What Do Financial Economists Know About Short Termism?

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Guiding Principles

• Balanced assessment
• “Credibility revolution”
  • From correlation to causation
  • Highly relevant to provide policy guidance
• Mostly empirical “micro” evidence
  • Difficult to infer causation from aggregate, “macro” relationships (counterfactual?)
• High-quality research
  • Peer reviewed, top journals, some exceptions
• Awareness that I have missed some of your work…
What is Short-termism?

Actions that focus on short-term gains \textit{at the expense} of long-term value

Elements

• Actions (investment, payouts, …)
• Long-term value destruction
• Focus on short-term stock price
• Market inefficiency (?)
My Map

- STHs
  - Private/Public
  - Long-term/Short-term
  - Activists

- Incentives
- Engagement

- Reporting

- R&D
  - Capex
  - Buybacks

- ST Stock Price
- LT Stock Price

- CEO

- Analysts
Agenda

• Executive compensation
  • Short-term incentives and long-term investment
  • Short-term incentives and long-term firm value

• Financial reporting
  • Frequency of reporting and long-term investment
  • Analyst earnings forecasts and long-term investment

• Ownership
  • Private versus public
  • Long-term versus short-term
  • Activist versus non-activist
Now give me the evidence!
Executive Compensation
Executive Compensation

• Short-term incentives and long-term investment
  • Question: Do concerns about the short-term stock price affect long-term investment?
  • Measure of short-term concerns: amount of equity-based compensation that vests (becomes exercisable)
  • Challenge: Short-term incentives are endogenous

• Short-term incentives and long-term firm value
  • Question: How do short-term actions affect long-term firm value?
  • Challenge: Isolating long-term effects of myopic actions; difficult to look at long-term stock returns
Causal effect: vested equity largely driven by grants made years ago

Results: Vested equity induces CEOs to reduce investment

Also: Positive effect on short-term earnings, analysts forecast revisions, earnings guidance

### Table 2: Vesting equity and change in investment

<table>
<thead>
<tr>
<th>Dependent variables</th>
<th>$\Delta RD_q$</th>
<th>$\Delta CAPEX_q$</th>
<th>$\Delta NETINV_q$</th>
<th>$\Delta RDCAPEX_q$</th>
<th>$\Delta RDNETINV_q$</th>
</tr>
</thead>
<tbody>
<tr>
<td>$VESTING_q$</td>
<td>-0.060***</td>
<td>-0.089***</td>
<td>-0.149**</td>
<td>-0.159***</td>
<td>-0.224***</td>
</tr>
<tr>
<td></td>
<td>(0.021)</td>
<td>(0.025)</td>
<td>(0.067)</td>
<td>(0.039)</td>
<td>(0.079)</td>
</tr>
<tr>
<td>$UNVESTED_{q-1}$</td>
<td>-0.003</td>
<td>0.004</td>
<td>0.051</td>
<td>0.002</td>
<td>0.054</td>
</tr>
<tr>
<td></td>
<td>(0.009)</td>
<td>(0.013)</td>
<td>(0.036)</td>
<td>(0.018)</td>
<td>(0.040)</td>
</tr>
<tr>
<td>$VESTED_{q-1}$</td>
<td>-0.001*</td>
<td>0.002</td>
<td>-0.006</td>
<td>0.001</td>
<td>-0.008*</td>
</tr>
<tr>
<td></td>
<td>(0.001)</td>
<td>(0.001)</td>
<td>(0.004)</td>
<td>(0.002)</td>
<td>(0.004)</td>
</tr>
</tbody>
</table>

Year fixed effects: Yes
Quarter fixed effects: Yes
Firm fixed effects: Yes
Observations: 26,724
Adjusted $R^2$: 0.093

OLS regression results on the relationship between the CEO’s vesting equity and the change in investment. Variable definitions are in Appendix A. $VESTING$, $UNVESTED$, $VESTED$, $SALARY$, and $BONUS$ are in billions. $CEOAGE$, $CEOSENRE$, and $FIRMAGE$ are in hundreds. Robust standard errors are in parentheses. ***, **, and * indicate significance at the 1% 5%, and 10% two-tailed levels, respectively.

1 STD increase in $VESTING$ -> 0.2% decline in $RDNETINV$ (11% mean investment-to-assets ratio) ($NETINV$=change in PPE)

Controls not reported
Causal effect: accelerated option vesting varies across firms based on FYE

Results: Accelerated vesting induces CEOs to reduce investment

Also: Positive effect on short-term earnings, stock prices

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Total investment</th>
<th>Total investment</th>
<th>Total investment</th>
<th>R&amp;D</th>
<th>Capex</th>
<th>Total investment</th>
<th>R&amp;D</th>
<th>Capex</th>
</tr>
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<tbody>
<tr>
<td>Model</td>
<td>OLS</td>
<td>OLS</td>
<td>2SLS</td>
<td>2SLS</td>
<td>2SLS</td>
<td>2SLS</td>
<td>2SLS</td>
<td>2SLS</td>
</tr>
<tr>
<td>Sample</td>
<td>All firms</td>
<td>Thomson firms</td>
<td>All firms</td>
<td>All firms</td>
<td>All firms</td>
<td>Thomson firms</td>
<td>Thomson firms</td>
<td></td>
</tr>
</tbody>
</table>

| Year-fixed effects | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry-fixed effects | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

Frac. options accelerated

-0.003 (-0.16)

-0.516*** (-3.70)

-0.275*** (-3.55)

-0.248*** (-2.58)

Log accelerated options delta

-0.000 (-0.20)

-0.017*** (-3.31)

-0.010*** (-3.11)

-0.009** (-2.25)

1 STD increase in the fraction of options accelerated -> Investment rate down by 0.052 (24% of STD)

Controls not reported
Causal effect: shareholder proposals on long-term exec. pay that pass/fail by small margin

Results: Adoption leads to increase in investments (innovation, stakeholder relationships)
Also: Positive effect on op. performance, firm value
Executive Compensation

• Short-term incentives and long-term investment
  • Question: Do concerns about the short-term stock price affect long-term investment?
  • Measure of short-term incentives: amount of equity-based compensation that vests (becomes exercisable)
  • Challenge: Short-term incentives are endogenous

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  • Challenge: Isolating long-term effects of myopic actions; difficult to look at long-term stock returns
Causal effect: vested equity largely driven by grants made years ago; key managerial actions

Results: Vesting equity increases share buybacks, M&A

Larger negative abnormal long-term abnormal returns following buybacks, M&A when more equity vested
Financial Reporting
Financial Reporting

• Frequency of reporting and long-term investment
  • Question: Does quarterly financial reporting induce short-termist behavior due to the focus on short-term earnings?
  • Identify effects from changes in reporting regulation in the US, EU, UK

• Analyst earnings forecasts and long-term investment
  • Question: Do quarterly earnings forecasts/EPS targets by analysts induce short-termist behavior?
Kraft, Vashishtha, and Venkatachalam (TAR 2018)

Causal effect: transition of US firms from annual to semi-annual to quarterly reporting (1950–1970)

Results: Increased reporting frequency is associated with less investment

Also: Stronger effects in industries where investments take long to generate earnings

<table>
<thead>
<tr>
<th>TREAT</th>
<th>CAPEX</th>
<th></th>
<th>CHFPE</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.014*</td>
<td>(1.934)</td>
<td>0.012*</td>
<td>(1.747)</td>
</tr>
<tr>
<td>AFTER</td>
<td>0.006*</td>
<td>(1.873)</td>
<td>0.006</td>
<td>(1.512)</td>
</tr>
<tr>
<td>TREAT*AFTER</td>
<td>-0.016***</td>
<td>(-2.895)</td>
<td>-0.012**</td>
<td>(-2.028)</td>
</tr>
</tbody>
</table>

TREAT is an indicator for treatment firms, which are firms that experience an increase in reporting frequency. AFTER is an indicator for firm-year observations after the treatment year.

Controls not reported
Ernstberger et al. (TAR 2017)

Causal effect: Reporting frequency in EU increased with mandate to issue quarterly Interim Management Statements (IMSs). Compare newly mandated with matched firms already mandated to report quarterly.

Results: Increase in real activities manipulations (RAM) (e.g., discretionary spending) for firms mandated to switch from semiannual to quarterly IMS reporting, relative to matched control firms.

<table>
<thead>
<tr>
<th>Variables of Interest</th>
<th>Coeff.</th>
<th>Sign.</th>
</tr>
</thead>
<tbody>
<tr>
<td>POST&lt;sub&gt;t&lt;/sub&gt;</td>
<td>-1.259</td>
<td>(1.01)</td>
</tr>
<tr>
<td>SEMI × POST&lt;sub&gt;t&lt;/sub&gt;</td>
<td>3.077</td>
<td>(4.16)***</td>
</tr>
</tbody>
</table>

Costs Associated with Real Activities Manipulation

- SHARE<sub>t-1</sub>: 0.156 (0.18)
- ZSCORE<sub>t-1</sub>: 0.025 (0.32)
- INST<sub>t-1</sub>: 0.028 (4.59)***

Costs Associated with Accrual-Based Earnings Management

- BIGFOUR<sub>t</sub>: -2.918 (1.55)
- TENURE<sub>t</sub>: -1.327 (3.31)***
- ENF<sub>t</sub>: -0.203 (0.06)
- NOA<sub>t-1</sub>: 0.975 (1.89)*
- CYCLE<sub>t-1</sub>: -2.900 (4.57)***

Further Control Variables

- ROA<sub>t</sub>: 0.124 (2.98)***
- ASSETS<sub>t</sub>: 0.935 (0.72)
- MTB<sub>t</sub>: -0.140 (0.85)
- EARN<sub>t</sub>: -0.422 (5.72)***
- COVERAGE<sub>t</sub>: -0.009 (0.23)
- MKT_LIQ<sub>t</sub>: 0.001 (1.75)
- MKT_RETURN<sub>t</sub>: -0.002 (0.12)
- RAM<sub>t-1</sub>: 0.243 (6.14)***

IM<sub>t</sub>

Firm and year fixed effects: Included
Adj. R<sup>2</sup>: 85.1%
Number of Obs.: 5,304

SEMI indicates whether an observation is related to the treatment group of firms newly mandated to issue IMSs. POST: fiscal year after the mandate to issue IMSs in the EU.
Causal effect: Start of mandatory quarterly reporting by the UK Financial Conduct Authority in 2007 and the end of the requirement in 2014.

Results: Mandatory quarterly reporting has no impact on investment. Also: Companies that voluntarily moved back from to semi-annual reporting show no increases investment.

\[ \text{Treat} \] equals 1 for firms that mandatorily switched to quarterly reporting and 0 otherwise (i.e., control firms reported quarterly before/after). \[ \text{Post} \] equals 1 for the sample years 2008-2010 and 0 for the years 2005-2007.
Financial Reporting

• Frequency of reporting and long-term investment
  • Question: Does quarterly financial reporting induce short-termist behavior due to the focus on short-term earnings?
  • Identify effects from changes in reporting regulation in the US, EU, UK

• Analyst earnings forecasts and long-term investment
  • Question: Do quarterly earnings forecasts/EPS targets by analysts induce short-termist behavior?
Causal effect: Survey among 400+ executives

Results: 80% willing to decrease discretionary spending on R&D, advertising, maintenance to meet an earnings target

Fig. 5. Responses to the question: “Near the end of the quarter, it looks like your company might come in below the desired earnings target. Within what is permitted by GAAP, which of the following choices might your company make?” based on a survey of 401 financial executives.
Causal effect: Reg. discontinuity to identify the real effects of EPS-target-induced share repurchases

Results: Probability of share repurchases (increase EPS) is higher for firms that would have just missed the EPS forecast w/o the repurchase, compared with firms that "just beat" the forecast

*EPS-motivated* repurchases lead to less employment, less investment (see table)
Almeida et al. (2020)

• Study the long-term effects of the incentive to engage in EPS-driven repurchases

• Leads to lower long-term productivity, but only if there are additional frictions that prevent firms from downsizing efficiently
  • Most plants in states with weak labor (unions)
    • Reduction in investment in unproductive plants; minimizes impact of downsizing on productivity.
  • Most plants in states with strong labor (unions)
    • Cut investment inefficiently, across the board, even in productive plants
Ownership
Ownership

• Private versus public

• Long-term versus short-term

• Activist versus non-activist
Asker, Farre-Mensa, and Ljungqvist (RFS 2015)

Causal effect: Compare similar public and private firms (matching)

Results: Compared with private firms, public firms invest less (investment rate of 4.1% versus 7.5%), year-on-year investment changes are smaller (figure)

Also: public firms are less responsive to changes in investment opportunities

Average annual change in gross fixed assets (scaled by total assets)
Ownership

• Private versus public

• Long-term versus short-term

• Activist versus non-activist
Long-term versus Short-term Investors

Presence of short-term investors is associated with (causes?) …

- … less investment
  - Bushee (TAR 1998); Derrien et al. (JFQA 2013); Cremers et al. (MS 2020):

- … more fraud, more empire building
  - Harford et al. (JCF 2018)

- … worse M&A decisions
  - Gaspar et al. (JFE 2005), Chen et al. (JFE 2007)
Causal effect: Russel 2000 index inclusion

Results: Higher ownership by short-term investors leads to less investment

Also: Higher short-term ownership leads to increases in short-term earnings, and temporary boosts in the stock price that reverse over time
Ownership

• Private versus public

• Long-term versus short-term

• Activist versus non-activist
Activist Investors

Presence of an activist investors causes …

• … higher stock prices
  • Brav et al. (JF 2008)

• … more investment/higher productivity
  • Brav et al. (RFS 2015)

• … higher long-term firm values
  • Bebchuk et al. (CLR 2015)
Summary of Evidence

• Executive compensation
  • Short-term incentives and long-term investment
  • Short-term incentives and long-term firm value

• Financial reporting
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Bottom Line

• Nuanced perspective is needed
  • Short-termism is a first-order issue, but only in *certain parts* of the system
  • Evidence does *not* suggest that the system is broken

• What is the cause of the problem?
  • Shareholder orientation is not the cause, rather a lack thereof
  • Should not confuse the symptoms with the disease (underlying problem)?
    • E.g., Payouts are not the disease
  • Reform needs to address selective features of the system
    • Fix the underlying problems, not the symptoms
Caveats

• Publication bias?

• Personal bias?

• Sample bias?
THANKS FOR YOUR ATTENTION