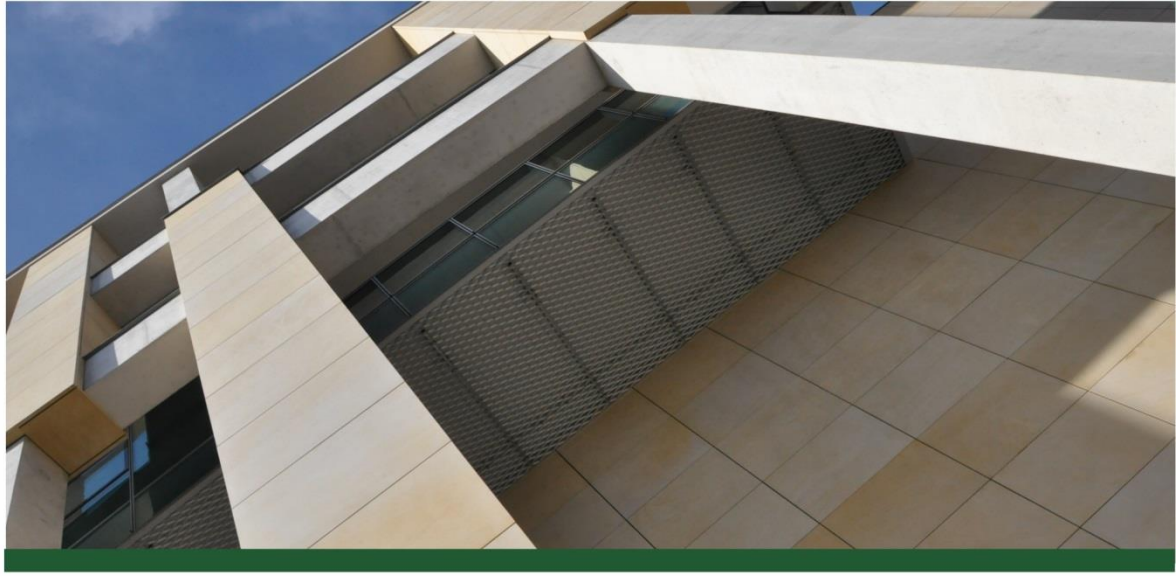

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Governance Through Exit: Polish Pension Fund Reform Impact on Real Earnings Management of Portfolio Companies

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MOTIVATION AND MAIN RESEARCH QUESTION

- **Institutional investors** in Poland **hold relatively large stakes** - in terms of **aggregate institutional ownership** (app. **30%**). Poland is ranked **fifth** preceded only by the US, the UK, Canada and Netherlands (OECD, 2019) .Polish pension funds (OFE) are **one of the most prominent group** of institutional blockholders in Polish listed companies

- Our **main aim** was to examine whether the institutional blockholder **exit threat** curbs **managerial misbehavior and short-termism** reflected in real earnings management

- Polish **pension fund reform** implemented in **2013** created a perfect laboratory for studying the blockholder exit threat as a governance mechanism
  - **changes affecting investment policy** (transformation from balance funds to equity funds; much higher involvement in international stock markets)
  - **changes affecting internal competition** (suspention of the mechanism used by the Polish market supervisor (KNF) to evaluate the performance of pension funds)
  - **changes affecting inflows, outflows and liquidity** (suspention of the mandatory character of contributions; zipper)

LITERATURE REVIEW AND HYPOTHESES

Theoretical background and empirical evidence on institutional ownership in corporate governance context :

- Large shareholders (outside blockholders) motivation to monitor (Shleifer and Vishny 1986; Admati et al. 1994; Maug 1998; Admati and Pfleiderer 2009; Edmans 2009)
- Outside institutional blockholders engage in corporate governance and monitor managers (insiders) using **two different channels: voice (intervention) or exit (trading)** (McCahery, Sautner, & Starks, 2016)
- Institutional blockholders' **intervention may take different forms** from direct observable actions as **shareholders proposals, voting against managers' proposals, or publicly expressed critique** of the managers' actions to the unobservable **private negotiations "behind the scenes"**
- Instead of pursuing direct intervention, investors dissatisfied with underperforming managers can **vote with their feet and sell their stocks** ("Wall Street Walk"). What really matters is **the threat of exit, not necessarily the exit itself** (Edmans, 2014, p. 25)

LITERATURE REVIEW AND HYPOTHESES

The strength of the exit channel as possible governance mechanism depends on:

- manager's short-term concerns (such as stock price-related wealth, managerial reputation or a takeover threat) - he is more concerned with the effect of blockholder selling if he shirks
- stock market liquidity - exits are easier if stock market liquidity is high
- size of a block which makes the possible exit more harmful for managers (Edmans & Holderness, 2017)

The effectiveness of exit mechanism rises also with:

- number of blockholders, as the competition between blockholders in a multiple-blockholder setting results in more information being impounded into prices and thus the strength of a possible exit signal (Cvijanović, Dasgupta, & Zachariadis, 2022; Edmans & Manso, 2011)
- blockholder common ownership, because owning multiple blocks gives the blockholder the choice of which firms to sell upon a liquidity shock (Edmans, Levit, & Reilly, 2019)

LITERATURE REVIEW AND HYPOTHESES

The agency perspective of real earnings management and the role of outside blockholders:

- most academics regard earnings management as detrimental because it helps managers obtain some private gains at the cost of shareholders
- REM is much more detrimental than AEM because it represents a departure from optimal operational decisions, thus destroying a company's long-term ability to generate earnings (Badertscher, 2011; Cohen & Zarowin, 2010; Roychowdhury, 2006)
- blockholders can deter earnings manipulation because they can "see through" the numbers and will sell if high earnings are not backed up by strong fundamentals (Edmans, 2009)
- financial reporting quality – measured with earnings management proxies (with higher values of EM representing lower values of reporting quality) – increases with the increase in blockholder exit threat (Dou et al., 2018)
- long-term and large insitutional investors reduce real earnings manipulations (Bushee, 1998; Roychowdhury, 2006; Zang, 2012; Sakaki et al. 2017; Kałdoński et al. 2020; Amin and Cumming, 2021)

LITERATURE REVIEW AND HYPOTHESES

Hypotheses:

General hypothesis:

Exit threat can mitigate agency problems and force managers to undertake actions that would maximize the firm value in the long run

Testable hypotheses:

H1

Institutional blockholders' exit threat is negatively associated with real earnings management

H2

The effect of institutional blockholders' exit threat on real earnings management is stronger in firms with higher insiders' sensitivity to stock price

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MEASURES

Measure of real earnings management - Roychowdhury (2006) :

REM $_{it}$ *- sum of abnormal discretionary expenses (ABSGE), abnormal operating cash flows (ABOCF), and abnormal production costs (ABPROD) for year* ***t****.*

Abnormal levels are calculated as **residuals** from models

$$ABSGE - \quad \frac{SGE_{i,t}}{A_{i,t-1}} = \alpha_0 + \alpha_1 \times \frac{1}{A_{i,t-1}} + \beta \times \frac{S_{i,t-1}}{A_{i,t-1}} + \varepsilon_{i,t}$$

$$ABOCF - \quad \frac{OCF_{i,t}}{A_{i,t-1}} = \alpha_0 + \alpha_1 \times \frac{1}{A_{i,t-1}} + \beta_1 \times \frac{S_{i,t}}{A_{i,t-1}} + \beta_2 \times \frac{\Delta S_{i,t}}{A_{i,t-1}} + \varepsilon_{i,t}$$

$$ABSGE - \quad \frac{PROD_{i,t}}{A_{i,t-1}} = \alpha_0 + \alpha_1 \times \frac{1}{A_{i,t-1}} + \beta_1 \times \frac{S_{i,t}}{A_{i,t-1}} + \beta_2 \times \frac{\Delta S_{i,t}}{A_{i,t-1}} + +\beta_3 \times \frac{\Delta S_{i,t-1}}{A_{i,t-1}} \varepsilon_{i,t}$$

We **multiply ABOCF and ABSGE by –1** so that higher proxies indicate higher REM

MEASURES CONT.

Institutional Investor Exit Threat Variables

TREAT $_{it}$ *– indicator variable coded as one if the firm has at least one pension fund ("OFE") blockholder in year 2013, where blockholder is defined as holding at least the 5 % of the firm's shares outstanding*

Num_OFE $_{it}$ *– natural logarithm of one plus the number of pension funds' ("OFE") blockholders in year 2013*

OFE_AvgNum $_{it}$ *– natural logarithm of one plus the number of same-industry peers block-held by the average cross-holding pension fund ("OFE") in year 2013*

POST $_{it}$ *– indicator variable coded as one for the years after the announcement of the pension funds reform in year 2013*

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EMPIRICAL MODEL (difference-in-differences design) AND OTHER VARIABLES

$$REM_{i,t} = \alpha + \beta_1 TREAT_{i,t} + \beta_2 TREAT_{i,t} \times POST_{i,t} + \sum \beta_j CONTROLS_{i,t} + \alpha_t + \alpha_s + \varepsilon_{i,t}$$

General control variables :

- SIZE
- ROA
- LOSS
- GROWTH
- LEV
- IO

Institutional Investor Monitoring Variables :

- HHI_IO
- TURNOVER
- PORTFWEIGHT
- MULTIBLOCK

Incentives to Engage in Earnings Manipulation :

- BENCHBEAT
- OVERVALUED
- INSIDERNETSELL

Insiders' Wealth Sensitivity to Stock Prices Variables :

- STOCK_COMP
- MB_OWNERSHIP
- MB&SB_OWNERSHIP

Insiders' Entrenchment Variables :

- DUALCLASS

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SAMPLE

- Study based on **187** non-financial companies listed on the main market of WSE over the period **2011–2016**
- We required: 1) each firm **exist both before and after** the event; 2) at least **15** observations for each industry-year to estimate REM; 3) availability of **other necessary** data
- Data source: ***Capital IQ - S&P Global; Amadeus - Bureau Van Dijk; Notoria Serwis, hand – collected ownership data***
- Final sample is limited to **1,122** firm-year observations

INDUSTRY	4 GICS CODE	ALL FIRMS		TREATED FIRMS	% of TREATED FIRMS
		No	%	No	%
Materials	1510	222	20%	84	38%
Capital Goods	2010	366	33%	192	52%
Consumer Durables & Apparel	2520	150	13%	78	52%
Food, Beverage & Tobacco	3020	132	12%	72	55%
Software & Services	4510	108	10%	48	44%
Technology Hardware & Equipment	4520	78	7%	48	62%
Real Estate	6010	66	6%	18	27%
Total		**1,122**	**100%**	**540**	**48%**

SAMPLE CONT.

Summary statistics :

	No	Mean	Std	25th	Median	75th
Real Earnings Management Characteristics						
REM	1,122	-0.183	0.237	-0.302	-0.163	-0.035
ABOCF	1,122	-0.075	0.051	-0.093	-0.075	-0.042
ABPROD	1,122	-0.020	0.131	-0.094	-0.020	0.059
ABSGE	1,122	-0.087	0.140	-0.143	-0.066	-0.015
Institutional Investor Exit Threat Variables						
TREAT	1,122	0.481	0.500	0.000	0.000	1.000
Num_OFE (number)	1,122	0.856	1.159	0.000	0.000	1.000
OFE_AvgNum (number)	1,122	3.683	5.566	0.000	0.000	5.000
POST	1,122	0.500	0.500	0.000	0.500	1.000
General Control Variables						
SIZE (Mio USD)	1,122	102.611	4.012	35.332	95.592	265.067
ROA	1,122	0.035	0.083	0.007	0.034	0.070
LOSS	1,122	0.194	0.396	0.000	0.000	0.000
GROWTH	1,122	0.020	0.291	-0.131	-0.010	0.126
LEV	1,122	0.121	0.119	0.029	0.094	0.170
IO	1,122	0.254	0.227	0.054	0.222	0.366
Institutional Investor Monitoring Variables						
HHI_IO	1,122	0.032	0.064	0.002	0.013	0.033
TURNOVER	1,122	0.315	0.204	0.207	0.300	0.426
PORTFWEIGHT	1,122	0.051	0.159	0.001	0.003	0.012
MULTIBLOCK	1,122	1.575	0.914	0.994	1.840	2.262

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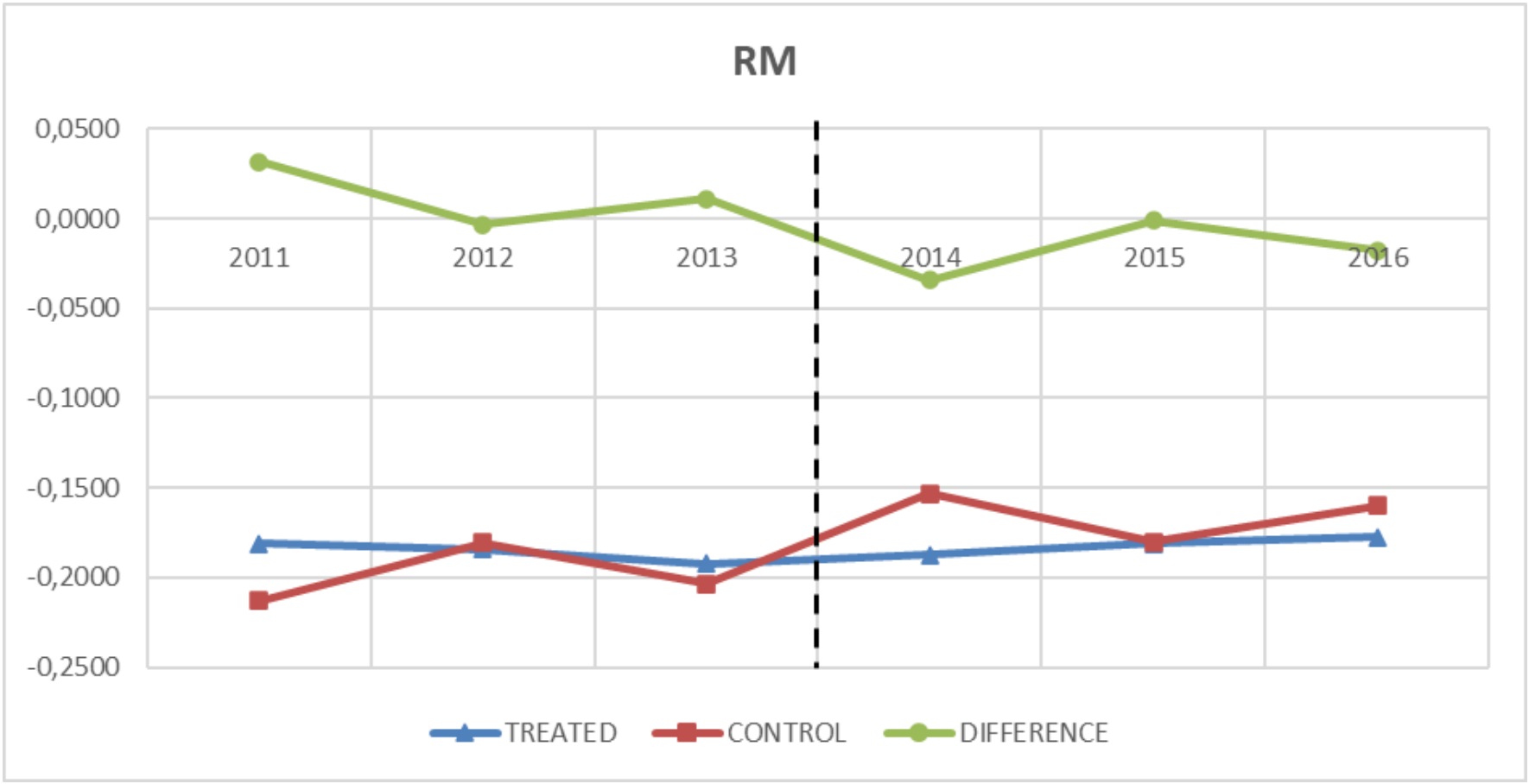
EMPIRICAL RESULTS

The real earnings management evolution around 2013 Pension Funds Reform



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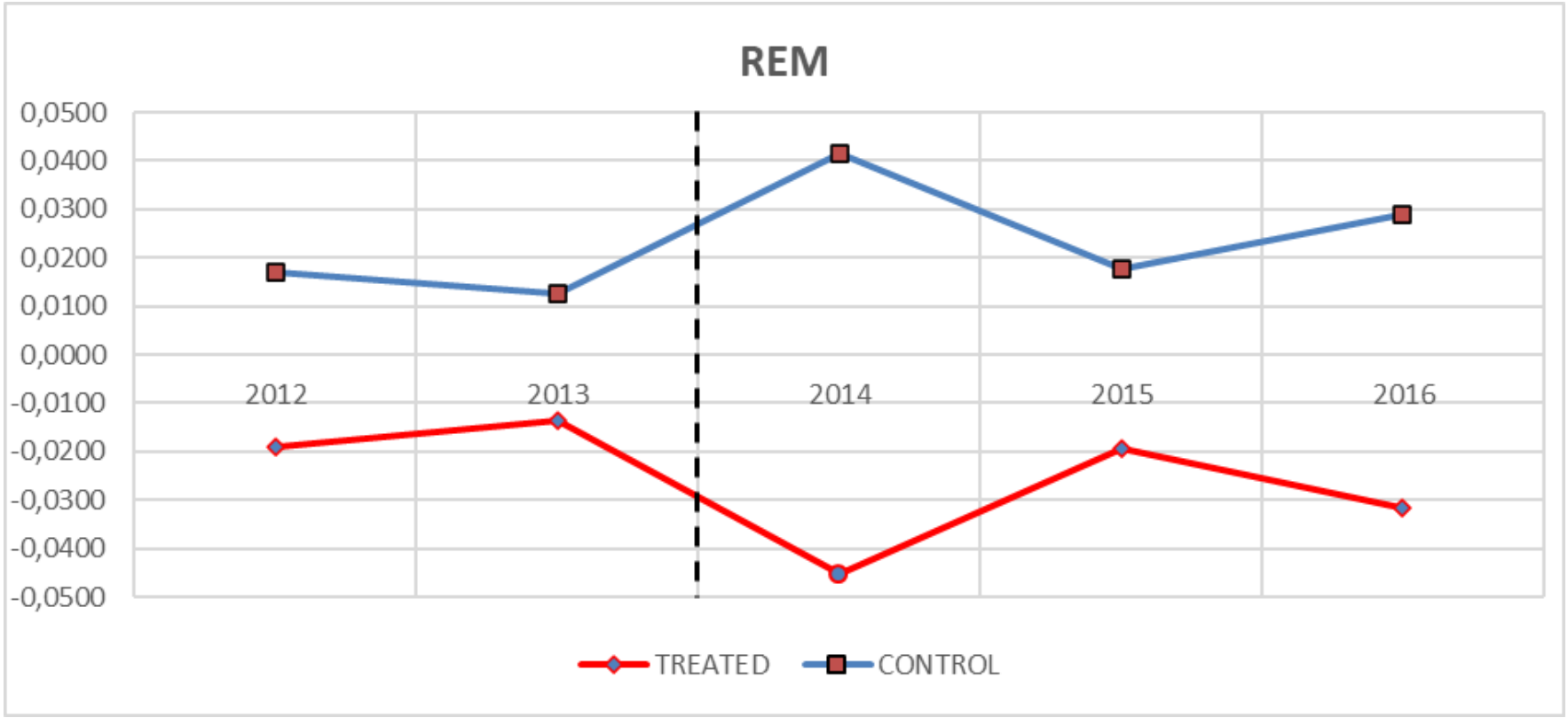
EMPIRICAL RESULTS CONT.

The changes in residual REM in current year relative to 2011



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EMPIRICAL RESULTS CONT.

Blockholder exit threat and real earnings management – OLS

	(1)	(2)	(3)	(4)	(5)	(6)
Intercept	−0.125*	−0.126*	−0.126*	−0.109*	−0.104	−0.102
	(-1.96)	(-1.96)	(-1.96)	(-1.52)	(-1.45)	(-1.42)
Treatement Effects						
TREAT	0.061*	X	X	0.079**	X	X
	(1.76)	X	X	(2.11)	X	X
TREAT x POST	−0.041**	X	X	−0.040*	X	X
	(-1.98)	X	X	(-1.89)	X	X
Num_OFE	X	0.040	X	X	0.053	X
	X	(1.10)	X	X	(1.36)	X
Num_OFE x POST	X	−0.038**	X	X	−0.039**	X
	X	(-2.01)	X	X	(-2.04)	X
OFE_AvgNum	X	X	0.018	X	X	0.022
	X	X	(1.14)	X	X	(1.30)
OFE_AvgNum x POST	X	X	−0.016**	X	X	−0.015*
	X	X	(-2.09)	X	X	(-1.91)
General Control Variables	YES	YES	YES	YES	YES	YES
Institutional Investors Monitoring Control Variables	NO	NO	NO	YES	YES	YES
Industry Fixed Effects	YES	YES	YES	YES	YES	YES
Year Fixed Effects	YES	YES	YES	YES	YES	YES
Obs.	1,122	1,122	1,122	1,122	1,122	1,122
Adjusted R2	0.128	0.125	0.125	0.141	0.135	0.134

EMPIRICAL RESULTS CONT.

Blockholder exit threat and real earnings management – controlling for incentives to engage in earnings manipulation

	(1)	(2)	(3)
Intercept	−0.128**	−0.133**	−0.124*
	(-2.01)	(-2.03)	(-1.94)
Treatement Effects			
TREAT	0.060*	0.062*	0.059*
	(1.72)	(1.76)	(1.69)
TREAT x POST x 1 {BENCHBEAT =1}	−0.069**	X	X
	(-2.57)	X	X
TREAT x POST x 1 {BENCHBEAT =0}	−0.023	X	X
	(-0.99)	X	X
TREAT x POST x 1 {OVERVALUED=1}	X	−0.066**	X
	X	(-2.40)	X
TREAT x POST x 1 {OVERVALUED=0}	X	0.005	X
	X	(0.17)	X
TREAT x POST x 1 {INSIDERNETSELL=1}	X	X	−0.076***
	X	X	(-2.66)
TREAT x POST x 1 {INSIDERNETSELL =0}	X	X	−0.020
	X	X	(-0.83)
General Control Variables	YES	YES	YES
Industry Fixed Effects	YES	YES	YES
Year Fixed Effects	YES	YES	YES
Obs.	1,122	1,122	1,122
Adjusted R2	0.130	0.131	0.131

EMPIRICAL RESULTS CONT.

Blockholder exit threat and real earnings management –the effect of insiders' wealth sensitivity (IWS) to stock prices

	(1)	(2)	(3)
Intercept	−0.124*	−0.128*	−0.131**
	(-1.95)	(-1.87)	(-2.06)
Treatement Effects			
TREAT	0.063*	0.065*	0.059*
	(1.81)	(1.87)	(1.70)
TREAT x POST x 1 {MB_OWNERSHIP_HIGH=1}	−0.123***	X	X
	(-3.98)	X	X
TREAT x POST x 1 {MB_OWNERSHIP_HIGH=0}	0.019	X	X
	(0.66)	X	X
TREAT x POST x 1 {MB&SB_OWNERSHIP_HIGH=1}	X	−0.110***	X
	X	(-4.02)	X
TREAT x POST x 1 {MB&SB_OWNERSHIP_HIGH=0}	X	0.020	X
	X	(0.62)	X
TREAT x POST x 1 {STOCK_COMP =1}	X	X	−0.102*
	X	X	(-1.70)
TREAT x POST x 1 {STOCK_COMP =0}	X	X	−0.033
	X	X	(-1.43)
General Control Variables	YES	YES	YES
Industry Fixed Effects	YES	YES	YES
Year Fixed Effects	YES	YES	YES
Obs.	1,122	1,122	1,122
Adjusted R2	0.149	0.145	0.130

EMPIRICAL RESULTS CONT.

Blockholder exit threat, managerial entrenchement and real earnings management

	Full Sample	High IWS	Low IWS
	(1)	(2)	(3)
Intercept	−0.129**	0.009	−0.199**
	(-2.03)	(0.09)	(-2.48)
Treatement Effects			
TREAT	0.060*	0.037	0.090*
	(1.72)	(0.67)	(1.92)
TREAT x POST x 1 {DUALCLASS = 1}	−0.106**	−0.165***	0.048
	(-2.03)	(-3.37)	(0.67)
TREAT x POST x 1 {DUALCLASS = 0}	−0.022	−0.046	−0.003
	(-0.89)	(-1.35)	(-0.11)
General Control Variables	YES	YES	YES
Industry Fixed Effects	YES	YES	YES
Year Fixed Effects	YES	YES	YES
Obs.	1,122	552	570
Adjusted R2	0.133	0.224	0.121

CHOW-test:	
Difference in coefficient on TREAT x POST x 1 {DUALCLASS = 1} (HIGH – LOW)	−2.946

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EMPIRICAL RESULTS CONT.

Robustness and additional tests :

- propensity score matching
- parallel trends assumption
- placebo test
- alternative explanations
  - new block formation
  - analyst following change
  - earnigs management methods substitution
  - family control
- firm fixed effects model

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SUMMARY

Main conclusions:

- companies with at least one pension fund holding at least a 5% stake, significantly **decreased real earnings management after** the implementation of **the reform** compared with control companies
- the observed change in REM levels holds primarily for the **companies likely to engage in earnings manipulations** (suspect companies)
- the effect is **more significant** for firms in a **multiple blockholder setting, firms under common ownership, and firms with higher insider's stakes**

Thank you for your attention!

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