

# ADAPTING TO RADICAL CHANGE: THE BENEFITS OF SHORT-HORIZON INVESTORS

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# Overview

- Firms operate in changing economic environments: **import competition from China**, deregulation etc.
  - Author, Dorn and Hanson (AER 2013); Bloom, Draca and Van Reenen (ReStud 2016)
- Industry shakeouts generate winners and losers: Firms may thrive or succumb depending on **whether they are able to reinvent their business model**
- Which firms perform better following negative shocks?
  - **This paper:** ownership characteristics, and institutional ownership in particular

# Institutional investors differ greatly in their trading horizons

- Long horizon investors
  - Focus on predicting long-run movements in asset values driven by fundamentals
  - Care about firm long-term performance
    - Follow indexes or hold large positions in one stock → Unable to sell fast
- Short horizon investors
  - Focus on predicting the flow of buy and sell orders and aim to profit from stock short-term appreciations
  - Care about firm short-term underperformance
- Short investment horizons lead to inefficient corporate policies in normal times and static economic environments
  - Theory
    - Managerial myopia (Stein, 1989)
  - Empirical evidence
    - Bushee, 1998; Bushee and Noe 2000; Bushee 2001; Gaspar, Massa and Matos, 2005; Chen, Harford and Li, 2007; Cella, Ellul and Giannetti, 2013; Harford, Kecskes, and Mansi, 2014; Cremers, Pareek and Sautner, 2015

# This paper

- Firms with more short-term institutional investors are **faster in adapting to radical change**
  - As a consequence, they perform better
- **Mechanisms:**
  - Management fears coordinated sell-offs by short-term investors at the first sign of underperformance
    - Long-term investors holding larger stakes in the firm or following an index cannot mimic short-term investors
    - Short-term investors are highly diversified and unlikely to have private information; their threat to sell may have both beneficial and negative effects
  - **Pressure affects corporate policies even if, and especially when, we do not observe voice and exit on the equilibrium path (Fos and Kahn 2015)**

# When may short-termism be desirable?

- Negative shocks leading to exogenous large increases in competition
  - **Large reductions of import tariff rates in manufacturing industries**
    - Large negative effects on manufacturing companies (Author, Dorn and Hanson, AER 2013; Bloom, Draca and Van Reenen, ReStud 2016)
      - Experiment used in a number of finance papers to proxy for changes in competition (Fresard, 2010, Xu, 2012, Valta, 2012)
    - *Following existing literature, we explore firm reactions to the actual increase in imports*
  - **Deregulation in service industries**
    - Asker and Ljungqvist (2010)

# What we do

- We test whether *ex ante* differences in ownership structure lead to differential responses to the above negative shocks
- Contributions
  - An economic context in which short-term investors may be beneficial
  - How firm characteristics (e.g., ownership) affect the firms' resilience to import competition

# Our findings in a nutshell

- Following large increases in competitive pressure, firms with *ex ante* more short-term investors “restructure” more
  - As a consequence, perform better
- Results are not due to selection effects
  - Robust to using exogenous variation in short-term institutional ownership due to index inclusions
  - No evidence that short-term institutional investors increase their holdings in firms that are going to perform better in the new competitive environment
  - No evidence that only the fittest firms with short-term investors survive. Firms with long-term investors exit to a larger extent
  - No evidence of pre-existing trends

# Data

- US import data for 4-digit SIC code industries (1981-2011)
  - We compute ad valorem tariff rates, computed as the duties collected at the U.S. Customs, divided by the Free-On-Board custom value of imports
  - Feenstra (1996), Feenstra, Romalis, and Schott (2010), our updates
- Firm characteristics
  - CRSP
  - COMPUSTAT
  - SDC
  - Execucomp, etc.
- Institutional ownership: 13F



# Measuring investor horizon

- *Investor horizon is a predetermined and persistent characteristic of the investor*
  - Two alternative proxies based on the past holding period of an investor
    - **Transient investors** as classified by Bushee (1998)
    - **The investor's portfolio turnover**
- Firm-level investor horizon
  - Aggregate the horizon of the firm's shareholders using ownership weights just before the event
  - A firm's **% short-term investors**: % of institutional ownership of transient investors
  - A firm's **average churn ratio**: the average portfolio turnover of the institutional investors in a firm (Cella, Ellul and Giannetti 2013)
- Extent to which a firm attracts short-term investors is relatively stable over time

# Empirical approach

- Initial reactions to negative shocks
  - How firms react in the year following the tariff cuts
    - Sales growth
    - Employment growth
    - PPE growth
    - $g_{f,i,t+1} = \alpha_0 + \alpha_1 cut_{i,t} \times short\ term\ IO_{f,i,t-1} + \alpha_2 cut_{i,t} + \alpha_3 short\ term\ IO_{f,i,t-1} + A_4 X_{f,i,t} + \epsilon_{f,i,t+1}$
- Long-term performance (up to five years after the tariff cuts)
  - Tobin's Q and ROA
- Mechanisms

# Initial reaction: Sales growth

Following a large tariff cut, a firm with one-std. dev. larger % *Short-term investors* → 2.3 percentage points lower drop in sales than that of a similar firm

<b>Cut × % Short-term Investors</b>	<b>0.215***</b>	<b>0.200***</b>	<b>0.205***</b>	<b>0.232***</b>	<b>0.242***</b>	
	<b>(0.057)</b>	<b>(0.059)</b>	<b>(0.064)</b>	<b>(0.088)</b>	<b>(0.090)</b>	
Cut	-0.019***	-0.017**				
	(0.007)	(0.007)				
% Short-term Investors	0.175***	0.037	0.190***	0.415***	0.176***	
	(0.028)	(0.041)	(0.031)	(0.041)	(0.056)	
<b>Cut × Churn</b>						<b>1.833***</b>
						<b>(0.634)</b>
Churn						2.512***
						(0.285)
% Institutional Investors				-0.114***	-0.109***	-0.229***
				(0.014)	(0.027)	(0.026)
Cut × % Institutional Investors				-0.019	-0.044	-0.092*
				(0.030)	(0.031)	(0.055)
ROA	0.161***	0.283***	0.143***	0.153***	0.256***	0.136***
	(0.014)	(0.022)	(0.014)	(0.014)	(0.023)	(0.012)
Observations	22,491	22,232	21,957	21,957	21,690	23,972
R-squared	0.102	0.245	0.209	0.213	0.349	0.198
Industry FE	YES	NO	NO	NO	NO	NO
Firm FE	NO	YES	NO	NO	YES	NO
Year FE	YES	YES	NO	NO	NO	NO
Industry x Year FE	NO	NO	YES	YES	YES	YES

# Initial reaction: Employment growth

<b>Cut × % Short-term Investors</b>	<b>0.187***</b>	<b>0.140***</b>	<b>0.212***</b>	<b>0.193**</b>	<b>0.161**</b>	
	<b>(0.048)</b>	<b>(0.049)</b>	<b>(0.054)</b>	<b>(0.076)</b>	<b>(0.074)</b>	
Cut	-0.013**	-0.005				
	(0.006)	(0.006)				
% Short-term Investors	0.176***	0.118***	0.173***	0.372***	0.227***	
	(0.023)	(0.033)	(0.026)	(0.034)	(0.041)	
<b>Cut × Churn</b>						<b>1.668***</b>
						<b>(0.503)</b>
Churn						1.978***
						(0.215)
% Institutional Investors				-0.102***	-0.096***	-0.175***
				(0.012)	(0.023)	(0.020)
Cut × % Institutional Investors				0.006	-0.011	-0.064
				(0.026)	(0.027)	(0.044)
ROA	0.119***	0.180***	0.108***	0.117***	0.168***	0.104***
	(0.009)	(0.014)	(0.009)	(0.010)	(0.015)	(0.008)
Observations	22,053	21,788	21,498	21,498	21,226	23,424
R-squared	0.082	0.232	0.175	0.179	0.324	0.165
Industry FE	YES	NO	NO	NO	NO	NO
Firm FE	NO	YES	NO	NO	YES	NO
Year FE	YES	YES	NO	NO	NO	NO
Industry x Year FE	NO	NO	YES	YES	YES	YES

# Initial reaction: PPE growth

<b>Cut × % Short-term Investors</b>	<b>0.238***</b>	<b>0.225***</b>	<b>0.225***</b>	<b>0.314***</b>	<b>0.284***</b>	
	<b>(0.045)</b>	<b>(0.045)</b>	<b>(0.051)</b>	<b>(0.071)</b>	<b>(0.069)</b>	
Cut	-0.013**	-0.013**				
	(0.006)	(0.006)				
% Short-term Investors	0.256***	0.256***	0.256***	0.490***	0.331***	
	(0.024)	(0.033)	(0.027)	(0.035)	(0.043)	
<b>Cut × Churn</b>						<b>2.630***</b>
						<b>(0.478)</b>
Churn						2.827***
						(0.226)
% Institutional Investors				-0.119***	-0.064***	-0.237***
				(0.012)	(0.023)	(0.021)
Cut × % Institutional Investors				-0.051**	-0.048*	-0.166***
				(0.025)	(0.025)	(0.042)
ROA	0.085***	0.125***	0.077***	0.087***	0.114***	0.077***
	(0.008)	(0.013)	(0.009)	(0.009)	(0.013)	(0.007)
Observations	22,823	22,566	22,284	22,284	22,020	24,335
R-squared	0.088	0.269	0.173	0.180	0.347	0.163
Industry FE	YES	NO	NO	NO	NO	NO
Firm FE	NO	YES	NO	NO	YES	NO
Year FE	YES	YES	NO	NO	NO	NO
Industry x Year FE	NO	NO	YES	YES	YES	YES

# Threat to exit and executive wealth-performance sensitivity

- Managers whose wealth is more sensitive to stock price pay more effort to avoid an *en masse* exit of ST investors

Dependent Variable	Sales Growth		Employment Growth		PPE Growth	
<b>Cut × % Short-term Investors</b>	<b>0.143*</b>	<b>0.100</b>	<b>0.134**</b>	<b>0.081</b>	<b>0.181***</b>	<b>0.154***</b>
	<b>(0.073)</b>	<b>(0.078)</b>	<b>(0.060)</b>	<b>(0.061)</b>	<b>(0.057)</b>	<b>(0.057)</b>
<b>High WP × Cut × % Short-term Investors</b>	<b>0.188**</b>	<b>0.197**</b>	<b>0.235***</b>	<b>0.193***</b>	<b>0.133**</b>	<b>0.129**</b>
	<b>(0.075)</b>	<b>(0.077)</b>	<b>(0.067)</b>	<b>(0.067)</b>	<b>(0.061)</b>	<b>(0.058)</b>
% Short-term Investors	0.190***	0.053	0.173***	0.115***	0.257***	0.262***
	(0.031)	(0.046)	(0.026)	(0.038)	(0.027)	(0.037)
ROA	0.142***	0.256***	0.107***	0.168***	0.076***	0.114***
	(0.014)	(0.023)	(0.009)	(0.015)	(0.009)	(0.013)
Observations	21,957	21,690	21,498	21,226	22,284	22,020
R-squared	0.209	0.348	0.175	0.324	0.173	0.347
Firm FE	NO	YES	NO	YES	NO	YES
Year FE	NO	NO	NO	NO	NO	NO
Industry x Year FE	YES	YES	YES	YES	YES	YES

# Long-term effects

A one-std. dev. increase in % *Short-term Investors* → a 6.3 percentage points higher Tobin's Q, 1.4 percentage points higher ROA for firms 5 years after a large tariff cut.

	Tobin's Q						ROA					
<b>Post Cut × % Short-term Investors</b>	<b>1.133***</b>	<b>0.722**</b>	<b>0.770**</b>	<b>0.636*</b>			<b>0.085*</b>	<b>0.126**</b>	<b>0.126**</b>	<b>0.143*</b>		
	<b>(0.233)</b>	<b>(0.314)</b>	<b>(0.310)</b>	<b>(0.330)</b>			<b>(0.051)</b>	<b>(0.062)</b>	<b>(0.061)</b>	<b>(0.074)</b>		
Post Cut	-0.187***	-0.237***	-0.226***		-0.234***		-0.000	0.006	0.004		0.000	
	(0.033)	(0.043)	(0.042)		(0.037)		(0.007)	(0.011)	(0.010)		(0.010)	
% Short-term Investors	0.831***	0.913***	1.012***	0.964***			0.005	-0.000	-0.016	-0.033		
	(0.214)	(0.241)	(0.236)	(0.257)			(0.049)	(0.055)	(0.055)	(0.064)		
<b>Post Cut × Churn</b>					<b>4.444**</b>	<b>4.717**</b>					<b>1.322***</b>	<b>1.581***</b>
					<b>(1.999)</b>	<b>(2.098)</b>					<b>(0.392)</b>	<b>(0.512)</b>
Churn					2.813*	2.684*					0.268	0.215
					(1.502)	(1.612)					(0.307)	(0.355)
% Institutional Investors	-0.602***	-1.106***	-0.698***	-0.561***	-0.576***	-0.449**	-0.037	0.001	-0.026	-0.017	-0.059*	-0.056
	(0.107)	(0.116)	(0.121)	(0.140)	(0.170)	(0.188)	(0.024)	(0.027)	(0.026)	(0.032)	(0.034)	(0.040)
Post Cut × % Institutional Investors		0.234**	0.191*	0.271**	0.043	0.041		-0.026	-0.021	-0.025	-0.096**	-0.118**
		(0.115)	(0.112)	(0.126)	(0.179)	(0.194)		(0.024)	(0.023)	(0.028)	(0.038)	(0.046)
ROA	0.065		0.064	0.063	-0.024	-0.030						
	(0.057)		(0.057)	(0.060)	(0.049)	(0.051)						
Leverage	0.280***		0.280***	0.304***	0.333***	0.350***	-0.055*		-0.055*	-0.052	-0.057**	-0.059**
	(0.063)		(0.063)	(0.065)	(0.055)	(0.058)	(0.032)		(0.032)	(0.033)	(0.029)	(0.029)
Size	-0.286***		-0.286***	-0.359***	-0.263***	-0.327***	0.019**		0.019**	0.023***	0.023***	0.026***
	(0.026)		(0.026)	(0.030)	(0.024)	(0.027)	(0.008)		(0.008)	(0.009)	(0.008)	(0.009)
Observations	24,661	24,667	24,661	24,107	27,282	26,739	22,437	22,550	22,437	21,884	24,751	24,223
R-squared	0.623	0.610	0.623	0.678	0.638	0.687	0.640	0.642	0.640	0.668	0.658	0.682
Firm FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	NO	YES	NO	YES	YES	YES	NO	YES	NO
Industry x Year FE	NO	NO	NO	YES	NO	YES	NO	NO	NO	YES	NO	YES

# Mechanisms

- Operational changes
  - Effort to promote existing and new products
    - Advertising growth
  - Product market differentiation
    - Hoberg and Phillips (2015)
- Entering new markets
  - M&As and diversifying M&As
- Changing the executive team
  - Executive turnover



# Mechanisms: Operational changes

	Advertising Growth		Product Differentiation		
<b>Cut × % Short-term Investors</b>	<b>0.251**</b>	<b>0.275**</b>	<b>-0.129**</b>	<b>-0.128**</b>	<b>-0.125**</b>
	<b>(0.104)</b>	<b>(0.122)</b>	<b>(0.045)</b>	<b>(0.047)</b>	<b>(0.049)</b>
Cut	0.044***		0.019	0.019	0.019
	(0.015)		(0.015)	(0.015)	(0.016)
% Short-term Investors	0.020	-0.063	-0.025	-0.031	-0.032
	(0.092)	(0.104)	(0.035)	(0.037)	(0.036)
% Institutional Investors	0.009	0.043	-0.013	-0.012	-0.021
	(0.040)	(0.044)	(0.025)	(0.026)	(0.027)
Cut × % Institutional Investors	-0.113***	-0.099*			
	(0.043)	(0.051)			
ROA	-0.091***	-0.088***		0.024	0.018
	(0.014)	(0.014)		(0.024)	(0.029)
Leverage					-0.004
					(0.013)
Size					0.006
					(0.008)
Observations	23,028	22,496	14,256	14,242	14,210
R-squared	0.218	0.284	0.064	0.064	0.064
Industry FE	YES	NO	NO	NO	NO
Firm FE	NO	NO	YES	YES	YES
Year FE	YES	NO	YES	YES	YES
Industry x Year FE	NO	YES	NO	NO	NO

# Mechanisms: M&As

Dependent Variable	M&A	Divestiture	Diversifying M&A							
<b>Cut × % Short-term Investors</b>	<b>-0.028</b>	<b>0.023</b>	<b>0.095*</b>	<b>0.208***</b>	<b>0.142*</b>	<b>0.171**</b>	<b>0.097*</b>	<b>0.210***</b>	<b>0.142*</b>	<b>0.174**</b>
	<b>(0.075)</b>	<b>(0.057)</b>	<b>(0.053)</b>	<b>(0.055)</b>	<b>(0.077)</b>	<b>(0.078)</b>	<b>(0.053)</b>	<b>(0.055)</b>	<b>(0.077)</b>	<b>(0.079)</b>
Cut	-0.017*	-0.007	-0.009		-0.004		-0.009		-0.004	
	(0.010)	(0.008)	(0.007)		(0.008)		(0.007)		(0.008)	
	0.168**									
% Short-term Investors	*	0.111**	0.020	-0.124***	0.008	-0.115**	0.021	-0.124***	0.010	-0.115**
	(0.065)	(0.050)	(0.045)	(0.043)	(0.047)	(0.046)	(0.046)	(0.043)	(0.048)	(0.046)
% Institutional Investors	-0.038	-0.040	-0.004	0.094***	0.002	0.090***	-0.005	0.094***	0.001	0.090***
	(0.034)	(0.026)	(0.022)	(0.019)	(0.023)	(0.020)	(0.022)	(0.019)	(0.023)	(0.020)
Cut × % Institutional Investors					-0.025	0.019			-0.024	0.019
					(0.030)	(0.031)			(0.030)	(0.031)
# of M&As			0.218***	0.228***	0.218***	0.228***	0.217***	0.228***	0.217***	0.228***
			(0.029)	(0.027)	(0.029)	(0.027)	(0.029)	(0.027)	(0.029)	(0.027)
ROA	0.055**									
	*	0.020***	0.022***	0.013**	0.022***	0.013**	0.015*	0.009	0.015*	0.009
	(0.011)	(0.007)	(0.008)	(0.005)	(0.008)	(0.005)	(0.008)	(0.006)	(0.008)	(0.006)
Size	0.025**									
	*	0.010**	0.004	0.005	0.004	0.005	0.004	0.005	0.003	0.005
	(0.007)	(0.004)	(0.004)	(0.003)	(0.004)	(0.003)	(0.004)	(0.003)	(0.004)	(0.003)
Leverage							-0.019**	-0.008	-0.019**	-0.008
							(0.009)	(0.006)	(0.009)	(0.006)
Observations	21,604	21,604	21,604	21,341	21,604	21,341	21,560	21,299	21,560	21,299
R-squared	0.320	0.218	0.541	0.529	0.541	0.529	0.541	0.529	0.541	0.529
Firm FE	YES	YES	YES	NO	YES	NO	YES	NO	YES	NO
Year FE	YES	YES	YES	NO	YES	NO	YES	NO	YES	NO
Industry x Year FE	NO	NO	NO	YES	NO	YES	NO	YES	NO	YES

# Mechanisms: Executive turnover

- Do firms with more ST investors **turn over the executive team** to adjust to changing market conditions?

	<b>0.100*</b>	<b>0.104*</b>	<b>0.100*</b>
<b>Cut × % Short-term Investors</b>	<b>(0.061)</b>	<b>(0.059)</b>	<b>(0.059)</b>
Cut	0.008 (0.015)	0.012 (0.015)	0.008 (0.015)
% Short-term Investors	0.018 (0.031)	0.032 (0.031)	0.032 (0.032)
% Institutional Investors	0.019 (0.016)	-0.005 (0.017)	-0.010 (0.017)
Cut × % Institutional Investors	-0.024 (0.029)	-0.031 (0.029)	-0.029 (0.029)
ROA	-0.133*** (0.017)	-0.120*** (0.018)	-0.120*** (0.018)
Leverage		0.008 (0.011)	0.013 (0.012)
Size		-0.004** (0.002)	-0.003* (0.002)
# of Executives		0.036*** (0.002)	0.036*** (0.002)
Observations	8,201	8,189	8,189
R-squared	0.039	0.088	0.092
Industry FE	NO	NO	YES
Year FE	YES	YES	YES

# Robustness

- Do firms with more ST investors already do better before the industry is affected by the shock?
  - Placebo test
- Endogeneity of institutional ownership
  - Do ST investors
    - Select better firms in anticipation of the negative shocks?
    - Increase their holdings preceding the shock?
  - Instrumental Variable approach
    - Russell 2000 index ownership (Boone and White 2015)
- Selection problems
  - Firms with more ST investors more likely have “bad death” and exit the dataset?
- Alternative mechanisms
  - Cash holding and leverage
  - Size, R&D, and family block ownership
  - Dedicated investors, investor activism, and ownership concentration
  - ST investors leave after the shock → firm revert to long-term strategies?
- An out of sample test: Deregulation events

# Placebo test

- Do firms with more ST investors in industries that will eventually be affected by the tariff cut are already growing faster?

Dependent Variable	Sales Growth		Employment Growth		PPE Growth	
<b>Cut × % Short-term Investors</b>	<b>0.155*</b>	<b>0.143*</b>	<b>0.151**</b>	<b>0.153**</b>	<b>0.192***</b>	<b>0.205***</b>
	<b>(0.081)</b>	<b>(0.080)</b>	<b>(0.065)</b>	<b>(0.064)</b>	<b>(0.061)</b>	<b>(0.058)</b>
% Short-term Investors	0.165***	0.020	0.210***	0.117**	0.316***	0.343***
	(0.041)	(0.060)	(0.034)	(0.049)	(0.034)	(0.046)
Cut (t-1) × % Short-term Investors	0.028	0.066	0.041	0.064	-0.024	-0.015
	(0.086)	(0.089)	(0.065)	(0.067)	(0.058)	(0.058)
Cut (t-2) × % Short-term Investors	0.115	0.100	0.131*	0.140**	0.087	0.077
	(0.080)	(0.080)	(0.071)	(0.071)	(0.066)	(0.064)
Cut (t-3) × % Short-term Investors	0.072	0.100	-0.132**	-0.167**	-0.081	-0.106
	(0.081)	(0.088)	(0.066)	(0.068)	(0.068)	(0.069)
ROA	0.154***	0.282***	0.104***	0.163***	0.091***	0.130***
	(0.019)	(0.027)	(0.014)	(0.022)	(0.013)	(0.019)
Observations	15,683	15,478	15,285	15,056	15,850	15,631
R-squared	0.197	0.345	0.187	0.338	0.193	0.380
Firm FE	NO	YES	NO	YES	NO	YES
Industry x Year FE	YES	YES	YES	YES	YES	YES

# Endogeneity of institutional ownership

- Direct effect of ST-ownership controls for ST investors' ability to select better firms
- ST investors select firms that they anticipate to do better at coping with competitive pressure
  - Lag ownership variable by 4 years

Dependent Variable	Sales Growth		Employment Growth		PPE Growth	
Cut × % Short-term Investors (t-4)	0.217*** (0.071)	0.190** (0.075)	0.144** (0.060)	0.120* (0.064)	0.142** (0.058)	0.077 (0.062)
Cut	-0.015* (0.009)		-0.009 (0.007)		-0.007 (0.007)	
% Short-term Investors (t-4)	-0.070 (0.043)	0.074** (0.035)	-0.132*** (0.034)	0.029 (0.027)	-0.158*** (0.031)	0.037 (0.026)
% Institutional Investors (t-4)	-0.000 (0.000)	-0.000** (0.000)	0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)
Cut × % Institutional Investors (t-4)	0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)
ROA	0.273*** (0.028)	0.175*** (0.019)	0.153*** (0.021)	0.121*** (0.013)	0.122*** (0.019)	0.100*** (0.012)
Observations	15,452	15,106	15,273	14,919	15,577	15,228
R-squared	0.241	0.241	0.222	0.189	0.247	0.171
Firm FE	YES	NO	YES	NO	YES	NO
Year FE	YES	NO	YES	NO	YES	NO
Industry x Year FE	NO	YES	NO	YES	NO	YES

# Instrumental Variable (2<sup>nd</sup> stage)

- Instruments: Russell 2000 and Cut x Russell 2000

Dependent Variable	Sales Growth				Employment Growth				PPE Growth			
Cut × % Short-term Investors	0.760**	1.020***	1.006***	3.871*	0.624**	0.832***	0.806***	2.737*	0.692***	0.776***	0.739***	2.834**
	(0.305)	(0.297)	(0.356)	(1.975)	(0.272)	(0.234)	(0.301)	(1.599)	(0.223)	(0.209)	(0.263)	(1.442)
% Short-term Investors	1.020***	0.524***	2.923***	2.266***	1.807***	0.610***	3.052***	2.602***	1.080***	0.576***	2.803***	2.310***
	(0.343)	(0.099)	(0.551)	(0.473)	(0.335)	(0.081)	(0.525)	(0.460)	(0.278)	(0.081)	(0.462)	(0.410)
Cut	-0.071**				-0.054**				-0.058***			
	(0.029)				(0.026)				(0.022)			
% Institutional Investors			-0.833***	-0.608***			-0.852***	-0.698***			-0.772***	-0.604***
			(0.154)	(0.126)			(0.146)	(0.124)			(0.128)	(0.110)
Cut × % Institutional Investors				-0.979*				-0.662				-0.719*
				(0.522)				(0.424)				(0.383)
ROA	0.264***	0.127***	0.170***	0.169***	0.150***	0.088***	0.134***	0.134***	0.112***	0.062***	0.102***	0.101***
	(0.023)	(0.014)	(0.015)	(0.016)	(0.016)	(0.010)	(0.011)	(0.011)	(0.013)	(0.009)	(0.010)	(0.010)
Observations	22,232	21,958	21,958	21,958	21,788	21,499	21,499	21,499	22,566	22,285	22,285	22,285
Kleibergen-Paap rk Wald F statistics	31.36	50.442	19.519	5.125	29.931	7.841	18.574	4.993	32.425	52.718	20.227	5.526
Industry FE	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Firm FE	YES	NO	NO	NO	YES	NO	NO	NO	YES	NO	NO	NO
Year FE	YES	NO	NO	NO	YES	NO	NO	NO	YES	NO	NO	NO
Industry x Year FE	NO	YES	YES	YES	NO	YES	YES	YES	NO	YES	YES	YES

# Short-term ownership after the cut

- Does short-term institutional ownership drop after the tariff cut?
  - That may explain why firms with more ex ante short-term ownership do better after the negative shock

Dependent Variable	% Short-term Investors			Churn		
Post Cut	0.007*** (0.002)	0.004** (0.002)	0.004** (0.002)	0.001*** (0.000)	0.001** (0.000)	0.001** (0.000)
% Institutional Investors		0.093*** (0.007)	0.096*** (0.007)		0.044*** (0.001)	0.042*** (0.001)
ROA		0.027*** (0.003)	0.032*** (0.003)		0.006*** (0.001)	0.005*** (0.001)
Leverage			0.008* (0.004)			0.001 (0.001)
Size			-0.001 (0.002)			0.001*** (0.000)
Observations	19,725	19,600	19,566	21,302	21,123	21,087
R-squared	0.639	0.652	0.657	0.788	0.826	0.831
Firm FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES



# Alternative mechanisms: Cash holdings and leverage

Dependent Variable	Sales Growth	Employment Growth	PPE Growth	Sales Growth	Employment Growth	PPE Growth
<b>Cut × % Short-term Investors</b>	<b>0.246***</b> (0.091)	<b>0.150**</b> (0.075)	<b>0.273***</b> (0.070)	<b>0.251***</b> (0.091)	<b>0.157**</b> (0.074)	<b>0.279***</b> (0.069)
% Short-term Investors	0.189*** (0.056)	0.236*** (0.041)	0.344*** (0.043)	0.172*** (0.056)	0.226*** (0.041)	0.334*** (0.043)
% Institutional Investors	-0.112*** (0.027)	-0.099*** (0.023)	-0.067*** (0.023)	-0.106*** (0.027)	-0.099*** (0.023)	-0.067*** (0.023)
Cut × % Institutional Investors	-0.050 (0.031)	-0.009 (0.027)	-0.048* (0.025)	-0.049 (0.031)	-0.009 (0.027)	-0.047* (0.025)
<b>Cash</b>	<b>-0.166***</b> (0.033)	<b>-0.070***</b> (0.025)	<b>-0.126***</b> (0.024)			
<b>Cut × Cash</b>	<b>-0.001</b> (0.049)	<b>0.028</b> (0.029)	<b>0.033</b> (0.027)			
<b>Leverage</b>				<b>0.028***</b> (0.009)	<b>-0.007</b> (0.005)	<b>-0.003***</b> (0.000)
<b>Cut × Leverage</b>				<b>0.048***</b> (0.017)	<b>-0.001</b> (0.009)	<b>-0.003</b> (0.010)
ROA	0.264*** (0.023)	0.172*** (0.015)	0.120*** (0.013)	0.281*** (0.025)	0.163*** (0.015)	0.113*** (0.014)
Observations	21,685	21,224	22,020	21,640	21,180	21,972
R-squared	0.352	0.325	0.350	0.351	0.325	0.349
Firm FE	YES	YES	YES	YES	YES	YES
Industry x Year FE	YES	YES	YES	YES	YES	YES







# Conclusion

- Firms with more short-term investors appear better able to adapt to volatile economic environments
  - Short-term investors' pressure (or fear of their pressure) may spur changes
  - These firms may be used to be faster
- Broader implications
  - Following large negative shocks, less stagnation in countries with short-term investors?
  - Short-term investors could be an antidote to zombie firms
    - Perhaps a cure for Japan and many countries in Europe?