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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 THE MAIN RESEARCH QUESTION

- **Institutional investors** in Poland **hold relatively large stakes**. In terms of **aggregate institutional ownership** (app. **30%**) Poland is ranked **fifth** among all OECD countries, preceded only by the US, the UK, Canada and Netherlands (OECD, 2019).
- **Polish pension funds (OFE)** are **the most prominent group** of institutional blockholders in Polish listed companies and they underwent a **substantial reform in 2013**
- Polish **pension fund reform** 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** (suspension of the mechanism used by the Polish market supervisor (KNF) to evaluate the performance of pension funds, no more „penalties” for underperformance)
 - **changes affecting inflows, outflows and liquidity** (suspension of the mandatory character of contributions)

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

LITERATURE REVIEW AND HYPOTHESES

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

- Large shareholders (outside blockholders) have motivation to monitor [Shleifer and Vishny 1986; Admati et al. 1994; Maug 1998; Admati and Pfleiderer 2009; Edmans 2009]
- Outside 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"** [Gillan & Starks, 2000; McCahery, Sautner, & Starks, 2016]
- 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 three main factors [Edmans & Holderness, 2017]:

- **manager's short-term concerns** (such as stock price-related wealth, managerial reputation or a takeover threat)
- 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

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 increasing the strength of a possible exit signal [Cvijanović, Dasgupta, & Zachariadis, 2022; Edmans & Manso, 2011]
- blockholder **common ownership**, because owning multiple blocks in companies from the same industry 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 REM 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 (agency cost perspective)
- **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 are good in **detecting earnings manipulation** because **they can “see through”** the numbers and will sell if high earnings are not backed up by strong fundamentals [Edmans, 2009]
- **long-term and large insitutional investors reduce REM** (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 REM

H2:

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

MEASURES

Measure of real earnings management - Roychowdhury (2006) :

REM_{it} - sum of abnormal discretionary expenses (ABS_{GE}), abnormal operating cash flows (ABOCF), and abnormal production costs (ABPROD) for year t.

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

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

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

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

We multiply ABOCF and ABS_{GE} by **-1** so that higher proxies indicate higher REM

MEASURES CONT.

Institutional Investor Exit Threat Variables

$TREAT_{it}$ – indicator variable coded as one if a 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 fund (“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

EMPIRICAL MODEL (difference-in-differences design)

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

General control variables:

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

Incentives to Engage in Earnings

Manipulation:

- BENCHBEAT
- OVERVALUED
- INSIDERNETSELL

Institutional Investor Monitoring Variables:

- HHI_IO
- TURNOVER
- PORTFWEIGHT
- MULTIBLOCK

Insiders' Wealth Sensitivity to Stock Prices Variables:

- STOCK_COMP
- MB_OWNERSHIP
- MB&SB_OWNERSHIP

Insiders' Entrenchment Variables :

- DUALCLASS



DATA AND 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 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

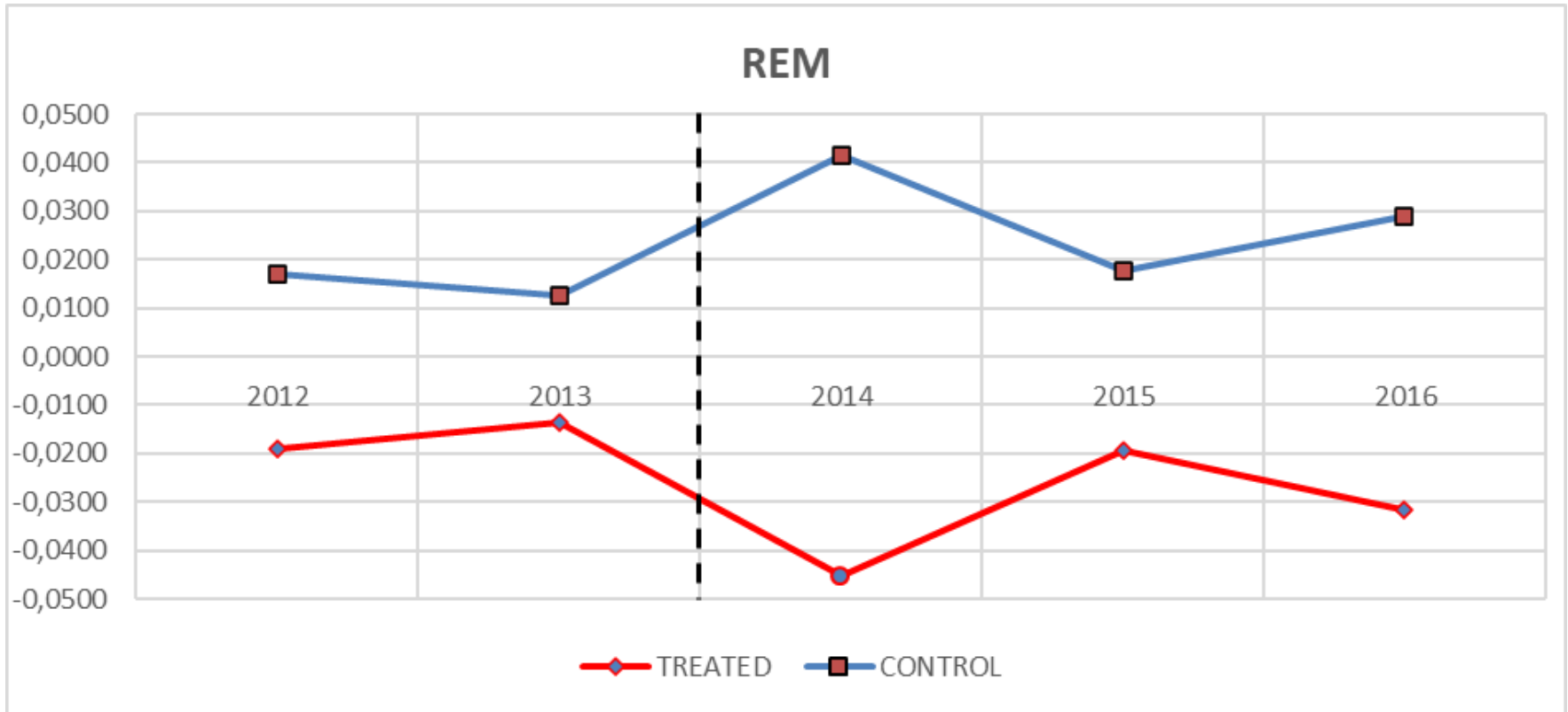
INDUSTRY	4 GICS CODE	ALL FIRMS		TREATED FIRMS		% of TREATED FIRMS
		No	%	No	%	
Materials	1510	222	20%	84	38%	
Capital Goods	2010	366	33%	192	52%	
Consumer Durables & Apparel	2520	150	13%	78	52%	
Food, Beverage & Tobacco	3020	132	12%	72	55%	
Software & Services	4510	108	10%	48	44%	
Technology Hardware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

SUMMARY STATISTICS

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

EMPIRICAL RESULTS

The changes in residual REM in current year relative to 2011



EMPIRICAL RESULTS CONT.

Blockholder exit threat and RM – pooled OLS

	(1)	(2)	(3)	(4)	(5)	(6)
Intercept	-0.125* (-1.96)	-0.126* (-1.96)	-0.126* (-1.96)	-0.109* (-1.52)	-0.104 (-1.45)	-0.102 (-1.42)
Treatment Effects						
<i>TREAT</i>	0.061* (1.76)	X X	X X	0.079** (2.11)	X X	X X
<i>TREAT x POST</i>	-0.041** (-1.98)	X X	X X	-0.040* (-1.89)	X X	X X
<i>Num_OFE</i>	X X	0.040 (1.10)	X X	X X	0.053 (1.36)	X X
<i>Num_OFE x POST</i>	X X	-0.038** (-2.01)	X X	X X	-0.039** (-2.04)	X X
<i>OFE_AvgNum</i>	X X	X X	0.018 (1.14)	X X	X X	0.022 (1.30)
<i>OFE_AvgNum x POST</i>	X X	X X	-0.016** (-2.09)	X X	X X	-0.015* (-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 REM – controlling for incentives to engage in earnings manipulation

	(1)	(2)	(3)
Intercept	-0.128** (-2.01)	-0.133** (-2.03)	-0.124* (-1.94)
Treatment Effects			
<i>TREAT</i>	0.060* (1.72)	0.062* (1.76)	0.059* (1.69)
<i>TREAT</i> x <i>POST</i> x 1 { <i>BENCHBEAT</i> =1}	-0.069** (-2.57)	X	X
<i>TREAT</i> x <i>POST</i> x 1 { <i>BENCHBEAT</i> =0}	-0.023 (-0.99)	X	X
<i>TREAT</i> x <i>POST</i> x 1 { <i>OVERVALUED</i> =1}	X	-0.066** (-2.40)	X
<i>TREAT</i> x <i>POST</i> x 1 { <i>OVERVALUED</i> =0}	X	0.005 (0.17)	X
<i>TREAT</i> x <i>POST</i> x 1 { <i>INSIDERNETSELL</i> =1}	X	X	-0.076*** (-2.66)
<i>TREAT</i> x <i>POST</i> x 1 { <i>INSIDERNETSELL</i> =0}	X	X	-0.020 (-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 REM – the effect of insiders' wealth sensitivity (IWS) to stock prices

	(1)	(2)	(3)
Intercept	-0.124* (-1.95)	-0.128* (-1.87)	-0.131** (-2.06)
Treatment Effects			
<i>TREAT</i>	0.063* (1.81)	0.065* (1.87)	0.059* (1.70)
<i>TREAT x POST x 1 {MB_OWNERSHIP_HIGH=1}</i>	-0.123*** (-3.98)	X	X
<i>TREAT x POST x 1 {MB_OWNERSHIP_HIGH=0}</i>	0.019 (0.66)	X	X
<i>TREAT x POST x 1 {MB&SB_OWNERSHIP_HIGH=1}</i>	X	-0.110*** (-4.02)	X
<i>TREAT x POST x 1 {MB&SB_OWNERSHIP_HIGH=0}</i>	X	0.020 (0.62)	X
<i>TREAT x POST x 1 {STOCK_COMP =1}</i>	X	X	-0.102* (-1.70)
<i>TREAT x POST x 1 {STOCK_COMP =0}</i>	X	X	-0.033 (-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 R ²	0.149	0.145	0.130

EMPIRICAL RESULTS CONT.

Blockholder exit threat, managerial entrenchement and REM

	Full Sample	High IWS	Low IWS
	(1)	(2)	(3)
Intercept	-0.129** (-2.03)	0.009 (0.09)	-0.199** (-2.48)
Treatment Effects			
<i>TREAT</i>	0.060* (1.72)	0.037 (0.67)	0.090* (1.92)
<i>TREAT x POST x 1 {DUALCLASS = 1}</i>	-0.106** (-2.03)	-0.165*** (-3.37)	0.048 (0.67)
<i>TREAT x POST x 1 {DUALCLASS = 0}</i>	-0.022 (-0.89)	-0.046 (-1.35)	-0.003 (-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:			
<i>Difference in coefficient on TREAT x POST x 1 {DUALCLASS = 1} (HIGH – LOW)</i>			-2.946

EMPIRICAL RESULTS CONT.

Robustness and additional tests :

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

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!