – No evidence that executive hedges outperform the market.

Conclusion: executives do not use hedges to opportunistically time trades.
Jagolinzer, Matsunaga, and Yeung (2007) study executives’ use of prepaid-variable forward contracts (PVF) to hedge equity.


Find that:
- Executives hedge approximately 30% of their equity holdings.
- Number of shares hedged ≈ 50 times the number sold during the period.
- PVF transactions follow periods of positive abnormal stock returns. (16.1% vs. matched peers; 12.6% vs. industry).
- PVF transactions precede periods of negative abnormal stock returns. (-4.3% vs. matched peers; -12.5% vs. industry).

Conclusion: executives use hedges to opportunistically time trades.
• Bettis, Bizjak, and Kalpathy (2015) also study executive hedging activity.

• Sample: 2,042 transactions, 929 individuals, 582 companies, 1996-2006.

• Observe that executive hedging activity breaks down as follows:
  – Transaction volume: 48% forwards, 23% collars, 22% exchange funds, 7% equity swaps.
  – Dollar size: 33% swaps, 31% collars, 28% forwards, 9% exchange funds.

• Find that executives place hedges after significant run-ups in stock price.

Conclusion: modest evidence that executives use hedges to time trades.

“While these instruments may be allowed by boards to mitigate agency problems relating to overvalued equity and equity-based pay, our evidence regarding forwards and collars is more consistent with the strategic timing of transactions by insiders.”
Jagolinzer, Larcker, and Taylor (2011) examine the roles of insider trading policies and general counsel approval to reduce trading advantages.

- Measure abnormal profits earned by executives through trading activity.
- Compare the profitability of trades when prior GC approval is / is not required.

Find that:
- Executives subject to general counsel approval generate lower trading profits.
- Impact is most pronounced when trades occur inside restricted windows.

Conclusion: insider trading policies can reduce trading advantages.

“When given the authority, it appears the general counsel can effectively limit the extent to which corporate insiders use their private information to extract rents from shareholders.”
CONCLUSIONS

• Research generally shows that CEO equity ownership is positively associated with firm value. Target ownership plans encourage this association by requiring executives to increase their ownership levels.

• Research on the relation between equity ownership and future restatements is mixed. Nevertheless, clawback policies have been shown to reduce the risk of restatement by subjecting equity awards to forfeiture.

• Evidence is fairly consistent that some executives take advantage of inside information to gain a trading edge over common shareholders.

• Stricter insider trading policies—such as blackout windows and the requirement of general counsel approval prior to trading—can reduce incidences of abuse.


